STATE OF OHIO DISASTER HISTORY (1964 - 2018) (Presidential and Emergency Disaster Declarations)
(Updated as of 06/03/19)

DISASTER DECLARATION NUMBER	DATE DECLARED	FEDERAL DISASTER PROGRAMS	INCIDENT TYPE	COUNTIES DECLARED	FUNDS PROVIDED
DR- 167	March 24, 1964	PA	Heavy rains and flooding	Adams, Athens, Auglaize Belmont, Brown, Butler, Carroll, Clermont, Clinton, Columbiana, Coshocton, Cuyahoga, Delaware, Fairfield, Franklin, Gallia, Geauga, Guernsey, Greene, Hamilton, Harrison, Hocking, Jackson, Jefferson, Lake, Lawrence, Licking, Medina, Meigs, Miami, Monroe, Morgan, Muskingum, Noble, Perry , Pickaway, Pike, Preble, Richland, Ross, Scioto, Summit, Trumbull, Tuscarawas, Vinton, Warren, Washington,	$571,482 (P)
DR- 191	April 14, 1965	PA	Tornadoes and high winds	Allen, Cuyahoga, Delaware, Hancock, Harrison, Highland, Lorain, Lucas, Medina, Mercer, Morrow, Pickaway, Seneca, Shelby, Van Wert	$275,248 (P)
DR- 238	May 4, 1968	PA	Tornadoes	Brown, Clermont, Gallia, Licking, Scioto	$270,000 (P)
DR- 243	June 5, 1968	PA	Heavy rains and flooding	Adams, Athens, Brown, Butler, Clermont, Clinton, Fairfield, Franklin, Fayette, Gallia, Greene, Guernsey, Hamilton, Hocking, Jackson, Lawrence, Licking, Meigs, Monroe, Montgomery, Morgan, Noble, Perry, Pickaway, Pike, Ross, Scioto, Vinton, Warren, Washington	$600,000 (P)
DR- 266	July 15, 1969	PA	Heavy storms and floods	Ashland, Ashtabula, Coshocton, Cuyahoga, Erie, Harrison, Holmes, Huron, Lake, Lorain, Lucas, Medina, Morgan, Muskingum, Ottawa, Richland, Sandusky, Seneca, Stark, Trumbull, Tuscarawas, Wayne, Wood	$1,000,000 (P)
DR- 345	July 19, 1972	PA	Storms and flooding	Ashtabula, Belmont, Cuyahoga, Jefferson, Lake, Lorain, Monroe	$1,328,098 (P)
DR- 362	November 24, 1972	PA	Storms and flooding	Erie, Lake, Lorain, Lucas, Ottawa	$615,863 (P)
DR- 377	April 27, 1973	PA	Storms and flooding	Ashtabula, Cuyahoga, Erie, Lake, Lorain, Lucas, Ottawa, Sandusky	$1,417,975 (P)
DR- 390	June 4, 1973	PA	Mudslides	Hamilton, Washington	$1,434,684 (P)

STATE OF OHIO DISASTER HISTORY (1964 - 2018) (Presidential and Emergency Disaster Declarations)
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DISASTER DECLARATION NUMBER	DATE DECLARED	FEDERAL DISASTER PROGRAMS	INCIDENT TYPE	COUNTIES DECLARED	FUNDS PROVIDED
DR- 421	April 4, 1974	PA/IFG	Tornadoes and high winds	Adams, Butler, Clark, Delaware, Fayette, Franklin, Greene, Hamilton, Madison, Paulding, Pickaway, Putnam, Summit, Warren,	$10,250,454 (P) $1,945,833 (I)
DR- 436	May 31, 1974	PA	Heavy rains and flooding	Lucas, Ottawa, Sandusky	$858,824 (P)
DR- 445	July 11, 1974	PA	Heavy rains and flooding	Warren	$507,364 (P)
DR- 480	September 11, 1975	PA	Floods	Belmont, Cuyahoga, Jefferson, Lake,	$3,320,493 (P)
DR- 3055-EM	January 26, 1978	PA	Severe blizzard conditions	All 88 counties	$3,546,669 (P)
DR- 630	August 23, 1980	PA/IFG	Heavy rains and flooding	Belmont, Columbiana, Guernsey, Jefferson, Monroe, Muskingum, Noble	$1,653,327 (P) $669,820 (I)
DR- 642	June 16, 1981	PA/IFG	Tornado, high winds and flooding	Hancock, Morrow, Putnam, Wyandot (IA) Morrow (PA)	$346,950 (P) $47,382 (SCB)** $515,593 (I)
DR- 653	March 26, 1982	PA/IFG	Flood	Defiance, Fulton, Henry, City of Toledo (Lucas), Paulding, Wood County (IA) Defiance, Paulding, Village of Grand Rapids (Wood only) (PA)	$157,390 (P) $268,187 (I)
DR- 738	June 3, 1985	PA/IFG	Tornadoes	Ashtabula, Columbiana, Coshocton, Licking, Portage, Trumbull (IA) Trumbull (PA)	$1,556,950 (P) $419,751 (SCB)** $424,893 (I)
DR-796	1987	IFG	Floods	Crawford, Marion, Morrow, Richland	$1,066,258 (I) $266,564 (SCB)**
DR- 831	June 10, 1989	IFG	Severe storms and flooding	Butler, Coshocton, Cuyahoga, Franklin, Geauga, Greene, Lake, Licking, Lorain, Mercer, Montgomery, Preble, Warren	$2,363,868 (I) $590,967 (SCB)**

STATE OF OHIO DISASTER HISTORY (1964 - 2018) (Presidential and Emergency Disaster Declarations)
(Updated as of 06/03/19)

DISASTER DECLARATION NUMBER	DATE DECLARED	FEDERAL DISASTER PROGRAMS	INCIDENT TYPE	COUNTIES DECLARED	FUNDS PROVIDED
DR- 870	June 6, 1990	PA/IFG/HMGP *	Severe storm, tornadoes, and flooding	Athens, Belmont, Butler, Columbiana, Fairfield, Hamilton, Harrison, Hocking, Jackson, Jefferson, Lawrence, Licking, Monroe, Muskingum, Perry, Pike, Richland, Vinton (PA/IA) Clermont, Franklin, Mahoning, Morrow, Madison, Ross, Trumbull (IA only)	$10,847,075 (P) $4,331,497 (I) $3,849,783 (SCB)** $630,000 (M) $630,000 (S)
DR- 951	August 4, 1992 (IA) August 14, 1992 (PA/HMGP)	PA/IFG/HMGP *	Severe storms, tornadoes, flooding	Cuyahoga, Franklin, Logan, Mahoning, Medina, Mercer, Ross, Shelby, Summit, Trumbull, Van Wert (PA/IA) Auglaize, Belmont, Columbiana, Erie, Fairfield, Fulton, Geauga, Jefferson, Lorain, Lucas, Ottawa, Portage, Wood (PA only)	$8,308,334 (P) $2,081,117 (I) $2,474,083 (SCB)** $250,000 (M) $350,000 (CDBG)+
DR-1065	August 25, 1995	IFG/HMGP	Severe storms and flooding	Champaign, Erie, Logan, Lorain, Licking, Marion, Mercer, Miami, Scioto, Shelby, Washington	$3,493,319 (I) $81,731 (SCB)** $721,500 (M)
DR-1097	January 27, 1996	PA/IFG/ HMGP	Ohio River flooding	Adams, Belmont, Columbiana, Gallia, Jefferson, Lawrence, Meigs, Monroe, Scioto, Washington (PA/IA) Brown, Clermont, Hamilton (IA)	$4,335,000 (P) $1,822,056 (I) $1,617,991 (SCB)** $1,721,655 (M)
DR-1122	June 24, 1996	PA/HMGP	Severe storms and flooding	Adams, Belmont, Brown, Butler, Clermont, Gallia, Hamilton, Hocking, Jefferson, Lawrence, Meigs, Monroe, Paulding, Scioto, Vinton, Williams	$10,811,838 (P) $2,702,960 (S) $1,137,951 (M)
DR-1164	March 4, 1997	IA/PA/HMGP	Flash flooding on inland rivers/streams and Ohio River flooding	Adams, Athens, Brown, Clermont, Gallia, Hamilton, Highland, Hocking, Jackson, Lawrence, Meigs, Monroe, Pike, Ross, Scioto, Vinton, Washington (IA/PA/HMGP) and Morgan (PA/HMGP)	$29,666,825 (P) $22,196,350 (I) $9,821,524 (M) $9,821,524 (S) $9,740,294 (NRCS)*+
DR-1227	June 30, 1998	IA/PA/MIT	Flash flooding, flooding, high winds and tornadoes.	Athens, Belmont, Coshocton, Guernsey, Harrison, Jackson, Jefferson, Knox, Meigs, Monroe, Morgan, Morrow, Muskingum, Noble, Ottawa, Perry, Pickaway, Richland, Tuscarawas, Washington; (IA only) Franklin, Sandusky (PA only) Holmes	$21,803,771 (P) $14,312,348 (I) $9,000,000 (M) $9,000,000 (S) $10,410,817 (NRCS)*+

DR-1321	March 7, 2000	IA/MIT	Flash flooding, flooding	Adams, Gallia, Jackson, Lawrence, Meigs, Pike and Scioto	$1,914,189 (I) $297,310 (M) $297,310 (S)
DR-1339	August 25, 2000	IA/MIT	Flooding	Lucas	$7,898,840 (I) $1,132,279 (M) $1,132,279 (S)
DR-1343	September 26, 2000	IA/PA/MIT	High winds and tornadoes	Greene	$189,051 (I) $3,430,810 (P) $558,025 (M) $558,025 (S)
DR-1390	August 8, 2001	PA/MIT	Flooding	Brown, Butler, Clermont and Hamilton	$ 7,712,456 (P) $ 876,439 (M) $ 876,439 (S)
DR-1444	November 18, 2002	IA/MIT	Tornados, Severe Storms	Ashland, Auglaize, Coshocton, Cuyahoga, Franklin, Hancock, Henry, Huron, Lorain, Medina, Ottawa, Paulding, Putnam, Sandusky, Seneca, Summit, Union, Van Wert, Wayne and Wood	$ 11,668,849 (I) $ 139,068 (M) – $ 48,409 (S) $ 2,297,222 (SDRP)
DR-1453*	March 24, 2003	IA/PA/MIT	Ice/Snow Storm	Adams, Gallia, Jackson, Lawrence, Meigs, Pike and Scioto (IA/PA); Athens, Belmont, Darke, Delaware, Fayette, Franklin, Greene, Guernsey, Harrison, Hocking, Licking, Madison, Miami, Monroe, Morgan, Montgomery, Muskingum, Noble, Perry, Preble, Ross , Union, Vinton and Washington (PA)	$ 16,689,841 (I) $ 39,621,605 (P) * $ 2,415,899 (M) $ 2,415,899 (S) -
DR-1478*	July 15, 2003	IA/MIT	Severe Storms, flooding	Auglaize, Columbiana, Crawford, Darke, Logan, Mahoning, Mercer, Pike, Shelby and Van Wert (IA/MIT); Adams, Auglaize, Darke, Logan, Mercer, Pike, Shelby and Van Wert (SDRP)	$ 6,451,793 (I) $ 145,762 (M)* $ 13,721 (S) $ 2,976,949 (SDRP)
DR-1484*	August 1, 2003	IA/PA/MIT	Severe storms, tornadoes and flooding	Carroll, Columbiana, Cuyahoga, Franklin, Jefferson, Mahoning, Medina, Portage, Richland, Stark, Summit and Trumbull (IA/MIT); Adams, Columbiana, Carroll, Jefferson, Mahoning, Medina, Monroe, Portage, Stark, Summit, Trumbull and Vinton (PA)	$ 135,723,395 (I) $ 13,160,834 (P)* $ 6,016,488 (M) $ 162,790 (S) -
EM-3187*	August 23, 2003	PA Only	Power Outage	Ashland, Ashtabula, Cuyahoga, Erie, Geauga, Huron, Knox, Lake, Lorain, Lucas, Portage, Summit and Trumbull	$ 2,067,222 (P)*

DR-1507*	January 26, 2004	IA/PA/MIT	Landslide, severe storms and landslides	Belmont, Jefferson, Morgan, Ross, Tuscarawas and Washington (IA/PA/MIT); Franklin, Licking (IA/MIT); Athens, Guernsey, Harrison, Monroe, Noble and Perry (PA/MIT)	$ 3,408,934 (I) $ 14,811,923(P*) $ 875,265 (M)* $ 164,804 (S) -
DR-1519*	June 3, 2004	IA/PA/MIT	Severe storms and flooding	Athens, Carroll, Columbiana, Cuyahoga, Delaware, Guernsey, Harrison, Hocking, Holmes, Medina, Noble, Perry, Portage, Summit and Tuscarawas (IA/PA/MIT); Crawford, Geauga, Licking, Logan, Lorain, Mahoning, Richland and Stark (IA/MIT) and Knox and Jefferson (PA/MIT)	$ 30,238,921 (I)* $ 14,060,750 (P) * $ 2,305,560 (M) $ 748,426 (S) -
DR-1556*	September 19, 2004	IA/PA/Mit	Severe storms and flooding	Athens, Belmont, Carroll, Columbiana, Gallia, Guernsey, Harrison, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Tuscarawas, Vinton and Washington (IA/PA/MIT); Lawrence, Mahoning, Stark and Trumbull (IA/MIT)	$ 47,455,690 (I) $ 35,597,480 (P)* $ 3,948,349 (M)* $ 2,300,000 (S)
EM-3198*	January 11, 2005	PA Only	Snow Removal and Response	Butler, Champaign, Clark, Crawford, Darke, Delaware, Erie, Franklin, Greene, Hamilton, Hardin, Huron, Logan, Madison, Marion, Miami, Montgomery, Morrow, Preble, Richland, Sandusky, Seneca, Shelby, Union, Warren and Wyandot	$ 11,116,398 (P)*
DR-1580*	February 15, 2005	IA/PA/MIT	Severe winter storms, ice and mudslides	Clark, Sandusky, Warren and Miami (IA/MIT); Ashland, Auglaize, Athens, Belmont, Coshocton, Crawford, Delaware, Fairfield, Franklin, Guernsey, Henry, Hocking, Holmes, Huron, Jefferson, Licking, Logan, Morgan, Muskingum, Pickaway, Pike, Richland, Ross, Scioto, Stark, Tuscarawas, Washington and Wyandot (IA/PA/MIT); Adams, Allen, Brown, Carroll, Champaign, Clermont, Columbiana, Darke, Fayette, Hancock, Hardin, Harrison, Highland, Knox, Lorain, Marion, Medina, Meigs, Mercer, Monroe, Montgomery, Morrow, Noble, Paulding, Perry, Putnam, Seneca, Shelby, Union, Van Wert and Wayne (PA/MIT)	$ 13,823,757 (I)* $123,935,836 (P)* $7,534,746 (M)* $1,500,000 (S) -
EM-3250	September 13, 2005	PA	Hurricane Katrina Emergency Shelter Operations	All 88 Counties were included in the federal declaration	$2,499,103 (P)*

DR-1651*	July 2, 2006	IA/MIT	Severe storms and flooding	Cuyahoga, Erie, Huron, Lucas, Sandusky and Stark	$25,001,761 (I)* $1,798,019 (M) $593,090 (S)
DR-1656*	August 1, 2006	IA/PA/MIT	Severe storms and flooding	Ashtabula, Geauga and Lake	$25,895,531 (I)* $9,282,843 (P)* $3,411,736 (M) $1,137,245 (S)
DR-1720	August 28, 2007	IA/PA/MIT	Severe storms and flooding	Allen, Crawford, Hancock, Hardin, Putnam, Richland, Wyandot (IA/PA/MIT); Seneca (IA/MIT)	$45,452,363 (I) $12,688,139 (P) $6,630,799 (M) $1,984,493 (S)
EM-3286	April 24, 2008	PA	Snow	Ashtabula, Brown, Clermont, Clinton, Crawford, Delaware, Fairfield, Franklin, Geauga, Greene, Hardin, Huron, Lake, Morrow, Richland, Union and Wyandot	$9,481,809 (P) est.
DR-1805	October 24, 2008	PA/MIT	Wind Event	Ashland, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Coshocton, Delaware, Fairfield, Franklin, Greene, Guernsey, Hamilton, Harrison, Highland, Hocking, Holmes, Knox, Licking, Madison, Miami, Montgomery, Morrow, Perry, Pickaway, Preble, Shelby, Summit, Tuscarawas, Union, and Warren	$47,968,724 (P) $6,507,249 (M)
DR-4002	July 13, 2011	PA/MIT	Severe storms, landslides	Adams, Athens, Belmont, Brown, Clermont, Gallia, Guernsey, Hamilton, Hocking, Jackson, Jefferson, Lawrence, Meigs, Monroe, Morgan, Noble, Pike, Ross, Scioto, Vinton, Washington	$45.8 Million (PA) $5,046,137 (M)
EM-3346	June 30, 2012	PA (for Direct Assistance only)	Severe storms, straight-line winds (derecho)	All 88 counties	PA was for Direct Assistance only, no financial assistance
DR-4077	August 20, 2012	PA/MIT		Adams, Allen, Athens, Auglaize, Belmont, Champaign, Clark, Coshocton, Fairfield, Franklin, Gallia, Guernsey, Hancock, Hardin, Harrison, Highland, Hocking, Jackson, Knox, Lawrence, Licking, Logan, Meigs, Miami, Monroe, Morgan, Morrow, Muskingum, Noble, Paulding, Perry, Pickaway, Pike, Putnam, Shelby, Van Wert, Vinton, Washington, Wyandot	Initial Estimates of: $22.0 Million (PA) est. $3.4 Million (M) est.

DR-4098	January 3, 2013	PA/MIT	Severe storms, flooding	Ashtabula, Cuyahoga	Initial Estimates of: $17.8 Million (PA) est. $2.7 Million (M) est.
DR-4360	April 17, 2018	PA/MIT	Severe storms, flooding, landslides	Adams, Athens, Belmont, Brown, Columbiana, Coshocton, Gallia, Hamilton, Harrison, Jackson, Jefferson, Lawrence, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Scioto, Vinton, Washington	Initial Estimates of: $65 Million (PA) est. $9.75 Million (M) est.

- HMGP first available with disaster declared after 1987.
- (P) – Public Assistance (S) – State Match to Federal Hazard Mitigation funds (M) – Hazard Mitigation Grant
- (SCB)** - State Controlling Board funds; (SDRP)**State Disaster Relief Program
- (CDBG)+ - Community Development Block Grant funds provided by the OH Department of Development
- (I) Individual Assistance includes FEMA Disaster Housing, SBA loans for homes, personal property and businesses and FEMA/State Other Needs Assistance grants for families and individuals
- (NRCS)*+ - Natural Resources Conservation Service
- EM 3187 is an Emergency Declaration for Public Assistance
- * Indicates the disaster is not officially closed.

Appendix B

Federal Emergency Management Agency

National Flood Insurance Program

Repetitive Loss Summary

For the State of Ohio

Revised December 2018

Region 1

County Name	Community Name	Community Number	Total Losses	Total Building Payment	Total Contents Payment	Total Payment	Total RL/SRL Structures	Total RL Structures	Total SRL Structures
ALLEN COUNTY	ALLEN COUNTY (Unincorp.)	390758	25	$368,439.21	$499,881.50	$868,320.71	9	9	0
	BLUFFTON, VILLAGE OF	390004	24	$343,807.30	$50,504.18	$394,311.48	7	6	1
	DELPHOS, CITY OF	390005	6	$32,531.68	$0.00	$32,531.68	3	3	0
	ELIDA, VILLAGE OF	390656	4	$70,673.47	$24,731.26	$108,346.24	2	2	0
AUGLAIZE COUNTY	AUGLAIZE COUNTY (Unincorp.)	390761	2	$48,087.22	$692.64	$48,779.86	1	1	0
	ST. MARYS, CITY OF	390022	2	$16,043.21	$0.00	$16,043.21	1	1	0
	WAPAKONETA, CITY OF	390023	14	$211,210.93	$8,893.34	$220,104.27	4	3	1
CHAMPAIGN COUNTY	URBANA, CITY OF	390060	3	$56,204.61	$0.00	$56,204.61	1	1	0
CLARK COUNTY	CLARK COUNTY (Unincorp.)	390732	20	$353,974.56	$31,354.47	$385,329.03	7	7	0
	NEW CARLISLE, CITY OF	390062	2	$3,473.58	$471.56	$3,945.14	1	1	0
	SPRINGFIELD, CITY OF	390063	8	$28,773.15	$5,529.62	$34,302.77	3	3	0
CRAWFORD COUNTY	CRAWFORD COUNTY (Unincorp.)	390811	4	$126,568.47	$40,110.17	$166,678.64	2	2	0
	BUCYRUS, CITY OF	390090	20	$360,146.42	$22,058.67	$382,205.09	7	7	0
	CRESTLINE, VILLAGE OF	390091	5	$96,173.41	$5,433.55	$101,606.96	2	2	0
	GALION, CITY OF	390092	20	$388,708.38	$78,290.06	$466,998.44	7	6	1
DARKE COUNTY	DARKE COUNTY (Unicorp.)	390137	2	$12,193.65	$0.00	$12,193.65	1	1	0
	GREENVILLE, CITY OF	390139	5	$47,754.42	$16,285.76	$64,040.18	1	0	1
DEFIANCE COUNTY	DEFIANCE COUNTY (Unicorp.)	390143	2	$3,656.73	$0.00	$3,656.73	1	1	0
	DEFIANCE, CITY OF	390144	139	$1,359,911.50	$428,636.20	$1,788,547.70	41	34	7
ERIE COUNTY	BELLEVUE, CITY OF	390487	9	$253,297.87	$4,426.19	$257,724.06	4	4	0
	ERIE COUNTY (Unincorp.)	390153	61	$584,917.15	$128,739.45	$713,656.60	24	22	2
	HURON, CITY OF	390154	48	$432,864.16	$98,793.31	$531,657.47	12	9	3
	SANDUSKY, CITY OF	390156	68	$312,076.06	$86,531.08	$398,607.14	25	24	1
	VERMILION, CITY OF	395374	145	$1,178,536.15	$453,163.90	$1,631,700.05	34	25	9
FULTON COUNTY	FULTON COUNTY (Unincorp.)	390182	3	$15,878.25	$8,520.10	$24,398.35	1	1	0
HANCOCK COUNTY	FINDLAY, CITY OF	390244	801	$17,581,469.00	$1,735,775.17	$19,317,244.17	253	210	43
	HANCOCK COUNTY (Unincorp.)	390767	34	$415,520.26	$53,785.59	$469,305.85	13	11	2
HARDIN COUNTY	KENTON, CITY OF	390253	4	$133,974.27	$2,000.00	$135,974.27	2	1	1
HENRY COUNTY	HENRY COUNTY (Unincorp.)	390776	62	$513,413.69	$128,811.88	$642,225.57	18	15	3
	HOLGATE, VILLAGE OF	390265	16	$207,317.44	$42,329.62	$249,647.06	5	5	0
	LIBERTY CENTER, VILLAGE OF	390619	4	$19,462.46	$17,148.84	$36,611.30	1	1	0
	NAPOLEON, CITY OF	390266	13	$54,197.46	$29,921.84	$84,119.30	5	5	0
HURON COUNTY	MONROEVILLE, VILLAGE OF	390283	2	$8,255.38	$0.00	$8,255.38	1	1	0
	NORWALK, CITY OF	390286	15	$312,194.07	$32,238.58	$344,432.65	6	6	0
LOGAN COUNTY	BELLEFONTAINE, CITY OF	390340	2	$6,998.71	$0.00	$6,998.71	1	1	0
	LAKEVIEW, VILLAGE OF	390341	15	$173,233.10	$6,901.29	$186,804.83	6	5	1
	LOGAN COUNTY (Unincorp.)	390772	5	$71,668.03	$16,192.01	$87,860.04	2	2	0
	RUSSELLS POINT, VILLAGE OF	390342	15	$217,989.12	$9,572.79	$227,561.91	4	3	1

LUCAS COUNTY	LUCAS COUNTY (Unincorp.)	390359	33	$468,594.05	$12,720.44	$481,314.49	13	12	1
	MAUMEE, CITY OF	390360	2	$7,669.86	$6,659.34	$14,329.20	1	1	0
	OREGON, CITY OF	390361	26	$284,959.79	$22,752.94	$307,712.73	10	10	0
	TOLEDO, CITY OF	395373	151	$1,624,142.17	$191,083.70	$1,815,225.87	52	46	6
	WATERVILLE, VILLAGE OF	390637	15	$100,350.04	$34,449.89	$134,799.93	4	3	1
MADISON COUNTY	LONDON,CITY OF	390366	2	$10,109.21	$5,554.64	$15,663.85	1	1	0
MARION COUNTY	GREEN CAMP, VILLAGE OF	390374	8	$63,025.32	$1,904.54	$64,929.86	3	2	1
	LA RUE, VILLAGE OF	390375	20	$1,700,167.33	$42,834.85	$1,743,002.18	20	20	0
	MARION COUNTY (Unincorp.)	390774	22	$377,822.19	$43,037.42	$420,859.61	10	9	1
	PROSPECT, VILLAGE OF	390377	14	$90,453.53	$50.00	$90,503.53	4	4	0
MERCER COUNTY	FORT RECOVERY, VILLAGE OF	390395	18	$182,731.07	$65,042.75	$247,773.82	9	9	0
	MERCER COUNTY (Unincorp.)	390392	24	$259,129.93	$26,082.28	$285,212.21	8	8	0
MIAMI COUNTY	MIAMI COUNTY (Unincorp.)	390398	26	$566,807.60	$80,495.58	$647,303.18	11	10	1
	TROY, CITY OF	390402	9	$150,426.64	$25,500.05	$175,926.69	4	4	0
OTTAWA COUNTY	OAK HARBOR, VILLAGE OF	390433	14	$75,367.45	$9,446.92	$84,814.37	4	4	0
	OTTAWA COUNTY (Unincorp.)	390432	329	$2,344,341.72	$602,695.22	$2,947,036.94	116	113	3
	PORT CLINTON, CITY OF	390434	32	$186,225.44	$73,441.74	$259,667.18	10	8	2
PAULDING COUNTY	PAULDING COUNTY (Unincorp.)	390777	9	$126,636.82	$21,759.28	$148,396.10	4	4	0
	PAULDING, VILLAGE OF	390438	2	$28,694.27	$0.00	$28,694.27	1	1	0
PREBLE COUNTY	PREBLE COUNTY (Unincorp.)	390460	2	$35,934.92	$0.00	$35,934.92	1	1	0
PUTNAM COUNTY	OTTAWA, VILLAGE OF	390472	141	$2,579,378.08	$309,064.11	$2,888,442.19	41	33	8
	PUTNAM COUNTY (Unincorp.)	390465	8	$80,017.67	$2,722.32	$82,739.99	3	3	0
SANDUSKY COUNTY	CLYDE, CITY OF	390489	3	$8,605.00	$0.00	$8,605.00	1	1	0
	FREMONT, CITY OF	390490	3	$7,096.07	$3,424.53	$10,520.60	1	1	0
	SANDUSKY COUNTY (Unincorp.)	390486	24	$192,050.43	$32,248.51	$224,298.94	10	10	0
	WOODVILLE, VILLAGE OF	390495	15	$81,527.59	$2,073.00	$83,600.59	3	2	1
SENECA COUNTY	SENECA COUNTY (Unincorp.)	390779	15	$156,939.62	$9,731.96	$166,671.58	6	5	1
	TIFFIN, CITY OF	390502	22	$761,319.46	$51,240.98	$812,560.44	9	9	0
SHELBY COUNTY	SHELBY COUNTY (Unincorp.)	390503	15	$79,049.99	$1,923.37	$80,973.36	6	6	0
	SIDNEY, CITY OF	390507	7	$17,088.45	$0.00	$17,088.45	3	3	0
UNION COUNTY	MARYSVILLE, CITY OF	390548	6	$11,773.95	$7,827.62	$19,601.57	1	1	0
	RICHWOOD, VILLAGE OF	390549	5	$8,228.11	$13,993.95	$22,222.06	1	1	0
	UNION COUNTY (Unincorp.)	390808	6	$65,842.84	$0.00	$65,842.84	3	3	0
VAN WERT COUNTY	VAN WERT, CITY OF	390552	2	$2,764.50	$106.54	$2,871.04	1	1	0
WILLIAMS COUNTY	BRYAN, CITY OF	390580	4	$266,459.83	$311,196.71	$577,656.54	2	2	0
	WILLIAMS COUNTY (Unincorp.)	390785	3	$29,099.19	$0.00	$29,099.19	1	1	0
WOOD COUNTY	BOWLING GREEN, CITY OF	390583	2	$12,599.00	$5,626.51	$18,225.51	1	1	0
	GRAND RAPIDS, VILLAGE OF	390585	21	$239,676.05	$37,727.60	$277,403.65	9	9	0
	MILLBURY, VILLAGE OF	390586	2	$13,369.47	$3,904.17	$17,273.64	1	1	0
	PEMBERVILLE, VILLAGE OF	390624	17	$201,075.61	$56,892.50	$257,968.11	7	6	1
	WOOD COUNTY (Unincorp.)	390809	17	$99,499.15	$8,912.44	$108,411.59	7	7	0
WYANDOT COUNTY	CAREY, VILLAGE OF	390590	39	$1,271,738.51	$69,307.84	$1,341,046.35	14	11	3
	WYANDOT COUNTY (Unincorp.)	390787	4	$55,070.93	$28,937.71	$84,008.64	2	2	0
	REGION 1 SUBTOTAL		**2,768**	**$41,345,453.38**	**$6,290,098.57**	**$47,655,163.90**	**937**	**830**	**107**

Region 2									
County Name	**Community Name**	**Community Number**	**Total Losses**	**Total Building Payment**	**Total Contents Payment**	**Total Payment**	**Total RL/SRL Structures**	**Total RL Structures**	**Total SRL Structures**
ASHLAND COUNTY	ASHLAND COUNTY (Unincorp.)	390759	5	$59,129.23	$39,192.48	$98,321.71	2	2	0
	ASHLAND, CITY OF	390007	4	$0.00	$11,775.94	$11,775.94	2	2	0
	LOUDONVILLE, VILLAGE OF	390009	2	$150,056.63	$13,954.42	$164,011.05	1	1	0

ASHTABULA COUNTY	ASHTABULA COUNTY (Unincorp.)	390010	41	$518,255.76	$139,470.97	$657,726.73	12	10	2
	CONNEAUT, CITY OF	390012	2	$23,967.12	$0.00	$23,967.12	1	1	0
	GENEVA, CITY OF	390013	2	$9,990.64	$0.00	$9,990.64	1	1	0
	JEFFERSON, VILLAGE OF	390014	4	$122,005.80	$8,313.11	$130,318.91	1	1	0
BUTLER COUNTY	BUTLER COUNTY (Unincorp.)	390037	20	$276,070.24	$92,469.12	$368,539.36	8	8	0
	FAIRFIELD, CITY OF	390038	92	$887,210.20	$215,146.55	$826,286.51	31	30	1
	HAMILTON, CITY OF	390039	7	$111,037.77	$14.39	$111,052.16	3	3	0
	MIDDLETOWN, CITY OF	390040	3	$25,998.87	$0.00	$25,998.87	1	1	0
	MILLVILLE, VILLAGE OF	390041	3	$23,432.21	$0.00	$23,432.21	1	1	0
	MONROE, CITY OF	390042	4	$127,734.81	$50,622.73	$178,357.54	1	0	1
	SHARONVILLE,CITY OF	390236	22	$827,052.78	$512,576.24	$1,343,500.11	9	9	0
	SOMERVILLE, VILLAGE OF	390046	4	$23,825.87	$0.00	$23,825.87	2	2	0
CUYAHOGA COUNTY	BAY VILLAGE, CITY OF	390093	3	$31,394.66	$641.36	$32,036.02	1	1	0
	BEACHWOOD, CITY OF	390094	4	$25,066.72	$0.00	$25,066.72	1	1	0
	BEDFORD HEIGHTS, CITY OF	390096	26	$246,650.55	$459,157.73	$705,808.28	3	2	1
	BEDFORD , CITY OF	390095	3	$8,949.48	$0.00	$8,949.48	1	1	0
	BENTLEYVILLE, VILLAGE OF	390682	3	$11,217.19	$0.00	$11,217.19	1	1	0
	BEREA, CITY OF	390097	2	$4,337.04	$533.79	$4,870.83	1	1	0
	BRECKSVILLE, CITY OF	390098	13	$426,390.70	$55,737.66	$482,128.36	5	5	0
	BROADVIEW HEIGHTS, CITY OF	390099	4	$58,409.66	$19,970.62	$78,380.28	4	4	0
	CLEVELAND, CITY OF	390104	22	$317,492.93	$405,726.17	$723,219.10	9	8	1
	CUYAHOGA COUNTY (Unincorp.)	390766	11	$70,645.02	$24,899.54	$95,544.56	4	4	0
	EUCLID, CITY OF	390107	2	$10,289.08	$0.00	$10,289.08	1	1	0
	GARFIELD HEIGHTS, CITY OF	390109	12	$186,537.59	$38,153.86	$224,691.45	4	4	0
	GATES MILLS, VILLAGE OF	390593	4	$38,691.07	$0.00	$38,691.07	2	2	0
	INDEPENDENCE, CITY OF	390111	114	$5,953,080.91	$6,150,118.68	$12,103,199.59	20	7	13
	LAKEWOOD, CITY OF	390112	12	$160,635.40	$48,565.27	$209,200.67	3	1	2
	MAYFIELD, VILLAGE OF	390116	9	$957,339.62	$5,367.55	$962,707.17	2	1	1
	MIDDLEBURG HEIGHTS, CITY OF	390117	15	$192,947.70	$18,811.02	$211,758.72	6	6	0
	NORTH OLMSTED, CITY OF	390120	11	$78,519.40	$9,869.45	$88,388.85	5	5	0
	NORTH ROYALTON, CITY OF	390121	20	$211,877.32	$30,156.47	$242,033.79	6	5	1
	OAKWOOD, VILLAGE OF	390122	2	$13,852.19	$667.19	$14,519.38	1	1	0
	PARMA, CITY OF	390123	6	$31,927.39	$0.00	$31,927.39	3	3	0
	PEPPER PIKE, CITY OF	390125	9	$104,903.32	$1,362.94	$106,266.26	4	4	0
	RICHMOND HEIGHTS, CITY OF	390126	3	$16,559.96	$2,551.86	$19,111.82	1	1	0
	ROCKY RIVER, CITY OF	395372	5	$25,161.51	$7,435.38	$32,596.89	1	1	0
	SEVEN HILLS, CITY OF	390128	2	$24,673.63	$0.00	$24,673.63	1	1	0
	SOLON, CITY OF	390130	2	$95,325.31	$100,000.00	$195,325.31	1	1	0
	STRONGSVILLE, CITY OF	390132	11	$156,702.94	$27,419.49	$184,122.43	5	5	0
	VALLEY VIEW, VILLAGE OF	390134	216	$11,002,194.19	$1,418,286.13	$4,396,973.72	49	37	12
	WALTON HILLS, VILLAGE OF	390636	2	$11,908.14	$15,032.41	$26,940.55	1	1	0
	WESTLAKE, CITY OF	390136	5	$310,687.43	$37,174.25	$347,861.68	2	2	0
DELAWARE COUNTY	DELAWARE COUNTY (Unincorp.)	390146	24	$337,081.67	$47,664.38	$384,746.05	8	6	2
	POWELL, VILLAGE OF	390626	2	$23,220.49	$1,881.00	$25,101.49	1	1	0
	WESTERVILLE, CITY OF	390179	2	$4,128.96	$0.00	$4,128.96	1	1	0
FAIRFIELD COUNTY	BUCKEYE LAKE, VILLAGE OF	390882	4	$35,184.22	$0.00	$35,184.22	2	2	0
	FAIRFIELD COUNTY (Unincorp.)	390158	12	$87,662.67	$92,390.43	$180,053.10	6	5	1
	LANCASTER, CITY OF	390161	23	$160,575.85	$6,962.82	$439,609.30	10	9	1
	PICKERINGTON, CITY OF	390162	4	$31,392.87	$4,936.30	$36,329.17	2	2	0
	REYNOLDSBURG, CITY OF	390177	30	$234,449.06	$77,037.70	$311,486.76	9	7	2

FRANKLIN COUNTY	BEXLEY, CITY OF	390168	4	$2,319.75	$5,859.67	$8,179.42	3	3	0
	COLUMBUS, CITY OF	390170	76	$803,808.17	$259,144.15	$1,062,952.32	70	68	2
	FRANKLIN COUNTY (Unincorp.)	390167	54	$549,167.19	$123,242.37	$672,409.56	22	22	0
	GAHANNA, CITY OF	390171	3	$24,779.34	$0.00	$24,779.34	1	1	0
	GROVE CITY, CITY OF	390173	8	$50,334.17	$16,369.59	$66,703.76	4	4	0
	UPPER ARLINGTON, CITY OF	390178	6	$19,003.46	$31,348.76	$50,352.22	3	3	0
	WHITEHALL, CITY OF	390180	2	$4,322.43	$0.00	$4,322.43	1	1	0
	WORTHINGTON, CITY OF	390181	12	$164,545.81	$64,891.14	$229,436.95	4	3	1
GEAUGA COUNTY	GEAUGA COUNTY (Unincorp.)	390190	11	$178,829.29	$15,581.46	$194,410.75	4	3	1
	SOUTH RUSSELL, VILLAGE OF	390740	2	$23,784.02	$13,193.95	$36,977.97	1	1	0
GREENE COUNTY	BEAVERCREEK, CITY OF	390876	4	$32,672.72	$1,338.57	$34,011.29	2	2	0
	FAIRBORN, CITY OF	390195	6	$69,332.02	$0.00	$69,332.02	1	1	0
	GREENE COUNTY (Unincorp.)	390193	8	$27,024.57	$12,025.17	$39,049.74	3	2	1
	HUBER HEIGHTS, CITY OF	390884	2	$7,361.34	$4,797.41	$12,158.75	1	1	0
	XENIA, CITY OF	390197	6	$77,239.05	$88,852.52	$166,091.57	2	2	0
HAMILTON COUNTY	AMBERLEY, VILLAGE OF	390206	13	$80,530.42	$30,012.16	$110,542.58	4	4	0
	CINCINNATI, CITY OF	390210	220	$5,707,181.76	$3,029,774.44	$8,736,956.20	65	55	10
	CLEVES, VILLAGE OF	390211	11	$162,048.35	$49,885.98	$211,934.33	2	1	1
	EVENDALE, VILLAGE OF	390214	14	$404,521.75	$373,147.90	$777,669.65	3	1	2
	FAIRFAX, VILLAGE OF	390215	13	$233,034.22	$176,657.67	$409,691.89	5	4	1
	GREENHILLS, VILLAGE OF	390219	11	$40,597.24	$15,704.03	$56,301.27	3	3	0
	HAMILTON COUNTY (Unincorp.)	390204	116	$1,669,091.24	$381,788.44	$2,050,879.68	41	37	4
	INDIAN HILL, CITY OF	390221	2	$42,128.90	$3,664.59	$45,793.49	1	1	0
	MONTOGERMY, CITY OF	390228	2	$10,845.61	$0.00	$10,845.61	1	1	0
	MOUNT HEALTHY, CITY OF	390229	2	$1,028.23	$1,831.75	$2,859.98	1	1	0
	NEWTOWN, VILLAGE OF	390230	5	$33,941.12	$38,809.04	$72,750.16	2	2	0
	NORTH COLLEGE HILL, CITY OF	390232	8	$67,066.40	$5,146.93	$72,213.33	4	4	0
	READING, CITY OF	390234	5	$50,611.64	$0.00	$50,611.64	2	2	0
	SPRINGDALE, CITY OF	390877	6	$113,962.69	$0.00	$113,962.69	3	3	0
	TERRACE PARK, VILLAGE OF	390633	2	$5,879.78	$0.00	$5,879.78	1	1	0
	WOODLAWN, VILLAGE OF	390239	3	$37,836.25	$27,737.57	$65,573.82	1	1	0
	WYOMING, CITY OF	390240	2	$14,245.45	$8,935.90	$23,181.35	1	1	0
KNOX COUNTY	FREDERICKTOWN, VILLAGE OF	390309	2	$7,421.99	$1,218.47	$8,640.46	1	1	0
	KNOX COUNTY (Unicorp.)	390306	2	$31,814.00	$0.00	$31,814.00	1	1	0
	MOUNT VERNON, CITY OF	390311	2	$9,194.61	$0.00	$9,194.61	1	1	0
LAKE COUNTY	EASTLAKE, CITY OF	390313	110	$884,023.39	$174,905.65	$1,058,929.04	41	40	1
	FAIRPORT HARBOR, VILLAGE OF	390314	19	$187,885.25	$15,284.01	$203,169.26	1	0	1
	GRAND RIVER, VILLAGE OF	390315	9	$195,081.94	$25,517.02	$220,598.96	2	2	0
	LAKE COUNTY (Unincorp.)	390771	23	$632,056.21	$28,783.81	$660,840.02	9	8	1
	MADISON, VILLAGE OF	390316	5	$111,679.65	$9,941.50	$121,621.15	2	2	0
	MENTOR, CITY OF	390317	4	$55,603.57	$18,095.63	$73,699.20	2	2	0
	PAINESVILLE, CITY OF	390319	6	$55,361.65	$12,658.62	$68,020.27	3	3	0
	PERRY, VILLAGE OF	390320	2	$3,939.63	$2,794.65	$6,734.28	1	1	0
	WILLOUGHBY HILLS, CITY OF	390323	30	$373,164.84	$254,572.01	$627,736.85	10	7	3
	WILLOUGHBY, CITY OF	390322	12	$141,458.76	$47,807.34	$189,266.10	5	4	1
	WILLOWICK, CITY OF	390324	5	$138,430.33	$221.47	$138,651.80	2	2	0
LICKING COUNTY	ALEXANDRIA, VILLAGE OF	390329	2	$3,879.92	$0.00	$3,879.92	1	1	0
	HEATH, CITY OF	390332	5	$29,395.36	$13,076.62	$42,471.98	2	2	0
	HEBRON, VILLAGE OF	390333	24	$287,225.70	$86,848.78	$374,074.48	7	5	2
	LICKING COUNTY (Unincorp.)	390328	26	$225,476.28	$26,601.98	$252,078.26	9	7	2
	NEWARK,CITY OF	390335	2	$2,492.20	$0.00	$2,492.20	1	1	0
	PATASKALA, CITY OF	390336	2	$59,525.48	$8,519.90	$68,045.38	1	1	0

LORAIN COUNTY	AVON LAKE, CITY OF	390602	4	$29,908.98	$0.00	$29,908.98	2	2	0
	AVON, CITY OF	390348	13	$167,085.05	$4,634.87	$171,719.92	6	6	0
	BROWNHELM, TOWNSHIP OF	395371	6	$18,756.96	$5,532.43	$24,289.39	3	3	0
	LORAIN COUNTY (Unincorp.)	395371	58	$617,605.82	$124,532.14	$742,137.96	16	15	1
	LORAIN, CITY OF	390351	9	$520,573.43	$26,783.71	$547,357.14	4	4	0
	NORTH RIDGEVILLE, CITY OF	390352	29	$514,319.17	$21,109.52	$535,428.69	13	13	0
	SHEFFIELD, VILLAGE OF	390354	2	$0.00	$10,972.80	$10,972.80	1	1	0
	SOUTH AMHERST, VILLAGE OF	390356	6	$155,450.88	$23,041.03	$178,491.91	2	1	1
MAHONING COUNTY	CANFIELD, CITY OF	390369	2	$14,023.09	$5,797.65	$19,820.74	1	1	0
	MAHONING COUNTY (Unincorp.)	390367	56	$372,550.62	$105,589.80	$478,140.42	22	22	0
	YOUNGSTOWN, CITY OF	390373	13	$49,395.81	$499,460.77	$548,856.58	4	3	1
MEDINA COUNTY	BRIARWOOD BEACH, VILLAGE OF	390379	2	$8,865.61	$0.00	$8,865.61	1	1	0
	BRUNSWICK, CITY OF	390380	4	$27,220.42	$2,878.17	$30,098.59	2	2	0
	CHIPPEWA-ON-THE-LAKE, VILLAGE OF	390644	2	$13,620.03	$0.00	$13,620.03	1	1	0
	GLORIA GLENS PARK, VILLAGE OF	390381	63	$506,361.94	$68,568.82	$574,930.76	10	7	3
	MEDINA COUNTY (Unincorp.)	390378	33	$1,193,395.06	$258,607.17	$1,452,002.23	10	7	3
	MEDINA, CITY OF	390383	4	$13,250.89	$0.00	$13,250.89	2	2	0
	RITTMAN, CITY OF	390578	2	$3,982.51	$4,370.04	$8,352.55	1	1	0
MONTGOMERY COUNTY	BROOKVILLE, CITY OF	390407	2	$4,350.78	$0.00	$4,350.78	1	1	0
	CLAYTON, CITY OF	390821	3	$19,472.70	$0.00	$19,472.70	1	1	0
	DAYTON, CITY OF	390409	14	$173,158.96	$39,680.04	$212,839.00	5	3	2
	MONTGOMERY COUNTY (Unincorp.)	390775	13	$99,638.28	$23,307.91	$122,946.19	6	6	0
	VANDALIA, CITY OF	390418	7	$109,622.57	$12,828.17	$122,450.74	2	1	1
PICKAWAY COUNTY	CIRCLEVILLE, CITY OF	390447	2	$0.00	$17,092.62	$17,092.62	1	1	0
	PICKAWAY COUNTY (Unincorp.)	390445	14	$254,341.57	$40,000.00	$294,341.57	6	5	1
PORTAGE COUNTY	AURORA, CITY OF	390454	4	$3,516.43	$4,528.71	$8,045.14	2	2	0
	PORTAGE COUNTY (Unincorp.)	390453	10	$183,932.01	$12,211.11	$196,143.12	5	5	0
RICHLAND COUNTY	BELLVILLE, VILLAGE OF	390604	26	$392,666.43	$177,222.53	$569,888.96	9	7	2
	BUTLER, VILLAGE OF	390605	2	$5,527.56	$0.00	$5,527.56	1	1	0
	MANSFIELD, CITY OF	390477	26	$902,398.61	$501,068.58	$1,403,467.19	12	12	0
	ONTARIO, VILLAGE OF	390478	3	$6,670.97	$1,494.84	$8,165.81	1	1	0
	RICHLAND COUNTY (Unincorp.)	390476	9	$80,356.91	$320.80	$80,677.71	4	4	0
	SHELBY, CITY OF	390479	56	$974,718.82	$245,439.26	$1,220,158.08	20	17	3
STARK COUNTY	CANAL FULTON, CITY OF	390511	11	$27,133.02	$31,679.75	$58,812.77	3	3	0
	CANTON, CITY OF	390512	2	$13,752.21	$1,426.75	$15,178.96	1	1	0
	EAST CANTON, VILLAGE OF	390513	2	$9,996.06	$5,102.15	$15,098.21	1	1	0
	LOUISVILLE, CITY OF	390516	21	$1,297,304.80	$882,221.19	$2,179,525.99	7	5	2
	MASSILLON, CITY OF	390517	6	$19,559.63	$6,039.94	$25,599.57	1	1	0
	NORTH CANTON, CITY OF	390521	20	$160,705.81	$23,047.47	$183,753.28	8	7	1
	STARK COUNTY (Unincorp.)	390780	73	$1,691,035.37	$401,272.74	$2,092,308.11	20	19	1
SUMMIT COUNTY	AKRON, CITY OF	390523	43	$498,960.62	$43,054.94	$542,015.56	19	19	0
	BARBERTON, CITY OF	390524	80	$809,811.99	$209,823.56	$1,019,635.55	33	33	0
	CLINTON, VILLAGE OF	390525	9	$31,033.45	$7,267.09	$38,300.54	3	3	0
	FAIRLAWN, CITY OF	390657	2	$2,887.79	$1,454.37	$4,342.16	1	1	0
	HUDSON, CITY OF	390660	2	$24,382.92	$26,931.06	$51,313.98	1	1	0
	MUNROE FALLS, CITY OF	390843	9	$192,756.60	$17,911.74	$210,668.34	2	0	2
	NORTON, CITY OF	390529	9	$1,425,143.88	$610,200.00	$2,035,343.88	4	4	0
	PENINSULA, VILLAGE OF	390530	2	$49,921.27	$7,114.82	$57,036.09	1	1	0
	REMINDERVILLE, VILLAGE OF	390855	2	$4,599.19	$0.00	$4,599.19	1	1	0
	STOW, CITY OF	390532	11	$44,896.02	$39,180.01	$84,076.03	4	4	0
	SUMMIT COUNTY (Unincorp.)	390781	51	$888,388.69	$226,403.79	$1,114,792.48	19	16	3
	TALLMADGE, CITY OF	390533	2	$101,704.83	$0.00	$101,704.83	1	1	0

TRUMBULL COUNTY	GIRARD, CITY OF	390536	4	$25,489.72	$979.04	$26,468.76	1	1	0
	HUBBARD, CITY OF	390537	3	$24,684.51	$0.00	$24,684.51	1	1	0
	TRUMBULL COUNTY (Unincorp.)	390535	74	$1,126,862.54	$340,121.56	$1,466,984.10	29	27	2
	WARREN, CITY OF	390541	26	$283,125.96	$35,514.16	$318,640.12	9	8	1
WARREN COUNTY	LEBANON, CITY OF	390557	2	$4,123.32	$0.00	$4,123.32	1	1	0
	MASON, CITY OF	390559	3	$33,638.38	$933.80	$34,572.18	1	1	0
	MORROW, VILLAGE OF	390561	2	$2,720.00	$530.00	$3,250.00	1	1	0
	SOUTH LEBANON, VILLAGE OF	390563	18	$302,810.43	$49,835.58	$352,646.01	5	3	2
	SPRINGBORO, CITY OF	390564	2	$1,459.79	$11,119.26	$12,579.05	1	1	0
	WARREN COUNTY (Unincorp.)	390757	11	$135,726.31	$46,232.75	$181,959.06	5	5	0
WAYNE COUNTY	APPLE CREEK, VILLAGE OF	390642	4	$99,248.97	$6,735.72	$105,984.69	2	2	0
	WAYNE COUNTY (Unincorp.)	390574	6	$11,216.85	$16,498.24	$27,715.09	2	2	0
REGION 2 SUBTOTAL			**2,806**	**$55,750,707.48**	**$20,945,148.51**	**$68,672,220.87**	**992**	**885**	**107**

Region 3

County Name	Community Name	Community Number	Total Losses	Total Building Payment	Total Contents Payment	Total Payment	Total RL/SRL Structures	Total RL Structures	Total SRL Structures
ADAMS COUNTY	ADAMS COUNTY (Unincorp.)	390001	17	$204,373.92	$27,260.37	$231,634.29	6	5	1
ATHENS COUNTY	AMESVILLE, VILLAGE OF	390015	11	$340,662.79	$72,221.84	$412,884.63	5	4	1
	ATHENS COUNTY (Unincorp.)	390760	59	$879,418.39	$165,605.81	$1,045,024.20	17	13	4
	BUCHTEL, VILLAGE OF	390728	2	$8,813.10	$0.00	$8,813.10	1	1	0
	CHAUNCEY, VILLAGE OF	390017	72	$269,730.38	$56,912.18	$335,455.66	11	10	1
	GLOUSTER, VILLAGE OF	390018	15	$138,571.05	$27,303.21	$165,874.26	7	6	1
	JACKSONVILLE, VILLAGE OF	390019	4	$42,349.30	$19,561.08	$61,910.38	2	2	0
	NELSONVILLE, CITY OF	390020	7	$21,115.37	$0.00	$21,115.37	3	3	0
	TRIMBLE,VILLAGE OF	390021	29	$307,962.43	$185,454.82	$493,417.25	14	14	0
BELMONT COUNTY	BELLAIRE, CITY OF	390025	6	$105,895.12	$0.00	$105,895.12	3	3	0
	BELMONT COUNTY (Unincorp.)	390762	72	$663,421.23	$86,091.76	$749,512.99	30	28	2
	BRIDGEPORT, VILLAGE OF	390026	3	$27,879.08	$3,589.35	$31,468.43	1	1	0
	BROOKSIDE, VILLAGE OF	390027	18	$208,103.20	$30,853.62	$238,956.82	6	6	0
	MARTINS FERRY, CITY OF	390029	11	$668,187.83	$25,312.85	$693,500.68	4	4	0
	POWHATAN POINT, VILLAGE OF	390030	35	$679,094.85	$80,202.86	$759,297.71	16	16	0
	YORKVILLE, VILLAGE OF	390033	2	$25,714.92	$0.00	$25,714.92	1	1	0
BROWN COUNTY	ABERDEEN, VILLAGE OF	390675	2	$16,468.56	$2,164.00	$18,632.56	1	1	0
	BROWN COUNTY (Unincorp.)	390034	6	$61,511.16	$0.00	$61,511.16	2	2	0
	GEORGETOWN, VILLAGE OF	390035	2	$8,484.94	$712.40	$9,197.34	1	1	0
CARROLL COUNTY	CARROLL COUNTY (Unincorp.)	390763	5	$14,872.60	$0.00	$14,872.60	2	2	0
	MINERVA, VILLAGE OF	390518	2	$33,513.62	$6,198.62	$39,712.24	1	1	0
CLERMONT COUNTY	BATAVIA, VILLAGE OF	390066	6	$10,585.00	$110.00	$10,695.00	2	2	0
	CLERMONT COUNTY (Unincorp.)	390065	30	$375,453.95	$265,439.20	$640,893.15	12	11	1
	LOVELAND, CITY OF	390068	10	$54,674.28	$10,351.13	$65,025.41	4	4	0
	NEW RICHMOND, VILLAGE OF	390071	41	$591,312.36	$89,449.45	$680,761.81	14	13	1
	WILLIAMSBURG, VILLAGE OF	390072	3	$91,781.97	$591,896.79	$683,678.76	1	1	0
COLUMBIANA COUNTY	COLUMBIANA COUNTY (Unincorp.)	390076	9	$116,780.91	$25,855.81	$142,636.72	4	4	0
	EAST PALESTINE, CITY OF	390079	2	$12,355.41	$0.00	$12,355.41	1	1	0
	HANOVERTON, VILLAGE OF	390082	5	$33,887.00	$9,807.01	$43,694.01	2	2	0
	LISBON, VILLAGE OF	390085	2	$5,262.33	$1,686.17	$6,948.50	1	1	0
	WELLSVILLE, CITY OF	390088	6	$16,101.16	$1,408.75	$17,509.91	2	2	0
COSHOCTON COUNTY	COSHOCTON COUNTY (Unincorp.)	390765	8	$45,885.95	$2,068.31	$47,954.26	4	4	0
GALLIA COUNTY	CHESHIRE, VILLAGE OF	390186	6	$41,889.23	$569.08	$42,458.31	1	0	1
	GALLIA COUNTY (Unincorp.)	390185	41	$381,030.69	$167,008.07	$548,038.76	13	10	3
	VINTON, VILLAGE OF	390189	4	$57,859.26	$34,565.23	$92,424.49	1	0	1

GUERNSEY COUNTY	BYESVILLE, VILLAGE OF	390199	32	$852,495.22	$90,462.24	$942,957.46	15	14	1
	CAMBRIDGE, CITY OF	390200	59	$1,719,479.29	$799,737.24	$2,519,216.53	22	22	0
	GUERNSEY COUNTY (Unincorp.)	390198	30	$421,630.01	$824,176.07	$1,245,806.08	13	13	0
	LORE CITY, VILLAGE OF	390202	5	$26,705.92	$7,805.51	$34,511.43	2	2	0
	PLEASANT CITY, VILLAGE OF	390203	2	$9,098.43	$0.00	$9,098.43	1	1	0
	QUAKER CITY, VILLAGE OF	390853	11	$110,583.82	$12,800.00	$123,383.82	4	3	1
HARRISON COUNTY	ADENA, VILLAGE OF	390295	2	$10,370.63	$0.00	$10,370.63	1	1	0
	BOWERSTON,VILLAGE OF	390257	14	$66,269.78	$87,542.24	$153,812.02	3	0	3
	JEWETT, VILLAGE OF	390259	3	$43,485.31	$0.00	$43,485.31	1	1	0
HIGHLAND COUNTY	HILLSBORO, CITY OF	390269	2	$0.00	$11,992.37	$11,992.37	1	1	0
HOCKING COUNTY	HOCKING COUNTY (Unincorp.)	390272	22	$93,753.28	$23,990.64	$117,743.92	7	7	0
	MURRAY CITY, VILLAGE OF	390275	16	$96,506.65	$31,658.19	$128,164.84	6	5	1
HOLMES COUNTY	GLENMONT, VILLAGE OF	390277	2	$10,138.41	$0.00	$10,138.41	1	1	0
	HOLMES COUNTY (Unincorp.)	390276	2	$36,021.98	$1,437.49	$37,459.47	1	1	0
	KILLBUCK, CITY OF	390279	13	$47,382.46	$10,560.67	$57,943.13	6	6	0
	MILLERSBURG, VILLAGE OF	390280	3	$4,890.31	$24,607.24	$29,497.55	1	1	0
JACKSON COUNTY	COALTON, VILLAGE OF	390291	10	$117,731.46	$7,646.79	$125,378.25	3	2	1
	JACKSON COUNTY (Unincorp.)	390290	22	$376,422.60	$173,371.10	$549,793.70	6	4	2
	JACKSON, CITY OF	390292	23	$663,120.58	$55,570.51	$718,691.09	14	14	0
JEFFERSON COUNTY	DILLONVALE, VILLAGE OF	390298	16	$147,024.58	$14,078.22	$161,102.80	7	7	0
	IRONDALE, VILLAGE OF	390741	2	$23,073.04	$3,734.29	$26,807.33	1	1	0
	JEFFERSON COUNTY (Unincorp.)	390294	27	$432,334.95	$32,233.71	$487,641.70	11	11	0
	RAYLAND, VILLAGE OF	390301	4	$15,202.32	$0.00	$15,202.32	2	2	0
	TORONTO, CITY OF	390304	4	$196,266.33	$128,144.05	$324,410.38	2	2	0
LAWRENCE COUNTY	CHESAPEAKE, VILLAGE OF	390608	2	$8,194.20	$0.00	$8,194.20	1	1	0
	HANGING ROCK, VILLAGE OF	390699	3	$28,569.89	$9,055.00	$37,624.89	1	1	0
	LAWRENCE COUNTY (Unincorp.)	390325	117	$1,309,901.70	$219,815.64	$1,529,717.34	41	36	5
	PROCTORVILLE, VILLAGE OF	390700	8	$34,490.93	$29,024.16	$63,515.09	2	1	1
	SOUTH POINT, VILLAGE OF	390630	7	$297,021.98	$69,510.97	$366,532.95	6	6	0
MEIGS COUNTY	MEIGS COUNTY (Unincorp.)	390387	47	$540,900.29	$359,494.19	$900,394.48	18	14	4
	POMEROY, VILLAGE OF	390389	37	$248,604.47	$38,308.16	$286,912.63	13	11	2
	RUTLAND, VILLAGE OF	390670	21	$203,075.57	$135,964.32	$339,039.89	8	6	2
	SYRACUSE, VILLAGE OF	390391	2	$12,112.00	$4,823.28	$16,935.28	1	1	0
MONROE COUNTY	CLARINGTON, VILLAGE OF	390405	4	$44,542.86	$0.00	$44,542.86	2	2	0
	MONROE COUNTY (Unincorp.)	390404	19	$239,547.86	$37,059.96	$276,607.82	9	8	1
MORGAN COUNTY	MALTA, VILLAGE OF	390421	2	$3,400.00	$14.00	$3,414.00	1	1	0
	MCCONNELSVILLE, VILLAGE OF	390422	2	$17,520.55	$0.00	$17,520.55	1	1	0
	MORGAN COUNTY (Unincorp.)	390420	59	$686,361.73	$124,344.20	$810,705.93	24	21	3
MUSKINGUM COUNTY	MUSKINGUM COUNTY (Unincorp.)	390425	46	$523,431.73	$115,951.05	$639,382.78	2	2	0
	ZANESVILLE, CITY OF	390427	5	$151,582.78	$48,432.82	$200,015.60	2	2	0
NOBLE COUNTY	BELLE VALLEY, VILLAGE OF	390429	16	$361,944.37	$50,605.96	$412,550.33	8	8	0
	CALDWELL, VILLAGE OF	390430	6	$91,808.88	$24,152.32	$115,961.20	3	3	0
	DEXTER CITY, VILLAGE OF	390431	2	$95,942.49	$30,171.40	$126,113.89	1	1	0
	NOBLE COUNTY (Unincorp.)	390428	6	$81,128.91	$53,494.64	$134,623.55	3	3	0
PERRY COUNTY	CORNING, VILLAGE OF	390440	11	$255,005.64	$36,053.06	$291,058.70	4	3	1
	GLENFORD, VILLAGE OF	390442	2	$24,983.64	$0.00	$24,983.64	1	1	0
	NEW LEXINGTON, VILLAGE OF	390443	2	$44,435.76	$0.00	$44,435.76	1	1	0
	PERRY COUNTY (Unincorp.)	390778	2	$14,590.37	$309.10	$14,899.47	1	1	0
PIKE COUNTY	PIKE COUNTY (Unincorp.)	390450	22	$349,881.76	$99,118.32	$449,000.08	10	9	1
	PIKETON, VILLAGE OF	390451	2	$33,670.48	$0.00	$33,670.48	1	1	0
	WAVERLY, CITY OF	390452	4	$369,915.68	$38,577.43	$408,493.11	2	2	0
ROSS COUNTY	CHILLICOTHE, CITY OF	390482	6	$28,453.47	$10,551.84	$39,005.31	3	3	0
	FRANKFORT, VILLAGE OF	390484	2	$16,610.43	$4,997.79	$21,608.22	1	1	0
	ROSS COUNTY (Unincorp.)	390480	24	$286,235.92	$34,918.71	$321,154.63	9	8	1

SCIOTO COUNTY	PORTSMOUTH, CITY OF	390498	6	$47,019.03	$4,096.00	$51,115.03	3	3	0
	SCIOTO COUNTY (Unincorp.)	390496	52	$472,149.13	$105,599.85	$577,748.98	23	22	1
TUSCARAWAS COUNTY	DENNISON, VILLAGE OF	390542	3	$14,647.64	$733.90	$15,381.54	1	1	0
	DOVER, CITY OF	390543	2	$40,504.43	$4,438.96	$44,943.39	1	1	0
	NEW PHILADELPHIA, CITY OF	390545	15	$104,502.39	$30,207.18	$134,709.57	5	5	0
	TUSCARAWAS COUNTY (Unincorp.)	390782	16	$109,771.65	$6,072.41	$115,844.06	6	6	0
	UHRICHSVILLE, CITY OF	390547	7	$30,866.99	$4,059.84	$34,926.83	3	3	0
WASHINGTON COUNTY	BELPRE, CITY OF	390567	46	$764,289.74	$34,932.24	$799,221.98	17	15	2
	BEVERLY, VILLAGE OF	390568	7	$113,580.75	$0.00	$113,580.75	3	3	0
	LOWELL, VILLAGE OF	390569	6	$46,879.23	$2,597.09	$49,476.32	3	3	0
	LOWER SALEM, VILLAGE OF	390570	9	$219,435.58	$15,323.08	$234,758.66	3	2	1
	MACKSBURG, VILLAGE OF	390571	5	$56,932.80	$3,784.27	$60,717.07	2	2	0
	MARIETTA, CITY OF	390572	298	$7,266,053.04	$826,186.00	$8,092,239.04	120	111	9
	WASHINGTON COUNTY (Unincorp.)	390566	139	$2,292,911.48	$332,635.19	$2,625,546.67	54	47	7
REGION 3 SUBTOTAL			**1978**	**$30,064,400.92**	**$7,276,622.67**	**$37,372,909.73**	**751**	**684**	**67**

	Total Losses	Total Building Payment	Total Contents Payment	Total Payment	Total RL/SRL Structures	Total RL Structures	Total SRL Structures
STATE OF OHIO GRAND TOTAL	**7,552**	**$127,160,561.78**	**$34,511,869.75**	**$153,700,294.50**	**2,680**	**2,399**	**281**

Data Sources: WebDataExchange 4/14 and FEMA SRL List 4/14

NOTE: The Data contained on this report are Repetitive Loss Properties, as identified by the Federal Emergency Management Agency.

Web Data Exchange Report Description and Use

Report displays repetitive loss summary data by state and community. User selects current repetitive loss properties, mitigated properties, or combined. Report includes number of the selected type of properties in each community in the user's state, as well as community summary statistics. A drill-down to specific property data for each community is available.

Report Drivers

This report provides FEMA Mitigation Staff, regions, and states the opportunity to see whether particular communities/regions need to increase their mitigation outreach efforts to avoid future repetitive losses to their structures.

Field Descriptions

County Name: Name of the county. Report is divided into State regions, counties, and communities.
Community Name: Name of the community
Community Number: Six-digit number uniquely identifying the NFIP community
Total Losses: Total number of losses or claims identified by the NFIF
Total Building Payment: The total amount of payments on losses, excluding contents, for current RL properties in the community
Total Contents Payment: The total amount of payments on contents losses for current RL properties in the community
Total SRL Structures: The total number of properties that meet the statutory definition of SRL and included on FEMA's tracking list

Appendix C - State-Owned Critical and Non-Critical Facilities

Adams County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Natural Resources	0	$0	8	$1,033,100
Transportation	19	$3,210,607	0	$0
Ohio Historical Society	0	$0	1	$850

Allen County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Adjutant General	1	$4,960,889	0	$0
Job & Family Services	0	$0	1	$1,710,396
Natural Resources	0	$0	6	$2,293,755
Public Safety	1	$1,997,321	0	$0
Rehabilitation and Corrections	65	$53,134,111	0	$0
Transportation	50	$29,577,065	6	$498,372

Ashland County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Natural Resources	106	$43,493,645	1	$28,000
Public Safety	2	$2,263,524	0	$0
Transportation	31	$16,926,350	0	$0

Ashtabula County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Natural Resources	0	$0	139	$15,830,316
Public Safety	1	$2,679,552	1	$321,886
Transportation	57	$15,381,846	12	$2,026,259

Athens County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Mental Health and Addiction Services	9	$24,291,911	1	
Natural Resources	0	$0	34	$4,539,018
Public Safety	1	$3,343,585	0	$0
Rehabilitation and Corrections	5	$12,116,110	0	$0
Transportation	10	$2,811,856	7	$529,060

Auglaize County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$4,385,386	0	$0
Natural Resources	0	$0	47	$4,753,825
Ohio Historical Society	0	$0	6	$3,270,435
Public Safety	1	$2,915,075	0	$0
Transportation	17	$3,735,701	0	$0

Belmont County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	17	$1,710,750
Public Safety	1	$2,215,407	0	$0
Rehabilitation and Corrections	22	$43,966,224	4	$4,649,993
Transportation	36	$5,672,840	10	$636,380

Brown County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	5	$858,019
Ohio Historical Society	0	$0	5	$1,236,455
Public Safety	1	$3,270,567	0	$0
Transportation	8	$832,584	4	$567,666
Veterans Services	3	$27,451,291	0	$0

Butler County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$10,059,695	0	$0
Natural Resources	0	$0	7	$845,625
Public Safety	1	$2,402,146	2	$1,400,000
Transportation	18	$5,101,192	3	$393,875

Carroll County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Ohio Historical Society	0	$0	1	$1,112,000
Transportation	15	$2,290,075	0	$0

Champaign County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	28	$1,164,875
Ohio Historical Society	0	$0	4	$1,140,578
Transportation	23	$4,627,441	0	$0

Clark County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	52	$17,344,481
Public Safety	1	$3,641,152	0	$0
Transportation	25	$4,446,615	0	$0

Clermont County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Developmental Disabilities	14	$11,132,093	0	$0
Natural Resources	0	$0	47	$8,608,034
Ohio Historical Society	0	$0	4	$417,194
Public Safety	1	$3,043,189	0	$0
Transportation	22	$3,364,879	1	$32,797

Clinton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	46	$4,255,450
Public Safety	2	$8,159,814	1	$422,778
Transportation	19	$2,809,098	0	$0

Columbiana County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	22	$3,807,233
Ohio Historical Society	0	$0	2	$1,977,433
Public Safety	1	$2,871,451	0	$0
Transportation	33	$8,140,004	0	$0

Coshocton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$4,858,562	0	$0
Natural Resources	0	$0	9	$1,002,473
Transportation	14	$3,810,905	0	$0

Crawford County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	2	$7,150,179	0	$0
Transportation	10	$2,527,741	0	$0

Cuyahoga County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	4	$18,799,910	0	$0
Administrative Services	1	$108,393,110	0	$0
Developmental Disabilities	15	$20,105,617	0	$0
Natural Resources	0	$0	2	$1,848,125
Public Safety	1	$11,925,645	0	$0
Rehabilitation and Correction	14	$9,680,325	0	$0
Transportation	36	$30,001,508	0	$0
Department of Youth Services	4	$42,160,484	0	$0
Ohio History Connection	0	0	2	$944,576

Darke County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$2,943,354	0	$0
Ohio Historical Society	0	$0	4	$41,246
Transportation	23	$3,706,724	0	$0

Defiance County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	6	$197,450
Public Safety	1	$2,998,990	0	$0
Transportation	12	$4,563,684	0	$0

Delaware County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$12,671,682	0	$0
Natural Resources	0	$204,000	62	$21,496,560
Public Safety	1	$2,430,610	1	$20,400
Transportation	34	$30,220,913	8	$975,205

Erie County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$3,255,025	0	$0
Natural Resources	0	$0	37	$13,080,766
Public Safety	1	$2,722,425	0	$0
Transportation	16	$5,834,047	0	$0
Veterans Services	33	$149,412,438	0	$0

Fairfield County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$2,791,770	1	$513,290
Natural Resources	0	$0	11	$1,014,200
Public Safety	1	$2,943,416	0	$0
Rehabilitation and Corrections	61	$74,353,881	27	$13,924,132
Transportation	14	$5,769,433	0	$0

Fayette County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	3	$1,290,250
Transportation	20	$4,117,291	15	$1,056,251

Franklin County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	3	$38,286,990	0	$0
Bureau of Workers Compensation	0	$0	2	$194,536,403
Capitol Square Review Board	4	$237,088,814	1	$46,925,828
Administrative Services	11	$960,175,638	1	$126,000
Developmental Disabilities	20	$29,302,474	0	$0
Job and Family Services	0	$0	1	$22,958,639
Mental Health and Addiction Services	9	$45,904,375	0	$0
Natural Resources	0	$0	26	$75,798,216
Public Safety	7	$405,181,027	0	$0
Rehabilitation and Correction	13	$37,404,034	0	$0
Transportation	76	$124,687,159	1	$26,625
Judicial Supreme Court	0	$0	1	$242,457,166
Ohio Expositions Commission	31	$156,539,811	0	$0
Ohio History Connection	0	$0	27	$98,073,038
Ohio School for the Blind	20	$35,677,807	0	$0
Ohio School for the Deaf	34	$37,184,750	0	$0

Fulton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	32	$1,716,846
Transportation	14	$3,170,048	0	$0

Gallia County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Developmental Disabilities	56	$25,735,417	0	$21,776,188
Public Safety	2	$3,212,308	0	$0
Transportation	9	$3,243,150	11	$797,958
Ohio History Connection	0	$0	2	$819,618

Geauga County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	50	$11,133,092
Public Safety	1	$2,122,753	0	$0
Transportation	20	$4,568,140	0	$0

Greene County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$1,902,409	0	$0
Natural Resources	0	$0	21	$5,753,018
Ohio History Connection	0	$0	2	$9,000,000
Public Safety	1	$2,072,705	0	$0
Transportation	18	$4,498,394	0	$0

Guernsey County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Developmental Disabilities	22	$26,185,067	0	$0
Natural Resources	0	$0	113	$46,914,036
Public Safety	3	$6,801,569	1	$412,661
Transportation	25	$4,776,656	9	$904,422

Hamilton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$19,881,993	0	$0
Administrative Services	1	$89,000,000	0	$0
Mental Health and Addiction Services	3	$55,002,995	0	$0
Public Safety	0	$0	1	$212,277
Transportation	26	$5,884,049	0	$0
Ohio History Connection	0	$0	1	$1,132,400

Hancock County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	17	$3,299,548
Public Safety	3	$10,302,327	1	$462,997
Transportation	19	$5,275,066	11	$708,400

Hardin County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	1	$5,500
Transportation	12	$3,013,095	0	$0

Harrison County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Ohio Historical Society	0	$0	2	$22,695
Natural Resources	0	$0	4	$1,570,572
Transportation	26	$6,944,911	7	$275,048

Henry County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	25	$2,642,000
Transportation	13	$2,547,412	0	$0

Highland County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	51	$5,544,494
Ohio Historical Society	0	$0	2	$67,993
Transportation	6	$8,833,500	0	$0

Hocking County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	141	$13,246,699
Transportation	13	$2,902,923	6	$501,542

Holmes County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Transportation	23	$8,964,361	3	$107,789

Huron County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$3,143,865	0	$0
Natural Resources	0	$0	1	$55,000
Public Safety	1	$3,003,021	0	$0
Transportation	18	$3,616,370	3	$184,989

Jackson County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	21	$2,077,834
Public Safety	3	$9,247,106	0	$0
Transportation	11	$2,945,648	5	$2,160,137

Jefferson County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	13	$1,354,136
Ohio History Connection	0	$0	2	$1,748,450
Public Safety	1	$1,743,824	0	$0
Transportation	34	$5,418,577	5	$551,652

Knox County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Developmental Disabilities	20	$32,856,186	0	$0
Natural resources	0	$0	2	$58,750
Transportation	11	$5,477,191	0	$0

Lake County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	24	$5,721,625
Transportation	20	$5,337,835	6	$580,148

Lawrence County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	4	$275,125
Public Safety	2	$3,073,385	0	$0
Transportation	22	$5,651,315	0	$0

Licking County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$3,966,103	0	$0
Agriculture	14	$82,002,539	0	$0
Commerce	6	$25,155,011	0	$0
Natural Resources	0	$0	17	$9,992,234
Ohio History Connection	0	$0	7	$752,576
Public Safety	1	$2,096,456	0	$0
Transportation	35	$39,159,284	6	$2,750,109

Logan County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	53	$5,140,530
Transportation	22	$5,554,474	7	$691,436

Lorain County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$2,632,549	0	$0
Natural Resources	0	$0	24	$1,685,283
Public Safety	1	$2,989,909	0	$0
Rehabilitation and Corrections	70	$99,200,945	39	$4,857,598
Transportation	16	$4,006,212	7	$749,674

Lucas County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Administrative Services	1	$134,961,558	0	$0
Developmental Disabilities	15	$13,825,035	0	$0
Mental Health and Addiction Services	6	$39,106,204	0	$0
Natural Resources	0	$0	59	$52,802,770
Public Safety	1	$2,704,105	0	$0
Rehabilitation and Correction	13	$83,023,469	0	$0
Transportation	9	$2,153,922	0	$0

Madison County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Attorney General	7	$50,386,620	3	$457,232
Natural Resources	0	$0	13	$2,444,594
Public Safety	1	$2,899,940	0	$0
Rehabilitation and Corrections	73	$263,867,040	0	$0
Transportation	27	$3,751,630	11	$1,052,812

Mahoning County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$6,591,063	0	$0
Developmental Disabilities	11	$11,441,954	0	$0
Job and Family Services	0	$0	1	$2,500,996
Natural Resources	0	$0	14	$1,220,250
Public Safety	1	$2,659,739	0	$0
Rehabilitation and Correction	11	$41,532,983	0	$0
Transportation	39	$9,344,436	0	$0
Ohio History Connection	0	$0	1	$7,255,333

Marion County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	4	$894,811
Public Safety	2	$3,474,101	0	$0
Rehabilitation and Correction	81	$118,203,547	0	$0
Transportation	16	$6,183,294	4	$274,869
Ohio History Connection	0	$0	5	$12,453,379

Medina County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$9,788,642	0	$0
Natural Resources	0	$0	3	$131,288
Public Safety	1	$2,855,536	1	$216,749
Transportation	17	$3,676,936	7	$857,739

Meigs County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	20	$1,340,630
Transportation	13	$3,986,061	8	$198,600

Mercer County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	2	$349,500
Transportation	24	$5,649,522	0	$0

Miami County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	2	$4,733,083	0	$0
Transportation	20	$4,560,303	8	$593,804
Ohio History Connection	0	$0	12	$3,215,865

Monroe County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$4,671,825	0	$0
Transportation	16	$3,042,720	7	$201,319

Montgomery County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$15,375,211	0	$0
Developmental Disabilities	13	$7,954,521	0	$0
Natural Resources	0	$0	5	$908,125
Public Safety	2	$6,143,782	0	$0
Rehabilitation and Correction	17	$40,505,608	0	$0
Transportation	34	$6,390,774	0	$0
Ohio History Connection	0	$0	7	$4,334,508

Morgan County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	86	$19,983,433
Transportation	8	$3,101,447	2	$42,797

Morrow County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	15	$537,625
Public Safety	1	$2,414,474	0	$0
Transportation	19	$3,891,747	0	$0

Muskingum County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	79	$5,932,694
Ohio History Connection	0	$0	1	$2,171,200
Public Safety	1	$2,525,827	0	$0
Transportation	20	$5,200,863	0	$0

Noble County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	9	$554,025
Rehabilitation and Corrections	14	$43,878,793	4	$3,162,988
Transportation	14	$2,170,667	0	$0
State Library of Ohio	2	$3,391,692	0	$0

Ottawa County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	52	$57,636,943	0	$0
Natural Resources	0	$0	110	$33,741,630
Transportation	22	$2,316,252	4	$5,273,481

Paulding County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Transportation	2	$577,267	0	$0

Perry County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	2	$82,500
Transportation	14	$3,266,059	0	$0

Pickaway County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	72	$37,142,046
Public Safety	1	$1,851,990	0	$0
Rehabilitation and Corrections	108	$176,288,498	0	$0
Transportation	14	$2,951,664	4	$193,470
Youth Services	8	$13,329,357	0	$0

Pike County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	66	$7,720,584
Transportation	8	$2,620,816	4	$1,725,682

Portage County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	71	$14,388,841
Public Safety	1	$3,847,973	0	$0
Transportation	19	$2,682,914	8	$1,659,139

Preble County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	77	$19,702,675
Public Safety	0	$0	1	$212,756
Transportation	23	$4,624,095	10	$1,627,198

Putnam County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
	15	$2,763,489	0	$0

Richland County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	42	$11,118,000
Public Safety	2	$2,891,337	0	$0
Rehabilitation and Corrections	49	$100,697,084	0	$0
Transportation	20	$4,927,589	5	$963,234

Ross County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	115	$6,488,949
Ohio History Connection	0	$0	10	$5,720,083
Public Safety	1	$2,779,894	0	$0
Rehabilitation and Corrections	112	$239,522,498	0	$0
Transportation	21	$17,683,028	0	$0

Sandusky County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	7	$1,426,250
Public Safety	1	$2,570,826	0	$0
Transportation	13	$2,194,243	0	$0

Scioto County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	66	$20,497,157
Public Safety	1	$2,497,787	0	$0
Rehabilitation and Corrections	27	$159,073,472	0	$0
Transportation	19	$5,053,231	3	$988,716

Seneca County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$2,616,121	0	$0
Developmental Disabilities	38	$26,155,953	0	$0
Natural Resources	0	$0	8	$1,165,000
Transportation	8	$4,021,906	0	$0

Shelby County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	24	$2,826,900
Transportation	34	$26,176,043	0	$0
Ohio History Connection	0	$0	0	$9,096

Stark County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$18,515,162	0	$0
Mental Health and Addiction Services	10	$28,421,035	0	$0
Natural Resources	0	$0	4	$3,781,250
Public Safety	4	$14,170,888	0	$0
Transportation	19	$3,729,741	0	$0
Youth Services	2	$34,573,514	0	$0

Summit County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	3	$23,037,060	0	$0
Administrative Services	1	$52,502,992	1	$2,252,552
Attorney General	1	$13,939,187		
Mental Health and Addiction Services	6	$73,063,158	0	$0
Natural Resources	0	$0	33	$6,560,210
Ohio History Connection	0	$0	1	$755,000
Transportation	53	$35,498,827	12	$1,591,928

Trumbull County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	53	$4,200,833
Public Safety	5	$8,592,937	1	$213,230
Rehabilitation and Corrections	20	$36,797,342	0	$0
Transportation	32	$7,755,534	3	$332,800

Tuscarawas County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$3,379,607	0	$0
Ohio History Connection	0	$0	50	$8,970,141
Public Safety	1	$3,344,347	0	$0
Transportation	47	$47,159,496	0	$0

Union County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$8,794,356	0	$0
Public Safety	2	$2,752,386	0	$0
Rehabilitation and Corrections	29	$72,150,270	0	$0
Transportation	19	$3,761,949	6	$341,758

Van Wert County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	1	$3,340,536	1	$217,198
Transportation	11	$3,181,009	8	$553,400

Vinton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	124	$21,690,842
Transportation	16	$3,074,322	0	$0

Warren County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$3,109,675	0	$0
Natural Resources	0	$0	46	$3,294,512
Ohio History Connection	0	$0	14	$3,836,260
Public Safety	1	$2,817,310	0	$0
Rehabilitation and Corrections	77	$118,452,479	0	$0
Transportation	28	$23,216,005	10	$1,625,198

Washington County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	7	$190,224
Ohio History Connection	0	$0	11	$12,332,145
Public Safety	1	$2,147,441	0	$0
Transportation	45	$19,664,219	12	$685,936

Wayne County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	1	$2,452,183	0	$0
Natural Resources	0	$0	3	$504,977
Public Safety	2	$3,193,830	0	$0
Transportation	0	$0	6	$1,044,108

Williams County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	6	$1,533,750
Transportation	10	$4,071,906	0	$0

Wood County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Adjutant General	2	$25,649,483	0	$0
Attorney General	1	$14,900,000	0	$0
Natural Resources	0	$0	1	$40,250
Ohio History Connection	0	$0	13	$442,296
Public Safety	1	$3,268,409	1	$412,997
Transportation	29	$15,647,385	10	$6,200,651

Wyandot County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Natural Resources	0	$0	5	$889,550
Ohio History Connection	0	$0	1	$155,550
Transportation	18	$9,513,296	18	$1,631,750

Please note these data were obtained from Administrative Services for use in this plan development. Ohio EMA did not produce or maintain these data, and therefore do not guarantee their accuracy.

Site specific information was omitted from this summary for security purposes. For additional information, please contact the Ohio EMA Mitigation Branch.

Appendix C - State-Leased Critical and Non-Critical Facilities

Adams County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$55,406

Allen County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Bureau of Workers' Compensation	0	$0	1	$785,217
Public Safety	0	$0	1	$71,149
Industrial Commission	1	$106,416	0	$0

Ashland County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$51,787

Ashtabula County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$51,787

Athens County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$203,366	0	$0
Public Safety	0	$0	1	$43,211
Public Defender Commission	0	$0	1	$97,500

Auglaize County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$46,913

Belmont County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$65,489

Brown County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$59,053
Transportation	1	$625,000	0	$0

Butler County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	4	$198,726

Carroll County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$198,726

Champaign County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$37,988

Clark County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$72,425

Clermont County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	3	$135,681

Clinton County

Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$419,685

Columbiana County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$48,841

Coshocton County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$30,605
Transportation	1	$1,250,000	0	$0

Crawford County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$30,487

Cuyahoga County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$203,366	1	$15,434
Bureau of Workers Compensation	0	$0	1	$1,583,205
Civil Rights Commission	0	$0	1	$41,020
Department of Commerce	0	$0	1	$890
Department of Job and Family Services	0	$0	1	$27,839
Department of Public Safety	0	$0	5	$990,395
Department of Youth Services	0	$0	1	$49,851
Industrial Commission	0	$0	1	$403,457
Office of the Attorney General	0	$0	1	$854,382

Darke County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$27,080

Defiance County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$24,259

Delaware County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$129,094

Erie County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$34,154

Fairfield County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$127,985

Fayette County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	0	1	$44,150
Transportation	5	$608,500	0	0

Franklin County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Accountancy Board of Ohio	0	$0	1	$7,916
Air Quality Development Authority	0	$0	1	$74,000
Board of Chiropractic Examiners	0	$0	1	$15,930
Board of Embalmers and Funeral Directors	0	$0	1	$99,238
Board of Examiners of Architects	0	$0	1	$16,663
Board of Optometry	0	$0	1	$0
Board of Pharmacy	0	$0	1	$240,914
Board of Psychology	0	$0	1	$33,770
Board of Tax Appeals	0	$0	1	$126,065
Broadcast Educational Media Commission	4	$5,245,000	5	$1,410,276
Bureau of Workers Compensation	0	$0	2	$2,376,179
Commission on Minority Health	0	$0	1	$78,097
Commission on Service & Volunteerism	0	$0	1	$6,795
Counselors & Social Workers Board	0	$0	1	$23,298
Dental Board	0	$0	1	$26,337
Department of Administrative Services	1	$4,508,976	2	$4,405,515
Department of Aging	0	$0	1	$272,973
Department of Commerce	0	$0	1	$5,210,917
Department of Developmental Disabilities	0	$0	1	$58,170
Department of Education	0	$0	2	$3,222,519
Department of Health	0	$0	3	$18,498,121
Department of Higher Education	0	$0	2	$409,648
Department of Insurance	1	$6,494,001	0	$0
Department of Job and Family Services	0	$0	3	$7,411,404
Department of Mental Health and Addiction Services	0	$0	1	$7,000
Department of Public Safety	0	$0	5	$106,406
Department of Rehabilitation and Correction	0		1	$2,808,780
Department of Taxation	1	$11,000,000	2	$7,330,963
Department of Veterans Services	0	$0	1	$135,224
Department of Youth Services	0	$0	2	$966,862
Development Services Agency	0	$0	1	$5,264,289
Employment Relations Board	1	$475,046	0	$0
Engineers & Surveyors Board	0	$0	1	$7,586

Environmental Protection Agency	0	$0	1	$200,229
Industrial Commission	1	$206,383	25	$4,086,774
Inspector General	0	$0	1	$342,645
Judicial Supreme Court	0	$0	1	$350,446
Legislative Service Commission	0	$0	3	$4,908,343
Liquor Control Commission	0	$0	1	$24,532
Medical Board	0	$0	1	$209,745
Motor Vehicle Collision Repair Board	0	$0	1	$12,680
Occupational and Physical Therapy Board	0	$0	1	$116,724
Office of Budget and Management	0	$0	2	$937,065
Office of the Attorney General	0	$0	1	$4,541,003
Office of the Consumers' Counsel	1	$985,000	2	$32,338
Office of the Governor	0	$0	1	$128,028
Ohio Facilities Construction Commission	0	$0	1	$4,469
Ohio Housing Finance Agency	1	$3,153,170	0	$0
Ohio Secretary of State	1	$1,371,351	0	$0
Ohio Treasurer of State	0	$0	2	$4,818,229
Opportunities for Ohioans With Disabilities Agency	0	$0	1	$100,000
Public Defender Commission	0	$0	1	$1,600,000
Racing Commission	0	$0	1	$82,100
Spanish Speaking Affairs Commission	0	$0	1	$9,917
State Cosmetology and Barber Board	0	$0	1	$929,203
State Library of Ohio	0	$0	1	$25,023
The Ohio Senate	1	$1,053,455	0	$0
Veterinary Medical Board	0	$0	1	$33,738

Fulton County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$67,554

Gallia County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$38,043

Geauga County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$50,737

Greene County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Broadcast Educational Media Commission	2	$30,868	1	$48,912
Public Safety	0	$0	1	$75,729

Transportation	1	$1,125,000	0	$0
Industrial Commission	1	$210,467	0	$0

Guernsey County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Bureau of Workers Compensation	0	$0	1	$432,556
Department of Public Safety	0	$0	1	$59,969
Industrial Commission	1	$165,562	0	$0

Hamilton County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Broadcast Educational Media Commission	1	$209,366	1	$15,434
Bureau of Workers Compensation	0	$0	1	$1,304,591
Department of Administrative Services	1	$2,669,002	0	$0
Department of Public Safety	0	$0	3	$270,117
Industrial Commission	1	$288,968	0	$0

Hancock County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$37,171

Hardin County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$49,005
Transportation	1	$20,000	0	0

Harrison County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$46,382

Henry County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$54,378

Highland County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$39,235

Southern Ohio Agricultural & Community Development	1	$145,600	0	$0

Hocking County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$106,956
Industrial Commission	1	$172,150	0	$0

Holmes County				
Agency/Department	**Number of Critical Facilities**	**Value of Building/Contents**	**Number of Non-Critical Facilities**	**Value of Building/Contents**
Public Safety	0	$0	1	$36,342

Huron County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$45,858

Jackson County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$46,916

Jefferson County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$82,088

Knox County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Pubic Safety	0	$0	1	$36,976

Lake County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$117,015

Lawrence County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$34,434

Licking County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Commerce	1	$10,000,000	0	$0
Public Safety	0	$0	2	$128,831
Environmental Protection Agency	1	$3,363,695	0	$0

Logan County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$32,372

Lorain County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	4	$160,728

Lucas County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$203,366	0	$0
Civil Rights Commission	0	$0	1	$75,806
Department of Health	0	$0	1	$297,772
Department of Job and Family Services	0	$0	1	$26,213
Department of Public Safety	0	$0	4	$165,495
Department of Youth Services	0	$0	1	$47,586
Industrial Commission	0	$0	1	$228,901
Office of the Attorney General	0	$0	1	$279,497

Madison County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$54,644

Mahoning County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$15,434	0	$0
Public Safety	0	$0	0	$15,434

Marion County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$87,996

Medina County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	3	$35,664
Transportation	1	$200,000	0	$0

Meigs County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$39,508

Mercer County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$32,253

Miami County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$49,112

Monroe County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$48,917

Montgomery County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	2	$248,600	1	$15,434
Bureau of Workers Compensation	0	$0	1	$683,414
Public Safety	0	$0	5	$213,764

Morgan County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$41,739

Morrow County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$25,707

Muskingum County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$65,613

Noble County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$40,702

Ottawa County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$67,529

Paulding County

Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$38,342

Perry County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$41,314

Pickaway County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$65,219

Pike County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$24,534

Portage County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	2	$214,600	0	$0
Public Safety	0	$0	1	$61,748
Transportation	1	$20,000	0	$0

Preble County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$52,707

Putnam County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$12,384

Richland County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Bureau of Workers Compensation	0	$0	1	$740,949
Public Safety	0	$0	1	$55,533
Industrial Commission	0	$0	1	$117,349

Ross County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$39,988
Transporation	1	$937,500	0	$0
Public Defender Commission	0	$0	1	$122,500

Sandusky County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$54,183

Scioto County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	0	$0	1	$15,434
Bureau of Workers Compensation	0	$0	1	$501,173
Department of Public Safety	0	$0	1	$43,944
Industrial Commission	1	$122,770	0	$0

Seneca County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$50,077

Shelby County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
No state-leased facilities in this county				

Stark County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Bureau of Workers Compensation	0	$0	1	$994,955
Public Safety	0	$0	4	$162,657

Summit County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	0	$0	1	$15,434
Civil Rights Commission	0	$0	1	$55,520
Department of Health	0	$0	1	$54,587
Job and Family Services	0	$0	1	$35,079
Public Safety	0	$0	3	$151,869
Rehabilitation and Correction	0	$0	1	$2,545
Youth Services	0	$0	1	$36,534
Industrial Commission	0	$0	1	$295,109

Trumbull County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Bureau of Workers Compensation	0	$0	2	$946,278
Public Safety	0	$0	1	$12,732
Industrial Commission	1	$300,300	1	$30,060
Public Defender Commission	0	$0	1	$62,500

Tuscarawas County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	2	$71,722

Union County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$67,647

Van Wert County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$28,524

Vinton County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$47,161

Warren County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	3	$108,011

Washington County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$70,233
Public Defender Commission	0	$0	1	$64,000

Wayne County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$31,907	0	$0
Public Safety	0	$0	2	$84,626

Williams County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$30,022

Wood County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Broadcast Educational Media Commission	1	$199,166	0	$0
Public Safety	0	$0	1	$47,231

Wyandot County				
Agency/Department	Number of Critical Facilities	Value of Building/Contents	Number of Non-Critical Facilities	Value of Building/Contents
Public Safety	0	$0	1	$50,678

Please note these data were obtained from Administrative Services for use in this plan development. Ohio EMA did not produce or maintain these data, and therefore do not guarantee their accuracy.

Site specific information was omitted from this summary for security purposes. For additional information, please contact the Ohio EMA Mitigation Branch.

County	Approval Pending Adoption	Final Approval Date	Plan Expiration Date	Plan Exp. Status	Days Until Expiration (As of 2/6/2019)	Grant Status	APA STATUS
ADAMS	3/12/2010	4/23/2010	4/16/2015	Expired	-1509	PDMC-2017	
ALLEN	5/26/2016	6/3/2016	6/3/2021	Active	731		
ASHLAND	5/7/2015	8/31/2015	8/31/2020	Active	455		
ASHTABULA	8/30/2012	12/30/2013	12/30/2018	Expired	-155	PDMC-2017	
ATHENS	1/12/2015	6/9/2015	3/4/2020	Active	275	HMGP 4360	
AUGLAIZE	12/4/2018	1/4/2019	1/4/2024	Active	1676		
BELMONT	10/17/2013	2/3/2014	2/3/2019	Expired	-120	PDMC-2017	
BROWN	10/11/2017	10/26/2017	10/26/2022	Active	1241		
BUTLER	12/21/2017	3/26/2018	3/25/2023	Active	1391		
CARROLL	4/27/2005	1/12/2007	1/12/2012	Expired	-2699	Without Grant- Contractor	
CHAMPAIGN	4/12/2005	6/12/2006	6/12/2011	Expired	-2913	PDMC-2017	
CLARK	10/9/2013	11/5/2013	11/5/2018	Expired	-210	PDMC-2017	
CLERMONT	12/30/2013	3/12/2014	3/12/2019	Expired	-83	PDMC-2017	
CLINTON	2/12/2016	3/1/2016	3/1/2021	Active	637		
COLUMBIANA	7/7/2014	3/22/2016	12/18/2019	Active	198	PDMC-2017	
COSHOCTON	9/7/2010	11/24/2010	11/24/2015	Expired	-1287	PDMC-2017	
CRAWFORD	10/21/2014	11/5/2014	11/5/2019	Active	155	HMGP 4360	
CUYAHOGA	8/18/2017	9/19/2017	9/19/2022	Active	1204		
DARKE	9/21/2011	11/7/2011	11/6/2016	Expired	-939	PDMC-2016	
DEFIANCE	10/10/2017	10/10/2017	10/10/2022	Active	1225		
DELAWARE	3/12/2014	7/16/2014	5/22/2019	Expired	-12	PDMC-2017	
ERIE	12/12/2014	1/30/2015	1/29/2020	Active	240	HMGP 4360	
FAIRFIELD	9/19/2017	3/5/2018	1/15/2023	Active	1322		
FAYETTE	2/11/2015	3/6/2015	3/6/2020	Active	277	HMGP 4360	
FRANKLIN	9/19/2018	12/28/2018	12/28/2023	Active	1669	PDMC-2016	
FULTON	8/3/2015	9/30/2015	9/30/2020	Active	485		
GALLIA	12/2/2013	1/13/2014	1/13/2019	Expired	-141	PDMC-2017	
GEAUGA	5/7/2015	9/15/2015	9/15/2020	Active	470		
GREENE	8/7/2015	10/9/2015	9/30/2020	Active	485	HMGP 4360	
GUERNSEY	1/3/2018	1/11/2013	1/11/2018	Expired	-508	Without Grant	Yes
HAMILTON	9/4/2018	9/28/2018	9/27/2023	Active	1577	PDMC-2016	
HANCOCK	1/13/2014	2/3/2014	2/3/2019	Expired	-120	PDMC-2017	
HARDIN	3/8/2018	3/26/2018	3/26/2023	Active	1392		
HARRISON	2/23/2016	5/10/2016	5/10/2021	Active	707		
HENRY	12/4/2018	11/8/2012	10/17/2017	Expired	-594	PDMC-2016	Yes
HIGHLAND	2/14/2006	4/25/2007	4/24/2012	Expired	-2596	PDMC-2017	
HOCKING	6/6/2005	8/30/2005	8/30/2010	Expired	-3199	Without Grant- In house	
HOLMES	7/24/2014	9/15/2014	9/15/2019	Active	104	HMGP 4360	
HURON	11/30/2011	3/8/2012	3/8/2017	Expired	-817	PDMC-2016	
JACKSON	10/26/2017	12/8/2017	12/8/2022	Active	1284		
JEFFERSON	7/7/2014	1/8/2015	10/29/2019	Active	148		
KNOX	4/28/2015	5/21/2015	5/21/2020	Active	353	HMGP 4360	
LAKE	3/6/2017	8/18/2017	8/18/2022	Active	1172		
LAWRENCE	5/13/2015	7/24/2015	7/14/2020	Active	407	HMGP 4360	
LICKING	11/20/2013	3/4/2014	3/4/2019	Expired	-91	HMGP 4360	
LOGAN	3/13/2018	4/30/2018	4/30/2023	Active	1427	PDMC-2015	
LORAIN	3/10/2015	5/21/2015	5/21/2020	Active	353	HMGP 4360	
LUCAS	3/22/2013	9/6/2013	4/22/2018	Expired	-407	PDMC-2016	
MADISON	12/23/2013	2/3/2014	2/3/2019	Expired	-120	PDMC-2017	
MAHONING	10/24/2012	4/24/2013	4/24/2018	Expired	-405	PDMC-2016	
MARION	6/25/2014	7/16/2014	7/16/2019	Active	43	PDMC-2017	
MEDINA	12/30/2011	2/16/2012	2/16/2017	Expired	-837	PDMC-2016	

MEIGS	9/17/2018	11/29/2018	11/29/2023	Active	1640		
MERCER	9/5/2017	10/6/2017	10/6/2022	Active	1221		
MIAMI	3/13/2018	5/31/2018	5/31/2023	Active	1458	PDMC-2015	
MONROE	9/22/2014	3/4/2015	3/4/2020	Active	275	HMGP 4360	
MONTGOMERY	12/17/2013	4/15/2014	4/15/2019	Expired	-49		
MORGAN	3/25/2013	4/9/2013	4/9/2018	Expired	-420	HMGP 4360	
MORROW	8/24/2018	11/29/2018	11/29/2023	Active	1640	PDMC-2016	
MUSKINGUM	3/5/2018	4/30/2018	4/30/2023	Active	1427	PDMC-2015	
NOBLE	10/29/2014	11/5/2014	11/5/2019	Active	155	HMGP 4360	
OTTAWA	6/16/2017	6/23/2017	6/23/2022	Active	1116		
PAULDING	6/11/2018	6/26/2018	6/26/2023	Active	1484	PDMC-2015	
PERRY	6/12/2017	11/20/2017	11/20/2022	Active	1266		
PICKAWAY	4/26/2013	7/16/2014	7/16/2019	Active	43	HMGP 4360	
PIKE	3/14/2007	3/16/2007	3/15/2012	Expired	-2636	PDMC-2017	
PORTAGE	2/23/2016	4/1/2016	4/1/2021	Active	668	HMGP 4360	
PREBLE	10/12/2018	10/16/2018	10/16/2023	Active	1596	PDMC-2016	
PUTNAM	8/7/2015	9/30/2015	9/30/2020	Active	485	HMGP 4360	
RICHLAND	6/16/2017	6/23/2017	6/23/2022	Active	1116		
ROSS	6/27/2011	8/11/2011	8/10/2016	Expired	-1027	PDMC-2017	
SANDUSKY	5/18/2015	6/8/2015	6/8/2020	Active	371	HMGP 4360	
SCIOTO	8/14/2014	9/21/2014	9/21/2019	Active	110	HMGP 4360	
SENECA	12/29/2014	1/8/2015	1/8/2020	Active	219	HMGP 4360	
SHELBY	10/23/2017	11/8/2017	11/8/2022	Active	1254		
STARK	10/23/2017	10/23/2017	10/23/2022	Active	1238		
SUMMIT	12/31/2013	4/15/2014	4/15/2019	Expired	-49	Without Grant- In house	
TRUMBULL	10/19/2011	3/8/2012	3/8/2017	Expired	-817	PDMC-2017	
TUSCARAWAS	6/16/2017	8/3/2017	8/3/2022	Active	1157		
UNION	6/11/2018	8/22/2018	8/22/2023	Active	1541		
VAN WERT	7/30/2014	8/21/2014	8/21/2019	Active	79	HMGP 4360	
VINTON	6/16/2016	7/11/2016	7/11/2021	Active	769		
WARREN	10/9/2015	1/11/2016	1/11/2021	Active	588		
WASHINGTON	8/24/2016	8/25/2016	8/25/2021	Active	814		
WAYNE	5/29/2018	7/2/2018	7/2/2023	Active	1490	PDMC-2016	
WILLIAMS	6/14/2013	6/28/2013	6/28/2018	Expired	-340	PDMC-2017	
WOOD	8/24/2018	9/13/2018	9/12/2023	Active	1562		
WYANDOT	10/17/2017	1/5/2018	1/5/2023	Active	1312		

APPENDIX E: 2014 MITIGATION ACTION PLAN TABLE

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
1. Build on the success of the Risk MAP Areas of Mitigation Interest (AOMI) pilot project by continuing to utilize SHARPP to map areas of mitigation interest.	Goal 1, Obj 1	Flood	Ohio EMA Mitigation Branch	C	FEMA created a national database to capture AOMI data so this action is considered completed.	100%
2. Conduct HAZUS Level 2 flood analyses for all Counties in Region 2 using Ohio Statewide Imagery Program data and corresponding Digital Flood Insurance Rate Map data.	Goal 1, Obj 1	Multi	Ohio EMA Mitigation Branch	C	Ohio EMA worked with the USACE to complete HAZUS Level 2 flood analyses for counties in planning Region 2. The project was funded through the USACE Silver Jackets program and the results were incorporated into the 2019 SOHMP update.	100%
3. Continue to update and improve the vulnerability analysis for state-owned buildings and critical facilities.	Goal 1, Obj 1	Multi	Ohio EMA Mitigation Branch	C	Obtained updated state-owned and state-leased facility information from DAS; obtained supplemental data (HSIP Gold) from FEMA; developed vulnerability analysis methodologies for	Ongoing

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
					each hazard; analyzed all spatial hazards; generated maps/tables depicting results of analyses.	
4. Work with USGS, NOAA, and other partners to promote flood warning systems and stream/rain gauges.	Goal 1, Obj 2	Flood	Ohio EMA Mitigation Branch	C	Mitigation staff developed an HMGP application that is specific to 5% projects that includes guidance on warning systems.	100%
5. Reduce the number of pre-FIRM, flood prone properties each year by assisting such owners with successful funding of mitigation projects through FEMA mitigation programs.	Goal 1, Obj 3	Flood	Ohio EMA Mitigation Branch	A	Ongoing effort through the administration and implementation of FEMA HMA programs and other mitigation funding sources. According to SHARPP, 1,525 properties have been mitigated in Ohio using HMA programs.	Ongoing
6. Inspect all Class I-III dams once every 5 years.	Goal 1, Obj 4	Dam Failure	ODNR-DDS	B	The Dam Safety Program has recently expanded the number of dams that will be inspected every 5 years to include Class II-III dams.	Ongoing
7. Take enforcement actions on violations of state dam/levee safety	Goal 1, Obj 4	Dam Failure	ODNR-DDS	B	Notices of Violation are issued for deficiencies identified	Ongoing

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
laws for severely deficient and/or structurally unsound high hazard dams.					during inspections. The Dam Safety Program provides technical assistance to remedy deficiencies.	
8. Increase the number of Emergency Action Plans through compliance and education efforts.	Goal 1, Obj 4	Dam Failure	ODNR-DDS	B	All ODNR-owned Class I dams have EAPs. Efforts to increase EAPs statewide continues.	Ongoing
9. Continue to implement and improve the Ohio Safe Room Rebate Program.	Goal 1, Obj 5	Wind	Ohio EMA Mitigation Branch	B	The Safe Room Rebate Program is in its 6th year. As of Dec. 2018, the program has funded 352 safe rooms across the state; 184 have been completed to date and 168 are pending. The application website was also recently modernized.	Ongoing
10. Develop wind mitigation educational materials and outreach programs for vulnerable populations.	Goal 1, Obj 6	Wind	Ohio EMA Mitigation Branch	C	The state utilized an HMGP grant to purchase a mobile safe room display and accompanying signage. The display is available for counties to borrow and use public events.	100%

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
11. Promote the adoption of standards beyond NFIP minimums for flood loss reduction.	Goal 2, Obj 1	Flood	ODNR-DOW, FPM	B	As of 2018, there are 415 communities with higher standards.	Ongoing
12. Continue to participate in the public/private partnership effort between Ohio EMA and the business community.	Goal 2, Obj 2	Multi	Ohio EMA Mitigation Branch	C	New action item.	0%
13. Invite at least two additional entities each year to participate on the SHMT.	Goal 3, Obj 1	Multi	SHMT	C	In the last year, two new members joined and actively participate on the SHMT.	Ongoing
14. Continue inter-agency participation on the USACE Silver Jackets Initiative.	Goal 3, Obj 2	Flood	SHMT	C	The Ohio Silver Jackets Team continues to meet quarterly. The team has tackled multiple projects including: 1) HAZUS Level 2 project, 2) multi-media flood awareness campaigns, 3) loss avoidance studies, and others.	Ongoing
15. Develop and implement strong state incentives for maintaining local mitigation plans.	Goal 3, Obj 2	Multi	Ohio EMA	C	Despite several attempts, the Mitigation Branch has not successfully completed this task. Efforts will continue.	10%

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
16. Participate in FEMA's Risk MAP Outreach initiatives by facilitating local discussions on hazard mitigation	Goal 3, Obj 2	Multi	Ohio EMA Mitigation Branch	C	During the last planning cycle, Ohio EMA partnered with ODNR and FEMA on multiple Risk MAP initiatives.	Ongoing
17. Provide training to local county EMA Directors and mitigation plan keepers on entering local plan data into the State Hazard Analysis, Resource, and Planning Portal (SHARPP).	Goal 3, Obj 3	Multi	Ohio EMA Mitigation Branch	C	The State Hazard Mitigation Planner provides technical assistance to counties and contractors as needed.	Ongoing
18. Conduct training and/or post-disaster briefings for appropriate audiences on substantial damage assessments	Goal 4, Obj 1	Flood	ODNR-DOW, FPM	A	Multiple SD trainings were offered at the OFMA conferences and 5 Regional workshops are planned for 2019.	Ongoing
19. Develop and implement an outreach strategy targeting repetitive loss property owners on mitigation techniques and funding programs.	Goal 4, Obj 2	Flood	Ohio EMA Mitigation Branch	C	Ohio EMA received FMA technical assistance grants in 2016 and 2017 to conduct outreach to property owners and communities on mitigation techniques and funding programs. This outreach has resulted in multiple project applications.	Ongoing

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
20. Reduce the number of severe repetitive loss properties by 5% each year by assisting such owners with successful funding of mitigation projects through FEMA mitigation programs	Goal 4, Obj 3	Flood	Ohio EMA Mitigation Branch	A		Ongoing
21. Develop success stories in wind resistant construction codes and mitigation techniques.	Goal 5, Obj 1	Tornado	Ohio EMA Mitigation Branch	C	Mitigation Branch staff has developed multiple presentations highlighting successful community and residential safe room projects. The presentations also highlight recent state building code changes requiring tornado safe rooms in schools, EOCs, and other critical facilities.	50%
22. Work with stakeholders interested in expanding knowledge of earthquake risk.	Goal 5, Obj 1	Earthquake	Ohio EMA Mitigation Branch	C	In 2019, the Mitigation Branch will participate in an earthquake table top exercise.	100%
23. Ohio EMA will continue to actively participate on the Ohio Committee for Severe Weather Awareness.	Goal 5, Obj 1	Multi-hazard	Ohio EMA Mitigation Branch	C	The State Hazard Mitigation Officer is an active participant on this committee.	Ongoing

Action	Goal / Objective Reference	Hazard	Lead Agency	Priority	Status	% Complete
24. Continue to maintain, populate, and enhance the State Hazard Analysis Resource and Planning Portal.	Goal 5, Obj 2	Multi	Ohio EMA Mitigation Branch	C	The Mitigation Branch will initiate a project in early 2019 to modernize the website and enhance the hazard and risk data available.	Ongoing
25. Add a range of mitigation focused web-based training courses to the State Hazard Analysis Resource and Planning Portal (SHARPP).	Goal 5, Obj 2	Multi	Ohio EMA Mitigation Branch	C	The Mitigation Branch has not prioritized this action but hopes to make progress during the next planning cycle.	0%
26. Develop a Mitigation and Recovery Branch internship program.	Goal 5, Obj 3	Multi	Ohio EMA	C	The Mitigation Branch has worked with OSU CRP to develop a very successful internship program.	100%
27. Continue to support efforts to comply with the Emergency Management Accreditation Program (EMAP).	Goal 6, Obj 1	Multi	Ohio EMA Mitigation Branch	C	Ohio EMA was re-accredited in 2014 and is preparing for re-accreditation again in February 2019. SHARPP was highlighted as a best practice in 2014.	Ongoing
28. Continue participation on emergency management and floodplain association workgroups.	Goal 6, Obj 1	Multi	Ohio EMA Mitigation Branch	C	The ASFPM conference will be in Cleveland in 2019. Mitigation Branch staff are actively involved in OFMA and the APA.	Ongoing

Summary of FEMA Mitigation Program Funding - State of Ohio				
Program	**Federal Share**	**State Share**	**Local Share**	**Program Total**
HMGP-870	$630,000	$630,000	$0	$1,260,000
HMGP-951	$250,000	$0	$383,300	$633,300
HMGP-1065	$721,500	$0	$217,867	$939,367
HMGP-1097	$1,721,655	$208,624	$1,020,833	$2,951,112
HMGP-1122	$1,137,951	$2,702,960	Data Not Available	$3,840,911
HMGP-1164	$9,083,056	$3,490,605	$3,190,065	$15,763,726
HMGP-1227	$5,426,834	$3,283,373	$3,271,089	$11,981,296
HMGP-1321	$297,310	$289,745	$50,000	$637,055
HMGP-1339	$847,417	$231,223	$316,739	$1,395,379
HMGP-1343	$329,512	$52,247	$173,301	$555,060
HMGP-1390	$863,898	$718,518	$327,494	$1,909,910
HMGP-1444	$139,068	$37,209	$9,145	$185,422
HMGP-1453	$2,048,689	$2,071,335	$1,133,366	$5,253,390
HMGP-1478	$32,021	$9,568	$8,000	$49,589
HMGP-1484	$4,230,606	$163,932	$1,404,717	$5,799,255
HMGP-1507	$752,424	$164,804	$162,252	$1,079,480
HMGP-1519	$2,109,464	$787,072	$442,869	$3,339,405
HMGP-1556	$2,484,734	$2,050,442	$1,529,262	$6,064,438
HMGP-1580	$7,193,257	$1,315,933	$1,130,177	$9,639,367
HMGP-1651	$1,679,616	$379,251	$293,121	$2,351,988
HMGP-1656	$2,777,449	$969,617	$411,471	$4,158,537
HMGP-1720	$4,480,109	$1,570,055	$565,676	$6,615,840
HMGP-1805	$4,713,715	$0	$1,466,944	$6,180,659
HMGP-4002	$4,510,493	$727,785	$778,210	$6,016,488
HMGP-4077	$3,135,380	$772,586	$2,341,730	$6,249,696
HMGP-4098*	$3,704,581	$617,431	$617,431	$4,939,443
HMGP-4360*	$6,939,178	$1,156,530	$1,156,530	$9,252,238
subtotal:	*$72,239,917*	*$24,400,845*	*$22,401,589*	*$119,042,351*
FMA 1996	$96,240	$25,313	$19,500	$141,053
FMA 1997	$109,260	$0	$36,420	$145,680
FMA 1998	$103,042	$0	$34,347	$137,389
FMA 1999	$229,000	$7,000	$74,000	$310,000
FMA 2000	$39,880	$6,960	$6,333	$53,173
FMA 2001	$220,800	$25,328	$66,853	$312,981
FMA 2002	$23,938	$11,458	$3,017	$38,413
FMA 2003	$348,914	$315,256	$160,335	$824,505
FMA 2004	$37,870	$12,623	$0	$50,493
FMA 2005	$97,529	$32,067	$0	$129,596
FMA 2006	$48,968	$8,457	$8,507	$65,932
FMA 2007	$1,654,286	$9,957	$541,977	$2,206,220
FMA 2008	$135,531	$4,504	$42,542	$182,577
FMA 2012	$52,083	$1,578	$15,783	$69,444
FMA 2013	$162,875	$0	$0	$162,875
FMA 2014	$1,127,604	$1,545	$62,834	$1,191,983
FMA 2015*	$1,651,251	$2,557	$25,568	$1,679,377
FMA 2016*	$2,103,872	$36,372	$197,058	$2,337,302
FMA 2017*	$3,381,706	$16,666	$986,073	$4,384,444
subtotal:	*$11,624,649*	*$517,641*	*$2,281,147*	*$14,423,437*

Summary of FEMA Mitigation Program Funding - State of Ohio				
Program	**Federal Share**	**State Share**	**Local Share**	**Program Total**
PDM 2002	$502,797	$304,238	$258,621	$1,065,656
PDM 2003	$238,966	$220,209	$147,419	$606,594
subtotal:	$741,763	$524,447	$406,040	$1,672,250
PDM-C 2003	$2,630,064	$77,422	$799,264	$3,506,750
PDM-C 2006	$1,603,955	$42,933	$492,084	$2,138,972
PDM-C 2007	$831,146	$139,584	$138,500	$1,109,230
PDM-C 2008	$49,174	$13,962	$4,312	$67,448
PDM-C 2009	$1,094,041	$33,164	$332,000	$1,459,205
PDM-C 2010	$4,614,169	$90,079	$1,346,570	$6,050,818
PDM-C 2011	$475,157	$7,927	$155,749	$638,833
PDM-C 2012	$1,025,240	$29,848	$321,913	$1,377,001
PDM-C 2013	$165,185	$11,745	$49,790	$226,720
PDM-C 2014	$655,874	$32,204	$193,712	$881,790
PDM-C 2015*	$637,931	$29,082	$183,563	$850,576
PDM-C 2016*	$2,669,838	$92,895	$808,748	$3,571,481
PDM-C 2017*	$1,792,525	$106,569	$490,940	$2,390,034
subtotal:	*$18,244,299*	*$707,414*	*$5,317,145*	*$24,268,858*
LPDM 2008	*$293,828*	*$8,858*	*$90,060*	*$392,746*
LPDM 2009	*$376,295*	*$9,960*	*$126,038*	*$512,293*
LPDM 2010	*$1,087,906*	*$37,013*	*$1,218,030*	*$2,342,949*
subtotal:	*$1,758,029*	*$55,831*	*$1,434,128*	*$3,247,988*
RFC 2007	$189,841	$0	$0	$189,841
RFC 2008	$318,062	$0	$0	$318,062
RFC 2010	$138,021	$0	$0	$138,021
RFC 2011	$412,473	$0	$0	$412,473
RFC 2012	$1,499,318	$0	$0	$1,499,318
subtotal:	*$2,557,715*	*$0*	*$0*	*$2,557,715*
SRL 2008	$112,705	$1,216	$12,181	$126,102
SRL 2009	$108,900	$1,100	$11,000	$121,000
subtotal:	*$221,605*	*$2,316*	*$23,181*	*$247,102*
DRU 2003	$100,000	$0	$33,333	$133,333
subtotal:	*$100,000*	*$0*	*$33,333*	*$133,333*
PI 1998	$500,000	$0	$166,667	$666,667
PI 1999	$300,000	$0	$100,000	$400,000
PI 2000	$300,000	$0	$100,000	$400,000
PI 2001	$500,000	$0	$166,667	$666,667
subtotal:	*$1,600,000*	*$0*	*$533,334*	*$2,133,334*
TOTAL:	**$109,087,978**	**$26,208,494**	**$32,429,896**	**$167,726,368**

Updated December 13, 2018
Data Not Available: Local share records either incomplete or unavailable.
* Projects are still ongoing within the funding source.

OHIO EMERGENCY MANAGEMENT AGENCY
MITIGATION AND RECOVERY BRANCH

ADMINISTRATIVE PLAN

for the

HAZARD MITIGATION GRANT PROGRAM (HMGP)

Updated for DR-4360-OH
DECLARED:
April 17, 2018

Table of Contents

I. STATEMENT OF PURPOSE

Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended, and the Disaster Mitigation Act of 2000, Public Law 106-390, establishes a cost-sharing Hazard Mitigation Grant Program (HMGP) used to fund state and local hazard mitigation projects. This section is closely tied to the post-disaster hazard mitigation plans defined and required in Section 322 of the Stafford Act, and is implemented following a Presidential declaration of a major disaster. Sections 322 and 404 of the Stafford Act, in combination with several other state and federal programs and activities, help to form an overall pre- and post-disaster hazard mitigation strategy for the State of Ohio and affected local governments in the State.

The purpose of this document is to delineate the general organization, staffing, policies, and procedures which the State of Ohio will use when administering Section 404 HMGP and Section 322 Hazard Mitigation planning requirements of the Stafford Act.

II. REFERENCES AND AUTHORITIES

A. The Robert T. Stafford Act of 1988, Public Law 93-288, as amended, 42 U.S.C. 5121 et seq., and related authorities

B. Hazard Mitigation Relocation and Assistance Act of 1993, Public Law 103-181

C. Disaster Mitigation Act of 2000, Public Law 106-390

D. 44 Code of Federal Regulations

1. Part 7, Nondiscrimination in Federally assisted Programs
2. Part 9, Floodplain Management and Protection of Wetlands
3. Part 80, Property Acquisition and Relocation for Open Space
4. Part 201, Mitigation Planning
4. Part 206, Federal Disaster Assistance
5. Part 207, Management Costs

E. 2 CFR Part 200

F. National Flood Insurance Act, as amended

G. 42 U.S.C. 4001 et seq.

H. Executive Orders 11988 (Floodplain Management), 11990 (Protection of Wetlands), 12612 (Federalism), and 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Families)

I. Ohio Revised Code, Section 5502, and implementing rules

J. Ohio Emergency Operations Plan

K. State of Ohio Hazard Mitigation Plan, 2014

L. Hazard Mitigation Assistance Guidance and Addendum, February 27, 2015

M. National Historic Preservation Act and the National Environmental Policy Act (NEPA)

III. DEFINITIONS

APPLICANT - A state agency, local government, or eligible non-profit organization submitting an application to the grantee for assistance under HMGP.

GOVERNOR'S AUTHORIZED REPRESENTATIVE (GAR) - The person empowered by the Governor to execute, on behalf of the state, all necessary documents for disaster assistance. In Ohio, the functions of the GAR and the State Coordinating Officer (SCO) may be assigned to the same individual.

GRANT - An award of financial assistance. The total Hazard Mitigation Grant Program (HMGP) award shall not exceed twenty percent (20%) of the estimated total eligible Federal assistance under the Stafford Act us to $35.333 billion of such assistance, excluding administrative costs authorized for the disaster.

GRANTEE - The government entity to which a grant is awarded and, which is accountable for the use of the funds provided. The grantee is the entire legal entity even if only a particular component of the entity is designated in the grant award document.

MEASURE - Any mitigation measure, project, or action proposed to reduce risk of future damage, hardship, loss or suffering from disasters. The term "measure" is used interchangeably with the terms "project" and "action" in FEMA regulations.

MITIGATION BRANCH PROJECT MANAGER – The staff person from the Ohio EMA Mitigation Branch that has been assigned by the SHMO to be the Branch point of contact for that particular project.

NON-FEDERAL ENTITY – A state or local government, institution of higher education (IHE), or non-profit organization that carries out a Federal award as a recipient or sub-recipient.

PROJECT - Any mitigation measure, project, or action proposed to reduce risk of future damage, hardship, loss or suffering from disasters. The term "project" is used interchangeably with the terms "measure" and "action" in FEMA regulations.

44 CFR Part 201 Mitigation Planning and Part 206 Hazard Mitigation Grant Program – These rules contain the requirements to have a FEMA approved state and local natural hazard mitigation plans in order to be eligible for HMGP funds.

RECIPIENT – means a non-Federal entity that receives a Federal award directly from a Federal awarding agency to carry out an activity under a Federal program.

STATE ADMINISTRATIVE PLAN FOR THE HMGP - The plan developed by the State to describe the procedures for the administration of the Hazard Mitigation Grant Program (HMGP).

STATE COORDINATING OFFICER (SCO) - The person appointed by the Governor to act in cooperation with the Federal Coordinating Officer to administer disaster recovery efforts. In Ohio, the functions of the SCO and GAR may be assigned to the same person.

STATE HAZARD MITIGATION OFFICER (SHMO) - The person designated by the GAR as the responsible individual on all matters related to the HMGP.

STATE HAZARD MITIGATION PLANNER (SHMP) - The individual with the designated responsibility for developing and maintaining the State of Ohio Hazard Mitigation Plan in accordance with Section 322 (42 USC 5165).

STATE HAZARD MITIGATION TEAM - The team chaired by the SHMO that has a role in developing, updating, and implementing the state hazard mitigation plan; and assisting in recommendations and selection of projects for the HMGP and other Hazard Mitigation Assistance programs.

SUB-AWARD - An award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award received by the pass through entity.

SUB-RECIPIENT – a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program; but does not include an individual that is a beneficiary of such program.

IV. CONCEPT OF ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. ORGANIZATION

1. Staffing Plan

   Refer to Attachment 1.

2. Mitigation Staffing Assignments

   a. The Ohio Emergency Management Agency (Ohio EMA) and various State agencies will provide personnel who will perform the following functions:

      1. Governor's Authorized Representative (GAR) – Executive Director, Ohio EMA.
      2. Alternate GAR – Assistant Director, Ohio EMA.
      3. State Coordinating Officer (SCO) – Executive Director, Ohio EMA.
      4. State Hazard Mitigation Officer (SHMO) – Mitigation and Recovery Branch Administrator, Ohio EMA.
      5. State Hazard Mitigation Planner – Mitigation Branch Planner.
      5. Business Manager - Fiscal Branch Chief, Ohio EMA.
      6. Disaster Services Consultant (DSC) employees – will generally serve as Mitigation Branch Project Managers overseeing multiple sub-awards. One DSC is also assigned to be the Branch fiscal point-of-contact.
      7. Disaster Relief Grant Employees (DRG) staff will be hired as dictated by the staffing plan for the disaster – will generally serve as mitigation project managers overseeing multiple sub-awards.
      8. Administrative Assistants – Ohio EMA Mitigation, Recovery, Grants and Fiscal Division Administrative Assistants provide support to staff that manage and projects.
      9. Fiscal Specialist – Specialist assigned by Ohio EMA Fiscal Branch.
      10. Members of the State Hazard Mitigation Team.

   b. Cost of State personnel assigned to administer the HMGP in the Joint Field Office (JFO) are eligible HMGP management costs.

   c. After the close of the JFO, costs of State personnel (regular time salaries only) for continuing management of the HMGP are eligible HMGP management costs.

3. Securing Other Specialized Technical Assistance

   a. Contractual Assistance – Traditional areas where assistance is needed and it is either not possible or cost effective to have such skill sets on staff. These can include but are not limited to: data development for benefit-

cost analysis, expert appraisal review, and specialized research assistance to complete NEPA requirements (i.e., records review by the Ohio Department of Natural Resources).

B. ASSIGNMENT OF RESPONSIBILITIES

1. Governor's Authorized Representative (GAR)

   a. Ohio Revised Code Section 5502.22 provides authority for the Emergency Management Agency to administer the HMGP. The GAR is the state official ultimately responsible for ensuring that the state properly implements its responsibilities under Sections 322 (42 USC 5165) and 404 (42 USC 5170c) in a Presidential disaster declaration. The GAR shall supervise/monitor the activities of the SHMO. The GAR is responsible for the submission of a Section 404 (42 USC 5170c) grant application to Federal Emergency Management Agency (FEMA), on behalf of the State of Ohio, including state agencies, local governments, and private non-profit organizations.

2. State Hazard Mitigation Officer (SHMO)

   a. The SHMO is responsible for the State's Mitigation Program and the Section 404 (42 USC 5170c) program, as well as other mitigation programs, including development and maintenance of this Administrative Plan and procedures.

   b. Major responsibilities include:

      1. Prepare Section 404 (42 USC 5170c) program materials for distribution to communities announcing the availability of plan update funds.
      2. Train mitigation staff to assume their responsibilities.
      3. Provide direction for mitigation staff, as necessary.
      4. Disseminate Section 404 (42 USC 5170c) program information, initial application forms, and other program material.
      5. Brief local officials on mitigation, work with local Points-of-Contact, as related to HMGP.
      6. Ensure all required reports and correspondence are prepared and distributed.
      7. Chair meetings of the State Hazard Mitigation Team, and follow-up on team recommendations, in support of HMGP.
      8. Ensure project development and technical assistance is provided to interested communities.
      9. Ensure project selection is in compliance with administrative plan guidelines and State Hazard Mitigation Plan.
      10. Submit projects selected to FEMA for review and approval.

11. Ensure proper grant management of HMGP projects approved by FEMA.
12. Monitor the status of projects.
13. Ensure projects are completed in a timely manner and within federal rules and regulations governing the HMGP.
14. Ensure projects are closed properly and in a timely manner.

3. Business Manager

   a. Managing SMARTLINK, including:

      1. Performing disbursements and financial revisions;
      2. Preparing appropriate forms for closeout of projects/disasters; and,
      3. Providing monthly status reports on expenditures to program managers.

   b. Processing, or supervising the processing, of HMGP checks or the transfer of funds to Sub-recipients, recording disbursements, determining correct mailing addresses for checks, and entering disbursements into the state financial management system.

   c. Maintaining records of administrative expenses and state management costs eligible for reimbursement for each open disaster.

   d. Other duties as identified in **Attachment 1**.

4. State Hazard Mitigation Planner (SHMP)

   a. Develop and deliver training to local officials on updating local natural hazard mitigation plans to ensure compliance with 44 CFR 201.6.

   b. Perform project manager duties associated with planning grant projects.

   c. Review draft local hazard mitigation plans for compliance with 44 CFR 201.6 before forwarding to FEMA Region V for final approval.

   d. Update state mitigation plan with relevant data following a disaster declaration.

5. Other Mitigation Staff

   a. Work on project development and implementation. Duties are outlined in the state management cost and staffing plan **(Attachment 1).**

V. FUNDING

A. FEMA will make HMGP monies available to the State of Ohio as follows:

1. The total funds available for the HMGP shall be up to 20% of the total Stafford Act assistance provided.

   a. FEMA will provide an initial estimate of the total available HMGP funds to the State Hazard Mitigation Officer not earlier than 30 days and not later than 35 days from the date of the disaster declaration.

   b. Within 120 days of the disaster declaration, documentation must be submitted to FEMA to support costs and activities for which projected management costs will be used in accordance with 44 CFR 207.7. Alternatively, a letter requesting an extension up to one (1) year from the declaration date must be submitted to FEMA.

   c. The state may request an estimate of the amount of HMGP funds available at any time. Prior to 12 months after the declaration, total HMGP obligations are limited to not more than 75% of the current estimate without the concurrence of the Regional Administrator, or Federal Coordinating Officer, and the Office of Chief Financial Officer (OCFO).

   d. The final lock-in of funds will be provided by the OCFO twelve months (12) months from the date of declaration. This amount, known as the “lock-in”, is the maximum that FEMA can obligate for HMGP activities.

   e. FEMA may, at the Recipient’s written request, conduct a subsequent review of the lock-in amount 18 months after the declaration. The resulting review may result in an increase or reduction of the lock-in.

   f. Large sub-awards may be subject to the FEMA Strategic Funds Management (SFM) process. FEMA may elect to provide funding for certain projects in incremental amounts. SFM allows FEMA to schedule obligations to be available when the State is ready to execute an HMGP subgrant or components of the subgrant. SFM also allows for incremental obligations as needed within the 3-year period of performance requirement to support project activities as described in the project work schedule.

2. The federal funds provided to sub-recipients will be based on the cost-sharing provisions outlined in the FEMA-State Agreement or state legislation or as determined for each disaster. The federal share of projects may not exceed 75% of the cost of approved projects.

3. The non-federal share of projects may exceed the federal share, and it may be provided from a combination of state, local, or private funding sources. However, Section 404 (42 USC 5170c) funds cannot be used as a substitute or replacement to fund projects or programs that are available under other federal authorities, or used as a match for other federal funds.

4. Applicants must invest in the project cost through cash or in-kind contributions accounting for 25% of the total project cost, unless state funds are provided and the GAR approves a lesser share. For DR-4360, the state will be providing a 12.5% (one-half of the 25%) match to mitigation project applications (including planning grants).

B. The availability of state funding for Section 404 (42 USC 5170c) projects will be determined at the time of a Presidential disaster declaration. If such funds are made available, the amount of state funds for hazard mitigation projects available to communities will be equal to or less than the amount of HMGP funds awarded.

1. If State funding is provided, the funding shall be allocated in accordance with any requirements set by the Governor and/or the Ohio General Assembly. If there are no requirements set by the Governor and/or the General Assembly or the requirements apply to only a portion of state funds, combined HMGP and State funds will provide no more than 87.5% of the project cost. However, if additional funds are needed, the GAR may increase the percentage of funds to a level above 87.5% but not greater than 90%. It is the approach of Ohio EMA that applicants must invest in at least a portion of the cost of a HMGP project.

2. State agencies may receive a state share toward a project under the same percentages as local governments.

C. All potential funding sources from other agencies and programs will be explored, and utilized, wherever possible.

D. The State can set-aside 5% of the total HMGP available to use at its discretion. Any 5% project submitted to FEMA for approval must still meet basic eligibility, environmental, and benefit-cost analysis (BCA) requirements (although it is only a narrative BCA). Examples of projects eligible for 5% funding are experimental actions and measures not identified in the State's priorities (as noted in Section VI of this document). The 5% can be increased to 10% at the discretion of the Recipient for a disaster declaration involving tornadoes or high winds.

E. The State can utilize up to 7% of the total HMGP funds available to award plan development/update grants to sub-recipient. The final plan deliverable of any sub-recipient awarded HMGP funds to develop/update a local mitigation plan will meet 44 CFR Part 201. These funds may also be used to update the State of Ohio Hazard Mitigation Plan.

F. Management costs will be requested from FEMA in accordance with 44 CFR 207.7. The State may use funds made available by FEMA under its management cost allowance for any indirect costs, any administrative expenses, and any other expenses not directly chargeable to a specific project that are reasonably incurred in administering and managing HMGP. Regular time salaries, materials/equipment costs, travel and other cost items are allowable.

For DR-4360, $1,000 will be passed through to sub-recipients that are awarded project grants (planning projects will not receive in-direct management cost pass through funds). The sub-recipient may use in-direct management costs funds for any indirect costs, administrative expenses, and other expenses not directly chargeable to a specific project that are reasonably incurred in administering and managing the HMGP sub-award.

Any sub-recipient funds that are not used will be reallocated for State use. Reallocations that are less than 10% of the management cost budget do not require prior approval from FEMA. Reallocations that are greater than 10% must be submitted to FEMA in writing and include:

1. An explanation of why the change in budget is necessary,
2. An updated budget, and
3. An updated budget support narrative.

The recipient is responsible for oversight of in-direct management cost funds given to sub-recipients. Sub-recipient in-direct management cost funds will be reviewed by Mitigation Branch staff on a quarterly basis and during monitoring visits in accordance with this plan. Sub-recipient in-direct management cost closeout procedures will comply with Section XV.

G. Fiscal Procedures

1. Sub-recipient fiscal procedures

   a. Sub-recipients will make requests for an advance of funds using the Mitigation Grant Program Request for Payment form **(Attachment 15)** at least 4 – 6 weeks prior to the actual need for the funds. This will allow enough time for the State to issue the state warrant or transfer funds. A community may elect to use electronic transfer of funds (EFT).

   b. The Sub-recipient Project Coordinator should request funds to pay salary on a quarterly basis. These funds should be identified appropriately on the request for payment form.

   c. The advance of funds request should specify how the funds would be utilized. For example, the request should indicate the need for in-direct

management costs and/or project costs, and what supplies, equipment and/or number of structures to be acquired or demolished.

d. The final payment of HMGP and/or state share for planning grants will be held until the final, FEMA approved locally adopted plan has been provided to the Ohio EMA. The amount held will not exceed 10% of the total project cost.

e. The Sub-recipient will follow established fiscal procedures and comply with the 2 CFR Part 200. Expenditures will be tracked by funding source and show the balance of federal, state, and local funding. **Attachment 9** is an example of the appropriate spreadsheet for tracking funds that will be used in all HMGP projects.

2. State fiscal procedures

a. State fiscal procedures include built in redundancy – the Mitigation Branch fiscal point-of-contact works closely with the Ohio EMA Business Manager and ODPS fiscal office. Procedures to ensure proper fiscal management include the program fiscal point-of-contact reviewing, on a monthly basis, grant expenditures to ensure proper coding.
b. A monitoring program as described in this document will be used to monitor both programmatic and fiscal issues.
c. Procedures have been developed to manage fund drawdowns including ensuring that quarterly reports from the sub-recipient are up-to-date before processing the drawdown.
d. Quarterly reports are required to be submitted by sub-recipients to the recipient. These reports are reviewed for programmatic and fiscal issues.

VI. ELIGIBILITY

A. Applicants

1. Applicant eligibility criteria will be in accordance with federal regulations. Eligible applicants are: state agencies, local governments, and certain eligible private non-profit organizations. Ohio does not have any Federally recognized Indian tribes. Any questions regarding the eligibility of an applicant will be resolved by the SHMO or, if necessary, by the GAR.

2. The entire State is declared for Hazard Mitigation with a presidential declaration. The process for selecting applicants is explained in Section VIII.

B. Projects

1. **Eligible Project Types.** Projects may be of any nature that will result in protection to public or private property. Specific types of eligible projects include but are not limited to:

   a. Acquisition/relocation of real property in a hazard area;

   b. Elevation of structures above the base flood elevation (BFE);

   c. Retrofit of structures by wet or dry flood proofing (according to local code/building standards, compliant with NFIP standards); high wind strengthening; seismic strengthening of structures or their nonstructural components; application of wildfire resistant materials;

   d. Minor structural flood control and storm water management measures, to include but not be limited to: debris basins, storm water detention basins or infiltration wells, culvert upgrades; diversions, flap gates or floodgates, and localized flood control systems to protect critical facilities;

   e. Vegetation management, such as: natural windbreaks; living snow-fences; shoreline stabilization; natural dune restoration using native vegetation and sand-fencing; urban-forest practices; and landslide stabilization.

   f. Tornado safe room design and construction

   g. Phase I or II design, engineering, or feasibility studies for complex mitigation projects that are reasonably expected to be funded and implemented;

   h. The state may utilize up to 5% of total HMGP funds for non-technically proven projects that would not normally be funded under the program. Potential projects include, but are not limited to: research and

development; generators for non-critical facilities; development of codes and standards; and education/public awareness programs with mitigation as central feature. Hazard warning systems, sirens, and NOAA weather radios may be eligible if the declaration includes a tornado event. Projects funded through this initiative are determined on a case by case basis and do not require review by the State Hazard Mitigation Team.

i. The state may utilize up to 7% of total HMGP funds for mitigation planning purposes. Potential projects include, but are not limited to: updating/revision of state and/or local mitigation plans (or portions thereof), or the creation of new local mitigation plans. Local planning grant applications may be bundled and submitted as one state application, or submitted separately.

2. Minimum Project Eligibility Criteria

a. **Federal Criteria**. To be eligible for the HMGP, a project must meet the minimum project criteria established by FEMA:

1. Be in conformance with the Hazard Mitigation Plan developed as a requirement of section 322 of the Robert T. Stafford Act, 42 U.S.C.5165.

2. Local government applicants for project subgrants must have an approved local plan in accordance with 44 CFR part 201 before receipt of HMGP subgrant funding for projects.

3. Have a beneficial impact upon the designated disaster area, whether or not located in the designated area.

4. Be in conformance with 44 CFR Part 9, Floodplain Management and Protection of Wetlands, and other applicable environmental and historic preservation laws, regulations, Executive Orders and agency policy.

5. Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. The grantee must demonstrate this by documenting that the project:

a. Addresses a problem that has been repetitive, or a problem that poses a significant risk to public health and safety if left unsolved.

b. Will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur.

6. Has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options.

7. Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address.

8. Considers long-term changes to the areas and entities it protects and has manageable future maintenance and modification requirements.

9. Solves a problem independently or constitutes a functional portion of a solution where there is assurance that the project as a whole will be completed. Projects that merely identify or analyze hazards or problems are not eligible.

b. **State Criteria.** In addition to the above criteria, the State of Ohio has considered other basic criteria for evaluating potential Section 404 (42 USC 5170c) projects:

1. The community is participating and in good standing with the National Flood Insurance Program (NFIP). As a general rule, only mitigation activities involving pre-FIRM or post-FIRM compliant structures are eligible.

VII. PRE-DECLARATION AND JOINT FIELD OFFICE ACTIVITIES

A. Concept of Operations. As an event unfolds that may result in a Presidential disaster declaration, State Mitigation Branch staff initiate activities that, in the eventuality of a declaration, will lay the groundwork for appropriate and successful project applications, will maximize the technical assistance given limited resources, and will result in effective mitigation. These activities are divided into the following phases: Incident assessment, declaration, and Joint Field Office (JFO) activities.

B. Incident Assessment. Incident assessment may include but is not limited to the following activities:

1. Reviewing local and state mitigation plans including: hazard identification / risk assessments; potential mitigation activities; identifying any problems or vulnerable critical infrastructure.

2. Generate HAZUS models to project possible impacts in case of flood or earthquake.

3. Participating in Emergency Operation Center (EOC) Emergency Support Function briefings,

4. Coordinating with ODNR during flood incidents to identify NFIP sanctioned communities in impacted areas, and

5. Participate on joint federal/state hazard mitigation teams formed during the preliminary damage assessment (PDA). Information acquired during this assessment process may be used to identify potential projects, and develop the mitigation strategy for that disaster.

C. Disaster Declaration

1. Develop staffing a plan and logistics information for JFO, and

2. Begin to work on the Hazard Mitigation Strategy in consultation with FEMA, and ODNR (for flood events).

D. JFO Activities

1. Develop the Hazard Mitigation Strategy. The Hazard Mitigation Strategy will identify the different activities that are to be conducted as a result of the disaster declaration. It will be prepared in consultation with FEMA and ODNR (for flood events).

2. Provide mitigation planning and project technical assistance to impacted communities.

3. Attend meetings / briefings, including Federal Coordinating Officer meetings.

4. Complete the mitigation section of the ESF-14 Recovery Report.

5. Implement the Hazard Mitigation Strategy.

6. Conduct Mitigation Briefings. Normally, Mitigation Branch staff will offer to conduct countywide mitigation briefings in all counties included in the declaration to discuss mitigation with local officials. These briefings are coordinated with the PA briefings conducted by the Ohio EMA Recovery Branch. Counties may opt to not have a mitigation briefing (they may have had one recently), in which case packets will be offered to them for distribution to local officials. Briefings are part of the State's education and public awareness process necessary to the effective implementation of mitigation. Local officials will, during this process, be given the opportunity to identify mitigation issues and concerns. Although primarily focused on HMGP eligibility issues, application process/development, and types of mitigation actions; the National Flood Insurance Program and FEMA's other mitigation programs are also discussed briefly. The briefing is given as a Powerpoint presentation **(Attachment 10)**.

   Briefings can be a joint NFIP/mitigation briefings if the flood event was in an area with high flood insurance policy coverage and Increased Cost of Compliance will be triggered due to the large number of substantially damaged structures.

   For this declaration, mitigation briefings will be conducted in conjunction with PA briefings conducted by the Recovery Branch, whenever possible. If Mitigation Branch staff are not available to conduct HMGP briefings in coordination with PA briefings, a series of four webinar briefings will be offered. A webpage was also created on the Ohio EMA Mitigation Branch website to notify potential sub-recipients of the availability of HMGP funds.

VIII. APPLICATION PROCESS / PROJECT DEVELOPMENT

A. Concept of Operations

There will be two application cycles for HMGP funds available as the result of DR-4360. The first application cycle will be expedited and include: 1) unfunded Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) applications, 2) “shelf applications” that are ready to be submitted, 3) applications developed to mitigate damage caused by the disaster event and 4) applications for “substantially damaged structures.” Applications in category 1 will not be required to submit an HMGP application. The e-Grants application will be used to enter the required project application data into NEMIS. All other applicants in the first round must complete an HMGP full application by the established deadline in order to be considered for funding. The SHMT will review these applications and make award recommendations to the GAR.

The second HMGP application cycle will be a two-part process. Pre-applications are submitted first **(Attachment 2)**. Pre-applications are reviewed and ranked by the SHMT and enough pre-applications to expend 150 - 200% of the estimated remaining project funds will be selected for full project application development (this is to allow for projects that could be withdrawn and for the submission of zero funded projects to ensure that all Federal and state funds can be appropriated). Full project applications **(Attachment 3)** will be evaluated by the SHMT after the deadline for submission has passed. Projects will then undergo a cost-effectiveness, environmental, and completeness and eligibility review conducted by Mitigation Branch staff. Eligible and complete full project applications will then be submitted to FEMA for approval. The goal is to submit projects for the second cycle on or near the one-year anniversary date of the disaster declaration.

The timeline for this process is as follows:

ESTIMATED HMGP APPLICATION TIMELINE	
Time Period	Event
Week 0	Disaster Declared
Week 1-2	Pre-application period opens
Week 4-8	Applications for cycle one submitted to FEMA Region and Pre-applications submitted to state for cycle 2
Week 13	SHMT meets to review pre-applications and select those for full application development
Week 24	Full normal applications due at Ohio EMA
Week 36	OEMA completes completeness and eligibility review; begin to submit projects to FEMA for approval
Week 52	Completion of submission of projects to FEMA; FEMA begins to approve projects

IX. PROJECT REVIEW, RANKING, AND SELECTION

A. Priority

The following priorities are established by the State of Ohio under HMGP for DR-4360 based on the unique characteristics of the event, the DR-4360 *Hazard Mitigation Strategy,* and the *State of Ohio Hazard Mitigation Plan*:

- Priority will be given to projects in the declared counties over projects in other counties (except for planning grant applications).
- 7% planning funds will be utilized to fund local natural hazard mitigation plans that are approaching the five-year deadline for plan expiration. Priority will be given to planning grant applications with the earliest plan expiration date. Planning grant applications are not reviewed by the SHMT.
- Among flood loss reduction projects, priority will be given for the acquisition of repetitively flood-prone properties as it is the only permanent mitigation solution.
- Priority will also be given to the construction/installation of safe rooms that mitigate the loss of life from severe wind and storm events.

B. Review Process

1. The SHMO and/or Mitigation Branch staff will perform the initial review of project pre-applications to ensure all information and documentation is provided. The Mitigation Branch staff member assigned to each pre-application will present the project to the SHMT.

2. The SHMO will chair the SHMT. Representatives from the following agencies/organizations are permanent members of this team:

   a. Ohio EMA
   b. Development Services Agency, Community Services Division
   c. Department of Natural Resources, Division of Water Resources, Floodplain Management Program
   d. Watershed Conservancy District Representative
   e. Emergency Management Association of Ohio (EMAO)
   f. U.S. Army Corp. of Engineers (USACE)
   g. U.S. Geological Survey
   h. Ohio Voluntary Organizations Active in Disaster
   i. Ohio Public Works Commission
   j. Federal Emergency Management Agency (FEMA)

3. Additional State Agency representatives will be determined by the nature of the projects for which HMGP funds have been requested. Appropriate Federal agencies may also be asked to help review the merits of certain types of projects.

4. In keeping with the MOU between FEMA and the USACE, the appropriate Corps district will be advised of all proposed mitigation projects in Ohio prior to the recommendation to forward to FEMA for approval.

C. Evaluation and Ranking of Projects

1. The SHMT will review all applications (with the exception of applications for projects under 5% and 7% funding set-asides) according to established criteria. The membership of the State Hazard Mitigation Team will evaluate each project according to the HMGP Application Scoring Sheet (see **Attachment 6**). Criteria used to evaluate the projects include, but are not limited to the following:

    1. Whether the community was in the declared or impacted area,

    2. Consistency with state and local mitigation plans,

    3. The community's ability to manage a grant,

    4. Repetitive nature of the hazard the mitigation option is designed to protect against,

    5. Implementation of day-to-day mitigation programs outside of HMGP,

    6. Other criteria as necessary

    Projects are ranked according to their total evaluation score, highest to the lowest.

    c. The SHMT will review all projects submitted as zero funded projects using the above evaluation and ranking criteria.

D. Environmental and Floodplain Management Reviews

1. National Environmental Policy Act (NEPA) coordination and review are FEMA responsibilities. In order to assist FEMA, the Mitigation Branch gathers documentation from applicants and various government agencies and prepares a Record of Environmental Consideration (REC) for FEMA concurrence. Documentation includes:

    a. Site photographs

    b. Subapplicant responses to the Environmental Review section of the HMGP application (see **Attachment 3**),

c. A series of maps depicting the project location on:

   i. A street and/or plat map
   ii. Topographic map
   iii. Flood Insurance Rate Map
   iv. Wetlands map (if applicable)
   v. State Historic Preservation Office Map (if applicable)

d. Consultation with:

   i. The U.S. Army Corps of Engineers
   ii. State Historic Preservation Office
   iii. Ohio Department of Natural Resources
   iv. The Ohio Environmental Protection Agency
   v. The U.S. Fish and Wildlife Service

e. Public notice of project provided by community

2. Communities that participate in the National Flood Insurance Program and/or that adopt local regulations governing development in identified flood hazard areas are responsible for ensuring that proposed mitigation projects in these areas meet applicable floodplain management criteria. Copies of this documentation should be maintained with the local project files and be available for review during monitoring visits.

E. Selection

1. For project applications, following the evaluation and ranking of projects, the SHMT will make the following recommendations to the GAR:

   a. Projects recommended for approval, and,

   b. The order in which projects should be funded (i.e., a listing of the projects by priority).

3. In the event two or more projects are tied in rank, they will be listed according to their benefit-cost ratios (BCR).

3. The GAR will make the final decision regarding the selection, level of funding for, and ranking of projects by priority. Those projects not selected for funding will be forwarded to FEMA for approval as zero funded projects. This means that if additional funds become available, or if cost-underruns occur in

other projects, the zero funded projects can receive funding if approved by FEMA.

4. The GAR will notify all applicants of the decision made by the state relative to their proposed project.

5. Following notification by the applicant, the projects will have a final environmental, cost-effectiveness, and completeness review. The GAR will then submit the applications to FEMA for approval. Submittal will be done in NEMIS as well as hard copy. Hard copy application documents include the Project Summary, B/C Analysis narrative, and Record of Environmental Consideration (REC) with supporting letters and documentation. A hard copy will be forwarded to the FEMA Regional Administrator for approval. The application materials, which the GAR will forward to FEMA, will include the following:

    a. A SF 424 (Application for Federal Assistance).
    b. A SF 424D (Assurances for Construction Programs), if appropriate.
    c. A Project Summary that includes:

        1. Community point of contact, address, phone and fax numbers
        2. Major disaster number
        3. Project number
        4. Applicant name
        5. Location of the project
        6. Description of the project
        7. List of alternatives considered
        8. Congressional district
        9. Record of Environmental Consideration
        10. Benefit Cost Analysis
        11. Project Review and Results statement
        12. Projects involving the acquisition of property for open space (acquisitions and relocations) must include:

            - A photograph that represents the property at the time of application,
            - Statement of assurances acknowledging the conditions for mitigation of the property,
            - A notice of voluntary interest form signed by each property owner, which must include that the sub-applicant has informed them in writing that it will not use its eminent domain authority for the open space purpose,
            - Sample of the actual deed restriction that the local government will record with each property deed and,
            - Documentation of coordination with the U.S. Army Corps of Engineers and the Ohio Department of Transportation.

13. Projects that mitigate property by elevating, retrofitting, and/or relocation must include a signed form acknowledging the conditions for mitigation of property in a Special Flood Hazard Area with FEMA grant funds, and a statement that the elevation will be designed in accordance with ASCE 24-14, or latest edition as minimum design criteria.

6. All approved mitigation projects must be submitted to FEMA for environmental concurrence and obligation of funds twelve (12) months from the date of the disaster declaration. If necessary, the state can request up to two additional (2) ninety (90) day extensions to the one year application deadline (for a total of 18 months).

F. Award

1. FEMA will sign the REC and approve projects when all submittal requirements are met. At the discretion of the SHMO, a press release describing the program may be developed and issued.

2. Prior to project approval and if notice has been received by the SHMO, the local official of the community (project point-of-contact), the County EMA Director, the Ohio EMA Regional Field Office, the EMA PIO (if not already notified), and Ohio EMA Executive Director will be notified by the SHMO. This will be done by e-mail to ensure that local and state staff are aware in the case that there is media follow-up due to an early FEMA and/or Congressional press release.

3. After FEMA approval of a project has been received by the Mitigation Branch, the Executive Director will send a congratulatory letter followed by the State/Local Agreement and other administrative forms from the SHMO.

X. PROJECT INITIATION

A. General

1. Ohio EMA will serve as the Recipients for project management and accountability of funds in accordance with 2 CFR Part 200. (Sub-recipients are accountable to the Recipient for funds that have been awarded to them and will utilize the same resources).

2. The SHMO will provide the sub-recipient with the State/Local Grant Agreement, two W-9 forms, and a sample Designation of Applicants Agent (**see Attachments 7 and 8**). The Chief Elected Official (CEO) must sign the agreement and return to the Ohio EMA within thirty (30) days of receipt. If a problem should arise with the agreement, the SHMO should be notified as soon as possible to avoid any delays in beginning the project.

3. The GAR must sign the agreement, and the Mitigation Branch Project Manager will provide the Sub-recipient with a copy of the executed document, along with program requirements and information during the Implementation Meeting.

4. The designated local Project Manager will meet with the Mitigation Branch Project Manager within thirty (30) days of submission of the signed State/Local agreement (see Section XIV(A)(3) for more specific information on the *Implementation Meeting*).

5. Based upon the approved project application and work schedule for a project, both the Ohio EMA and sub-recipient will implement a record keeping and financial system relative to the project.

6. Sub-recipients will submit quarterly progress reports **(Attachment 11)** to the SHMO. Program regulations and this Administrative Plan identify specific due dates for these reports (see Section XIII – Reports.). The SHMO will submit quarterly progress reports to FEMA. The final report will be a complete assessment of project accomplishments and will meet 44 CFR Part 206 requirements.

7. The Mitigation Branch Project Managers will monitor and evaluate project accomplishments and adherence to the work schedule. Problems will be reported to the SHMO, GAR, and FEMA HMO as soon as identified (see Section XIV).

8. The Mitigation Branch Project Manager, SHMO, and Fiscal Officer will review advance of funds requests, time extension requests, and cost overruns.

9. The Mitigation Branch Project Manager will coordinate individual project close out and the SHMO will coordinate the overall grant closeout.

B. Request for Funds

1. The state may advance a portion of the federal share of the cost of an approved hazard mitigation project.

2. An initial advance will be made to an applicant based on expenditures necessary to start the project; ensuring that the remaining work to be completed is well within the dollar amount of the approved project. Additional advances will be made as long as expenditures can be documented, good record keeping is maintained, and sound fiscal procedures are used.

3. A request for an advance of funds must be submitted in writing to the SHMO. The request must be made using the form in **Attachment 15**. Request for funds should be made at least 4 – 6 weeks prior to the identified need, and should be expended within thirty (30) days of receipt.

4. Requests for funds are reviewed and signed in the following order prior to forwarding to the Fiscal Specialist for processing:

    a. The Mitigation Branch Project Manager responsible for project oversight,
    b. The Mitigation Branch Fiscal Staff person responsible for fiscal tracking and grant reconciliations, and
    c. The SHMO for final review and concurrence.

5. If the request is denied, the sub-recipient will be advised and given the reason for the denial. Requests will be denied if the sub-recipient is not up-to-date in submitting quarterly reports.

C. Time Limits and Extensions

1. Time Limits

    a. As a general rule, projects must be initiated within ninety (90) days of the approval date. When FEMA approves a project, the initial approval period is no later than (3) three years from the close of the application period.

2. Time Extensions

    a. If a sub-recipient determines that the project cannot be completed by the time specified in the state-local grant agreement, the sub-recipient must immediately notify the Mitigation Branch Project Manager, and request a

time extension. Formal requests for a time extension must be submitted by letter and the sub-recipient must:

1. Explain why the project cannot be completed by the deadline;
2. Explain the outstanding project work;
3. Explain when it anticipates the project will be completed; and
4. Provide a signed request for extension by the appropriate local authority.

b. Upon receipt of the time extension request, the Mitigation Branch Project Manager will review the request for appropriateness and determine whether the extension request is necessary for the state-local agreement, for the FEMA approval, or both. The Mitigation Branch Project Manager will send the extension request form (for a state-local agreement extension request) to the sub-recipient for signature. If a FEMA extension request is needed, the Mitigation Branch Project Manager will complete the extension request form and prepare the request letter for the GAR signature. **Extension requests to the FEMA period of performance must be submitted to the FEMA Regional Office no later than 60 days prior to the expiration of the period of performance.**

c. The Mitigation Branch Project Manager will then forward the request, signed form(s) and prepared letters (if necessary) with a recommendation to the SHMO who will then forward the request to the GAR and/or FEMA (if necessary), along with a recommendation for approval or disapproval.

c. The Mitigation Branch Project Manager is responsible for ensuring that projects are operational within approved timeframes.

D. Cost Overruns/Under-runs

1. Sub-recipients will be required to notify their assigned Mitigation Branch Program Manager by letter as soon as they determine that they will have a project cost overrun. The letter should include the dollar amount of the overrun, the reason for the overrun, and an appropriate justification and documentation (invoices, copies of contracts, pictures, and so on) to support the additional costs.

2. The SHMO in consultation with the Mitigation Branch Project Manager will evaluate each cost overrun. If the evaluation indicates that the cost overrun is justified, *and if funds are available*, the SHMO may recommend to the GAR approval of cost overruns. Cost overruns will be approved only if funds are available in the grant program to support the additional amount requested.

3. The GAR will forward all such cost overruns, along with a recommendation for approval, to the FEMA Region V, Regional Administrator. The Regional

Administrator will notify the GAR of the final determination made on the overrun.

4. The sub-recipient must notify the SHMO as soon as possible if a cost under run ***will*** occur.

5. Any request for deviation from an approved project must be consistent with and approved in accordance with current FEMA policy guidance as it relates to a change of project scope. This may trigger the need to review environmental compliance and/or conduct a new benefit-cost analysis. Project amendments must be sent to the FEMA Regional Office for approval prior to commencement of work related to the change in scope of the project. The Mitigation Branch Project Manager will be responsible for ensuring project amendments comply with all rules and any NEMIS changes that may be needed as a result.

XI. APPEALS

A. An eligible applicant or sub-recipient may appeal a decision made by the Mitigation Branch staff regarding projects submitted for funding under the HMGP. The appeal must be in writing, and contain sufficient additional information beyond that submitted with the original application, to warrant consideration. There are two types of appeals: those appealing state policies and those appealing Federal (FEMA) policies. The appeal will be made to the SHMO who will then determine whether the appeal is to a state policy or Federal policy. Upon this determination, the processes identified below will be followed accordingly.

   Appeals relating to state decisions based on state policies such as determinations made by the State Hazard Mitigation Team (SHMT), NFIP compliance, state mitigation priorities, state/local agreement issues, reasonable and necessary costs associated with project management, etc. are usually state appeals. For issues regarding program eligibility, time extensions beyond the FEMA approved time for the grant overall, determination of allowable project management and indirect management costs, allowable project costs, and other project implementation requirements, or the state's interpretation of any Federal policy related to these issues is usually a Federal appeal. Any appeal disputing the benefit-cost ratio (BCR) for a specific property or project must be accompanied by a benefit-cost analysis conducted by the appellant in accordance with FEMA guidelines.

B. State Appeals**.** There are two levels of state appeal. The Assistant Officer (AO) with responsibility for oversight of the Mitigation Branch is the decision-maker for the first appeal. If a second appeal is necessary the Governor's Authorized Representative (GAR) makes the decision on the second appeal.

   1. All applicant appeals must be submitted in writing to the AO within thirty (30) days of the date of the letter notifying the applicant of the State Hazard Mitigation Officers decision. The AO will respond within thirty (30) days of the applicant's letter.

   2. If the applicant does not agree with this decision they can appeal to the GAR. The applicant must provide additional information supporting their position to the GAR within thirty (30) days of the first decision letter. The GAR will respond within thirty (30) days of receipt of the request for appeal. The GAR's decision is final and no other state appeals will be considered.

   3. The GAR may, on behalf of an applicant or the state, request guidance and/or a decision from FEMA related to an applicant's appeal to the state. If guidance is requested from FEMA, the GAR will notify the applicant and

an additional thirty (30) days will be added to the time frame for response from the GAR.

C. Federal Appeals. The applicant or sub-recipient has the option of appealing to FEMA for a decision relating to Federal policy.

1. Federal appeals must be submitted in writing to the SHMO. All Federal appeals on behalf of the applicant or state are made by the Executive Director of the Ohio Emergency Management Agency to the FEMA Regional Administrator.

2. The Mitigation Branch may prepare materials and information including a summary and staff recommendation related to the issue being appealed to be forwarded to FEMA.

3. The appeal will then be forwarded to the FEMA Regional Administrator within sixty (60) days of the date the applicant requests the appeal.

4. Per the 44 CFR Part 206.440 FEMA will respond within ninety (90) days.

5. An appeal of the FEMA decision may be made within the following ninety (90) days to the FEMA Associate Director in Washington. FEMA will respond within ninety (90) days and the decision is final. No other appeals exist.

FEMA's decision will be in writing to the state. The state will copy the applicant with FEMA's decision.

XII. TECHNICAL ASSISTANCE

As a general rule, applicants for HMGP funds will be responsible for obtaining any technical assistance they may need in order to develop a hazard mitigation project proposal or to carry out a hazard mitigation project. Technical assistance will be available from the Ohio Emergency Management Agency Mitigation staff and FEMA Region V, Mitigation Division. Applicants may also request assistance from Regional Planning Councils and State agencies. Applicants who want such assistance are advised to notify the SHMO.

XIII. REPORTS

A. Sub-recipients will submit a Quarterly Progress Report (QPR) **(Attachment 11)** to the SHMO within fifteen (15) days of the end of the quarter, on the following schedule:

Quarter	Months	Report Due
1st	Oct. - Dec.	Jan. 15
2nd	Jan. - Mar.	Apr. 15
3rd	Apr. – June	July 15
4th	July - Sept.	Oct. 15

B. QPRs will be used to monitor and follow-up on projects. Failure to submit reports may result in suspension of HMGP funds. Copies of QPRs will be maintained by the State. The SHMO will submit a quarterly report to FEMA on the status of all mitigation projects by the end of the month following the end of the quarter.

XIV PROGRAM MONITORING

A. Purpose of Project Monitoring

1. As the Recipient for federal mitigation funds, the Ohio EMA is responsible for managing the day-to-day operations of Recipient and Sub-recipient activities. Ohio EMA must monitor Recipient and Sub-recipient activities to assure compliance with applicable Federal requirements and that performance goals are being achieved. Monitoring must cover each program, function or activity.

2. Role of Mitigation Staff

   a. The Mitigation Branch staff person assigned the project (herein referred to as the Mitigation Branch Project Manager) will be responsible for reviewing and documenting the community's ability to implement the project according to their project application, grant agreement, program requirements, and federal regulations. This is accomplished through the review of quarterly progress reports, on-site review of the project and fiscal records and the project area to ensure the scope of work as outlined in the project application is being fulfilled and all funds are expended and accounted for properly.

   b. The SHMO will be notified as soon as possible of any significant issues related to the above. Reporting requirements are discussed under section XIII Reports.

3. Implementation Meeting & Monitoring Visits

   a. **Implementation Meeting.** An on-site meeting will be conducted no later than two (2) months after the grant agreement has been signed by the community. The purpose of this meeting is to ensure the local Project Manager understands the program requirements. Often, the local Project Manager will not be the person who was involved in the development of the project and may not be as familiar with requirements of the program. The local Project Manager, local officials, and fiscal officer for the community are encouraged to attend the implementation meeting. Meeting topics include:

      - Presentation and review of the Implementation Binder. The Implementation Binder includes guidance materials, forms, timelines, and reporting requirements.
      - Review of file management procedures and fiscal management procedures.
      - Review of procedures that are specific to the mitigation action taking place.

The implementation meeting should also consist of a tour of the project site, especially if it has not been visited by Mitigation Branch Project Manager to date.

b. Following the implementation meeting, monitoring visits will be conducted. The frequency of monitoring visits will be based on the project type:

- For 5% Projects, such as single warning siren, that does not constitute significant construction, an annual monitoring visit shall be conducted at a minimum.
- Planning projects shall not necessitate any additional monitoring visits beyond the implementation meeting. Provided drawdown requests are tied to plan progress milestones that have been verified by the Mitigation Branch Project Manager, and the final drawdown is contingent on the final plan being submitted.
- For all other mitigation projects, monitoring visits shall be conducted *no less than one time each year*. The monitoring visits will include a review of programmatic files and fiscal records. The visit should also include an on-site visit to the project area. These visits will occur throughout project completion.

c. Additional monitoring visits may be scheduled by assigned Mitigation Branch Project Manager(s) in communities displaying an inability to manage the mitigation grant properly. Determination of an inability to manage the grant would include, but not be limited to the following inconsistencies in project implementation:

1. The project is not on schedule for completion within the 24-month grant agreement.
2. Project/program activities are not being documented properly.
3. Quarterly progress reports are not being provided each quarter or are not complete.
4. The community does not appear to be meeting their local cost share responsibility.
5. More than one instance of a failure to follow guidance on issues related to the project.

d. The SHMO or immediate supervisor will determine if additional monitoring visits are needed after discussion with the assigned Mitigation Branch Project Manager. The local Project Manager will be notified in writing, within ten (10) days of the most recent monitoring visit, of any corrective actions and the date of the next monitoring visit.

e. A sub-recipients failure to comply with requested corrective actions may result in enforcement actions as outlined in 2 CFR Part 200.338.

4. Scheduling the Implementation Meeting and Monitoring Visit(s)

    a. The scheduling of the implementation meeting should be done through the local Project Manager. Minimally, local officials, the local Project Manager, and whoever is responsible for fiscal management in the community should attend.

    b. The first monitoring visit will be scheduled during the implementation meeting. Other monitoring visits should be scheduled during each subsequent visit.

    c. A letter or email to the local Project Manager will be used to confirm the implementation meeting and monitoring visits. The County EMA Director, Ohio EMA Regional Field Operations staff, and any other appropriate local officials should be copied. The letter should outline the purpose of the visit, what the Mitigation Branch Project Manager wants to review, who should be at the meeting, and if other officials are needed in addition to the local Project Manager.

5. Conducting the Monitoring Visit

    a. The Mitigation Branch Project Manager shall review the project application prior to the monitoring visit and take the project files/binder to the monitoring visit. At a minimum the Mitigation Branch Project Manager should be *as familiar* with the project as the local Project Manager.

    b. The project must be implemented according to program guidance and the scope of work outlined in the project. Discrepancies should be discussed with the local Project Manager. If needed, clarification will be requested from the community officials responsible for project success.

    c. Quarterly Progress Reports (QPRs) are required to document the progress of the project. The QPR should reflect the amount of funds expended, and the steps taken with each structure in the project (e.g. property closing, demolition, etc).

    d. The QPR should be used in the review of project files. For example, if the QPR indicates a property has been acquired, the file should include the appropriate documentation.

e. The Mitigation Branch Project Manager shall review the fiscal information and spreadsheets to assess the funding levels and the amount advanced. All funds advanced prior to the last thirty (30) days should be expended. The only exception to this would be management costs.

    1. The fiscal documentation should be compared to the last QPR and/or the spreadsheet.

    2. Use the Final Closeout Report form (**Attachment 12**) to determine the amount of the local share of the project. Calculating the local share is especially important after the project is a year old and/or actions are documented for over half of the properties in the project. All communities are aware of their local share commitment and should be prepared to document availability.

    3. Verify the exact percentage of local share budgeted in the project. The federal funds contributed will never be greater than 75%. In some instances, State funds may be contributed toward the project cost or the local match requirement.

f. Each property file must be reviewed to ensure compliance with the Duplication of Benefit (DOB) requirement. Documentation related to how disaster assistance was expended should be provided in each file.

g. The Record of Environmental Consideration (REC) should also be reviewed during the monitoring visit, especially if further coordination has been requested or required by an agency. For example, the Indiana bat is commonplace in Ohio and will impact the cutting of trees. The local Project Manager should document whether trees have been removed during implementation of the project. Or, if an elevation project requires obtaining a local floodplain development permit, this should be in the file. The REC should be reviewed during the first monitoring visit and in subsequent visits if conditions have been identified requiring compliance by the community.

h. The Project Monitoring Forms will be used to document the review of individual property files **(Attachment 13)**. The appropriate form will be completed for each property file. The Mitigation Branch Project Manager will identify whether the file was complete or incomplete in the box in the upper right corner.

i. The Mitigation Branch Project Manager shall discuss corrective actions with the local Project Manager at the time of the monitoring visit. The local Project Manager can begin working on the corrections before the follow up letter is sent.

6. Reporting Requirements

    a. After the implementation meeting, the Mitigation Branch Project Manager will follow-up on specific issues with the local Project Manager, but a follow-up letter is not required.

    b. Following monitoring visits (not implementation meetings), a follow up letter will be sent by the Mitigation Branch Project Manager to the local Project Manager within 10 days of the monitoring visit. The letter will outline the results of the visit and any corrective actions required. The local Project Manager will be given 30 days to complete the corrective actions.

7. Follow-up

    a. The completed Project Monitoring forms should be given to the designated staff person upon return from the visit.

    b. This individual will prepare property listings with property owner, address, and parcel numbers for the completed files, and property owner, address, and the information missing from the file.

    c. The monitoring forms and property listings will be filed when completed. A copy of the property listings will be provided to the appropriate staff person.

    d. The property listings will be used during future monitoring visits to identify the files already reviewed and prevent duplication of effort.

B. Post-Project Closeout Open Space Monitoring for Properties Acquired with HMGP Funds

1. Ohio EMA will comply with the requirements in 44 CFR Part 80 to monitor properties acquired with Hazard Mitigation Assistance funds and report the status to FEMA every three years
2. Ohio EMA will comply with 44 CFR Part 80 to review re-use requests and coordinate with FEMA Region V as required.

XV. PROJECT COMPLETION AND CLOSE OUT

A. The period of performance begins on the date of declaration or authorization for HMGP and ends no later than 3 years from the close of the application period. The Mitigation Branch Project Manager is responsible for ensuring that all approved activities are completed by the end of the period of performance. The deadline can be extended if necessary, but only in unusual circumstances (see Section X(C)(2)). The total period of performance should not exceed five (6) years.

B. Project Completion by Sub-recipient

1. The local Project Manager **must** notify the Ohio EMA Mitigation Branch Project Manager within ten (10) days of the completion of **all** work on the project. This contact may be by phone with a follow up written notification by email or by letter.

2. The notification should be accompanied by a Final Progress Report (which is a quarterly report modified to indicate that it is a final report) and fiscal documentation including a completed Record of Grant Activity **(Attachment 9)**.

3. Upon receiving this notification the Mitigation Branch Project Manager will schedule a final monitoring visit to review all program and fiscal records related to the project. All project funds are suspended at the time of completion of the project unless approval to spend is given in writing by the SHMO.

C. Final Monitoring Meeting -- Programmatic Closeout

1. At the time of closeout all files not previously reviewed or complete will be reviewed to ensure all appropriate documents are included. The Project Monitoring Form **(Attachment 13)** will be utilized for the review. At closeout, the Mitigation Branch Project Manager should be able to fully complete a monitoring form for each property in the project.

2. If a file does not contain all required documentation, the local Project Manager will be required to provide the information within thirty (30) days of closeout, if not readily available at the monitoring meeting. If this time frame is not appropriate, a greater amount of time may be granted by the Mitigation Branch Project Manager. However, failure to provide the documentation may result in the requirement to repay some or all of the grant amount for a particular property or activity.

3. A photograph(s) of the project area or each individual acquired property must be taken by the Mitigation Branch Project Manager at the closeout meeting. The photograph(s) are required to close out the project with FEMA.

4. An Environmental Closeout Declaration must be presented to the local project manager and signed by them at the closeout meeting. This form is to verify compliance with the provisions of the REC.

5. For projects involving the acquisition of property for open space, the Mitigation Branch Project Manager must obtain a copy of the recorded deed for each property mitigated with deed restrictions consistent with FEMA model language. The Mitigation Branch Project Manager must also obtain a signed copy of the Statement of Voluntary Interest form.

6. The Mitigation Branch Project Manager will obtain a completed NFIP Repetitive Loss Update Worksheet (AW-501 form) for each property mitigated that is on the NFIP repetitive loss or severe repetitive loss list.

7. For projects where a structure will remain in the Special Flood Hazard Area, the Mitigation Branch Project Manager will obtain a copy of the notice recorded with the deed specifying flood insurance, disaster assistance and floodplain regulation compliance requirements for the property.

D. Final Monitoring Meeting - Fiscal Closeout

1. If possible, the local Project Manager should provide copies of spreadsheets to the Mitigation Branch Project Manager before conducting the closeout meeting.

2. The total project cost will be determined and appropriate cost shares calculated. Any discrepancies will be noted and brought to the attention of the local Project Manager. The Mitigation Branch Project Manager will work with the local Project Manager to reconcile any discrepancies. If the closeout identifies unspent funds being held by the community they must return the funds upon notification by the Mitigation Branch Project Manager. If funds are due the community, the Mitigation Branch Project Manager will request those funds as soon as possible and will forward the state warrant within sixty (60) days of identifying the short fall.

3. In the event final closeout cannot be completed, funds due the community will be held until all required information has been provided to the Mitigation Branch Project Manager.

E. Completing Project Closeout with Sub-recipient

After the fiscal issues have been reconciled, monitoring forms are completed, and the necessary documentation has been obtained from the local Project Manager, the Mitigation Branch Project Manager shall provide a final closeout package to the community. The package will include:

- □ A letter of congratulations (under the signature of the SHMO) indicating that the documents and fiscal records were reviewed and accepted by the Mitigation Branch, and
- □ A completed Final Closeout Report with the reconciled / adjusted project costs **(Attachment 12)**.

F. Completing Project Closeout with FEMA

1. De-Obligation of Funds. If funds are to be de-obligated because of cost under-runs, it is necessary to request that FEMA de-obligate funds. The Mitigation Branch must have confirmation of FEMA's de-obligation of the funds (a letter) before a Closeout Package can be sent to them. The de-obligation request letter will be under the signature of the Alternate GAR or GAR to the FEMA V Regional Administrator.

2. Transmittal of Closeout Package to FEMA. Upon completion of the project closeout with the sub-recipient and de-obligation of remaining funds (when necessary), a closeout package shall be submitted to FEMA. The closeout package will include:

   - □ A letter of transmittal to the FEMA V Regional Administrator, cc: HMO, (under the signature of Alternate GAR or GAR) requesting that FEMA closeout the project,
   - □ A completed Final Closeout Report with the reconciled / adjusted project costs **(Attachment 12)**,
   - □ Property Information Sheet for each property mitigated,
   - □ Pictures of properties in their final, mitigated state,
   - □ Completed and signed Environmental Closeout Declaration
   - □ Completed NEMIS Project Closeout Verification Form, and
   - □ For projects involving the acquisition of property for open space, the following shall be provided for each mitigated property
     - A copy of the recorded deed,
     - A photo of each property site after project completion,
     - A signed Voluntary Participation Form for each property acquired,
     - The latitude and longitude coordinates, and
     - Identification of property repetitive loss status.
   - □ For mitigation projects in the Special Flood Hazard Area where structures remain after project implementation (elevation or retrofit of a structure), a copy of the notice recorded with the deed specifying flood insurance, disaster assistance and floodplain regulation compliance requirements for the property.

- Verification of flood insurance for each structure

□ For elevation projects:

- A final Elevation Certificate for each structure to verify compliance with NFIP requirements
- Verification of flood insurance for each structure

G. The Ohio EMA and sub-recipient will comply with the Single Audit Act, as amended, and maintain all project documentation for a period of three years following project or disaster closeout.

H. Specific audit requirement information will be included with the State/Local Agreement.

I. The Mitigation Branch Project Manager is responsible for ensuring that the appropriate mitigation project information is entered into the State Hazard Analysis, Resource and Planning Portal. Some of this data may be entered by the local Project Manager.

XVI. PLAN REVIEW AND UPDATING

A. This document will be reviewed annually by the SHMO noting any changes in policy or guidance so that the plan can be easily updated when a Major disaster declaration occurs. It will be updated as needed to reflect regulatory or policy changes, or to improve program administration.

B. Following a Presidential disaster declaration, the SHMO will prepare any updates, amendments, or revisions to the plan that are required in order to meet current policy guidance or changes in the administration of the HMGP, and submit the plan to FEMA for approval.

C. FEMA will reply in writing that the plan is approved and/or if any further revisions required. FEMA will provide a timeframe for submission of any corrections in their letter.

XVII. ATTACHMENTS

Attachment 1	–	State Management Cost & Staffing Plan / Budget Worksheet
Attachment 2	–	HMGP Project Pre-application
Attachment 3	–	HMGP Project Full Application
Attachment 4	–	HMGP Planning Grant Application
Attachment 5	–	HMGP Application Workbook
Attachment 6	–	HMGP Application Scoring Sheet and Instructions
Attachment 7	–	State/Local Agreement for Projects and Planning Grants (includes audit standards)
Attachment 8	–	Sample Designation of Applicants Agent
Attachment 9	–	Record of Grant Activity form
Attachment 10	–	Mitigation Briefing PowerPoint Slides
Attachment 11	--	Quarterly Progress Report (QPR)
Attachment 12	--	Final Closeout Report
Attachment 13	--	Individual File Review form
Attachment 14	--	Property Information Sheet
Attachment 15	--	Mitigation Grant Program Request for Payment form

FEMA-4360-DR-OH

Hazard Mitigation Strategy

Declared: April 17, 2018

Figure 1: Ohio EMA Photo Credit (Website)

Counties Declared for Public Assistance:
Adams, Athens, Belmont, Brown, Columbiana, Gallia, Hamilton, Jackson, Lawrence, Meigs, Monroe, Muskingum, Noble, Perry, Pike, Scioto, Vinton, and Washington Counties
Amended to add: Coshocton, Harrison, Jefferson and Morgan

FEMA

I. HAZARD MITIGATION STRATEGY

Following a disaster, the Federal Emergency Management Agency's (FEMA's) mitigation programs play a critical role developing and integrating disaster operations policies, procedures, and training under the National Response Plan. The Insurance and Mitigation Readiness Division within the Federal Insurance and Mitigation Administration (FIMA) acts as the coordination point for mitigation disaster operations and activities.

PURPOSE OF THE HAZARD MITIGATION STRATEGY

This document outlines a strategy to identify and implement hazard mitigation opportunities following the disaster declaration for FEMA-4360-DR-OH, severe storms, flooding, and landslides. It also provides the framework for implementing long-term, cost-effective solutions to minimize future disaster damages statewide. The strategy has been designed to be consistent with the State Mitigation Plan and will serve to:

- Describe actions for Hazard Mitigation (HM);
- Identify opportunities to achieve hazard mitigation efforts within the state; and
- Document these efforts so they may be shared and enhanced in future disasters.

This document is a multi-agency effort. For this disaster, the Ohio Emergency Management Agency (Ohio EMA), the Ohio Department of Natural Resources (ODNR), and FEMA coordinated to develop strategies and priorities for HM within this disaster.

DESCRIPTION OF THE EVENT

Beginning on February 14, 2018, and continuing through February 25, 2018, a persistent band of moderate to severe storms moved across Region V impacting Illinois, Indiana, Michigan, Ohio, and Wisconsin. While precipitation levels and storm-related damages varied, Ohio experienced a significant amount of flooding and subsequent damage along the southern portion of the state. The snowmelt and continued rain throughout the incident period, combined with the frozen soils, led to flooding along area streams, rivers, and low-lying areas. Numerous flood gauges in this area rose to moderate flood stage, and rainfall totals in the impacted areas during the incident period ranged from a total of five to nine inches. Following these storms, there were several road closures as well as reports of inaccessible areas throughout southern Ohio due to standing water.

Immediately following the onset of this event, the Ohio State Emergency Operations Center (SEOC) began actively assessing and monitoring the situation across the state. The Governor of Ohio declared a State of Emergency on February 24, 2018 for Adams, Athens, Belmont, Brown, Clermont, Columbiana, Gallia, Hamilton, Hocking, Jackson, Jefferson, Lawrence, Meigs, Monroe, Muskingum, Scioto, and Washington Counties.

Widespread flooding culminated February 26, 2018, when the Ohio River at Cincinnati rain gauge showed a crest of 60.53 feet, 8 feet above flood stage and the highest crest since 1997. Communities near the river and its tributaries incurred damages to roads, bridges, and public buildings, as well as basement flooding and sewage backup. According to the Governor, preventative steps on the part of state and local agencies, such as Ohio EMA, shielded the area from the worst possible damage. The SEOC was partially activated with Emergency Support Functions (ESFs). A FEMA Region V Liaison Officer was deployed to the SEOC from February 25, 2018, through February 27, 2018, and the SEOC returned to normal operations on February 27, 2018.

There were several local evacuations due to flooding and the American Red Cross opened three shelters in the impacted areas. There was one confirmed fatality (Shelby County) as a result of this event, and at its peak, there were 10,449 customers without power statewide. On March 6, the Governor requested a joint preliminary damage assessment (PDA) conducted by local, state, and federal emergency management officials. The joint PDA resulted in documentation of approximately $44 million worth of damages to county, village and township roads, bridges, and public buildings. On March 26, the Governor requested a Presidential Disaster Declaration.

On April 17, 2018, a disaster was declared for the State of Ohio, due to severe storms, flooding, and landslides that occurred during the incident period of February 14, 2018, through February 25, 2018. As a result of that declaration, Public Assistance has been made available for Adams, Athens, Belmont, Brown, Columbiana, Gallia, Hamilton, Jackson, Lawrence, Meigs, Monroe, Muskingum, Noble, Perry, Pike, Scioto, Vinton, and Washington Counties. Hazard Mitigation is available statewide.

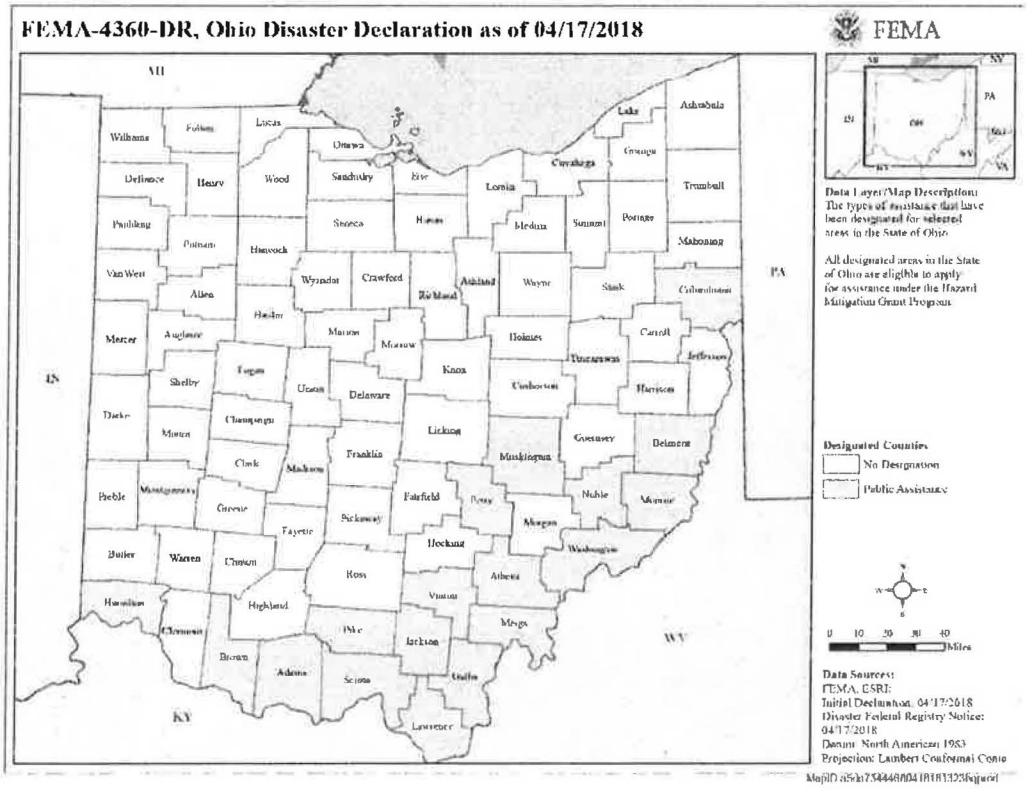


Figure 2: Map of FEMA-4360-DR-OH

II. MISSION, VISION, AND PRIORITIES

The FEMA Mission and Strategic Plan, FIMA Moonshots, and State and Regional priorities were taken into account in the development of this HM Strategy. The following is a summary:

FEMA MISSION
Helping people before, during, and after disasters.

FEMA STRATEGIC PLAN
This FEMA 2018-2022 Strategic Plan was developed with input from our external partners—state, local, tribal, and territorial governments, non-governmental organizations, and the private sector—as well as FEMA employees from offices and directorates across the agency. The vision for the next five (5) years includes objectives that Mitigation directly supports.

The Strategic Plan sets out three overarching Strategic Goals:

- **Build a Culture of Preparedness**
  Every segment of our society, from individual to government, industry to philanthropy, must be encouraged and empowered with the information it needs to prepare for the inevitable impacts of future disasters.
- **Ready the Nation for Catastrophic Disasters**
  FEMA will work with its partners across all levels of government to strengthen partnerships and access new sources of scalable capabilities to quickly meet the needs of overwhelming incidents.
- **Reduce the Complexity of FEMA**
  FEMA must continue to be responsible stewards of the resources we are entrusted to administer. We must also do everything that we can to leverage data to drive decision-making, and reduce the administrative and bureaucratic burdens that impede impacted individuals and communities from quickly receiving the assistance they need.

FIMA - RISK MANAGEMENT DIRECTORATE: Moonshots
The Federal Insurance and Mitigation Administration's (FIMA's) mitigation efforts are significant, are conducted across FIMA's directorates and include visible and less tangible activities, including mitigation planning and grants, investments in better data and maps for decision-making, and capacity building of FIMA stakeholders at the local, state, tribal, and national levels.

The purpose of "*moonshots*" is to engage, challenge, and motivate FIMA members around certain core objectives. FIMA Leadership believes that moonshot targets should engage staff across various directorates and offices around a common goal. Ideally moonshots address both the *Performance* and *Organizational Health* aspects of FIMA's 2017 Leadership Intent. Two aspirational ideas that cut across FIMA:

1. *Double policies-in-force by 2023*
2. *Increase mitigation Investments by 4x by 2023*

While both Moonshots are applicable to all FIMA employees, the Mitigation Investment moonshot is jointly sponsored by the Mitigation and Risk Management Directorates. Selective Executive Service Leads are Mike Grimm and Nick Shufro. Team Leads are Jennie Orenstein and Kathleen Smith. The Double Policies Moonshot is led by the Insurance Directorate under David Maurstad and Paul Huang.

STATE PRIORITIES
The State's HMGP priorities for FEMA-4360-DR-OH, as defined in the State of Ohio Administration Plan, are as follows:

- Priority will be given to projects in the declared counties over projects in other counties (except for planning grant applications).
- 7% planning funds will be utilized to fund local natural hazard mitigation plans that are approaching the five-year deadline for plan expiration. Priority will be given to planning grant applications with the earliest plan expiration date.
- Among flood loss reduction projects, priority will be given for the acquisition of repetitively flood-prone properties as it is the only permanent mitigation solution.
- Priority will also be given to the construction/installation of safe rooms that mitigate the loss of life from severe wind and storm events.

FEMA REGION V PRIORITIES
In support of the FIMA Moonshot, to "double coverage by 2023," one of FEMA Recreational Vehicle's (RV) priority is to deliver outreach on flood insurance through a coordinated Flood Insurance Outreach Strategy. This priority is also in line with the FEMA Strategic Plan goal to "Build a Culture of Preparedness" and objective of "Closing the Insurance Gap."

Floods are the most common and most costly natural disaster in the U.S. and it is important for individuals and communities to know their flood risk and take steps to minimize that risk and protect their financial investments. The Flood Insurance Outreach Strategy will be designed to provide outreach materials to increase an individual's knowledge of flood risk and understanding of flood insurance. Region V would like to focus on the Cincinnati Metropolitan Area as the target for this outreach. Outreach activities should include outreach at special events and state/county fairs, coordination with the State Insurance Commissioner's Office, and distribution of flood insurance publications to a wide range of stakeholders. Additionally, research on the availability of private flood insurance coverage in Ohio would be valuable to help inform risk management knowledge

III. HAZARD MITIGATION GOALS, OBJECTIVES, AND ACTIONS

The mission of hazard mitigation is to protect lives and prevent or reduce the loss of property from hazard events. Post-disaster, this is accomplished through comprehensive efforts authorized by the Stafford Act, as amended by the Disaster Mitigation Act of 2000, the National Flood Insurance Act, the Flood Insurance Reform Act, and Executive Orders.

In this event, the specific HM strategy goals, listed below, lay the foundation for building the capacity to mitigate future disaster damage throughout the state.

HM GRANTS AND PLANNING

Grants and Planning supports state, local, tribal, and territorial governments in the development and update of multi-hazard mitigation plans; provides technical assistance to support the use of Hazard Mitigation Assistance (HMA) grants, specifically Hazard Mitigation Grant Program (HMGP) funding for projects that are consistent with hazard mitigation plan strategies; and collaborates with HM Hazards and Performance Analysis (HPA), Public Assistance (PA), and Environmental Planning and Historic Preservation (EHP) partners to synchronize hazard mitigation opportunities authorized under Sections 404 and 406 of the Stafford Act.

Grants

For this declaration, mitigation briefings will be conducted in conjunction with PA briefings, whenever possible. If Mitigation Branch staff are not available to conduct HMGP briefings in coordination with PA briefings, a series of four webinar briefings will be offered. A webpage was also created on the Ohio EMA Website to notify potential subrecipients of the availability of HMGP funds.

As identified in the Administrative Plan for the HMGP, there will be two application cycles for HMGP funds. The first application cycle will be expedited and will include: 1) unfunded Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) applications, 2) "shelf applications" that are ready to be submitted, 3) applications developed to mitigate damage caused by the disaster event and 4) applications for "substantially damaged structures." Applications in category 1 will not be required to submit an HMGP application. The existing eGrants application for these projects will be used to enter the required project application data into NEMIS. All other applicants in the cycle complete a full HMGP application by the established deadline in order to be considered for funding. The State Hazard Mitigation Team (SHMT) will review these applications and make award recommendations to the Governor's Appointed Representative (GAR).

Also as noted in the Administrative Plan for the HMGP, the second HMGP application cycle will be a two-part process. Pre-applications are submitted first. Pre-applications are reviewed and ranked by the SHMT and enough pre-applications to expend 150 – 200% of the estimated remaining project funds will be selected for full project application development (this is to allow for projects that could be withdrawn and for the submission of zero funded projects to ensure that all Federal and State funds can be appropriated). Full project applications will be evaluated by the SHMT after the deadline for submission has passed. Projects will then undergo a cost effectiveness, environmental, and completeness and eligibility review conducted by the Mitigation Branch staff. Eligible and complete full project applications will then be submitted to FEMA for approval.

Program Administration by States (PAS) is a program created to provide a more streamlined grant approval process allowing communities to get the hazard mitigation funds they need faster. FEMA can delegate activities and subtasks to States, including mitigation planning review. States must submit a request letter to FEMA to indicate interest. States must have a current FEMA-approved mitigation plan, experience in the

activities/subtasks requested, and a demonstrated commitment to hazard mitigation. Under this declaration Ohio EMA would like to explore this option and potentially participate in the program.

Planning

Hazard mitigation is most effective when implemented under a comprehensive, long-term mitigation plan. State, tribal, and local governments engage in hazard mitigation planning to identify risks and vulnerabilities associated with natural disasters and develop long-term strategies for protecting people and property from future hazard events. Mitigation plans are key to breaking the cycle of disaster damage, reconstruction, and repeated damage.

According to the Disaster Mitigation Act of 2000 (DMA2K), states must have an all hazards mitigation plan approved by the Federal Emergency Management Agency (FEMA) in order to remain eligible for federal mitigation and public assistance funds associated with a presidential disaster declaration.

The State of Ohio Standard Hazard Mitigation Plan was first approved by FEMA in 2005. The 2014 Enhanced Hazard Mitigation Plan revision details Ohio's highest priority hazards: river/stream flooding; tornadoes; winter storms; landslides; dam/levee failure; wildfire; coastal flooding; earthquakes; coastal erosion, drought; severe summer storms; invasive species; and land subsidence hazards. The 2014 Ohio mitigation plan also integrates the State Hazard Analysis, Resource and Planning Portal (SHARPP)—a web-based system that captures and disseminates state and local hazard mitigation planning and project information.

Applicants with a FEMA-approved State or Tribal Enhanced Mitigation Plan are eligible for HMGP funding not to exceed 20 percent of the estimated total Federal assistance under the Stafford Act, up to $35.333 billion of such assistance, excluding administrative costs authorized for the disaster. Therefore, because Ohio has an Enhanced Mitigation Plan, the State is eligible for HMGP funding in accordance with this provision.

The Ohio Comprehensive Hazard Mitigation Plan Report, as of March 27, 2018, provides the status of local mitigation plans statewide (See Appendix 2). All subapplicants for HMGP must have a FEMA-approved local Mitigation Plan at the time of obligation of grant funds for mitigation projects.

Goal 1: Partner with the State of Ohio to identify mitigation opportunities and assist communities in the development of cost-effective and technically feasible mitigation projects.

Objective 1.1 *Build and support the capacity of the State to implement Hazard Mitigation Assistance*

1.1.1 Support the State in the development of a Program Administration by State (PAS) agreement related to approval of Hazard Mitigation Plans

- Coordinate with Ohio EMA to explore and potentially execute a PAS agreement between the State and FEMA for review of Hazard Mitigation Plans

1.1.2 Support submission and implementation of State Management Costs

- Ohio EMA will submit the initial request for State Management Costs (SMC) in mid-May 2018 after receipt of the initial 30-day lock-in of the estimate of the amount of funding eligible to be used for HMGP, and FEMA will approve and obligate up to 25% of SMC funds.
- Ohio EMA will submit to FEMA by mid-August 2018 (no later than 120 days after the date of declaration) the SMC narrative on how the State will utilize the SMC funds
- Ohio EMA will submit a request for the remaining SMC funds after 12 months from the declaration or in April 2019, and FEMA will approve and obligate the remaining funds for SMC.

1.1.3 Administer HMA grants to reduce future damages from hazards as identified in the State Hazard Mitigation Plan.

- Ohio EMA will contact those counties whose plans have expired or are at risk of expiring to encourage them to apply for a planning grant in May 2018
- Ohio EMA will solicit pre-applications from affected communities including contacting local officials, mailing application packages, and attending local meetings by December 2018
- Ohio EMA will submit to FEMA the Application for Federal Assistance (SF424) and Assurances for the Disaster

1.1.4 Develop two application cycles with the first cycle of submittals including applications for projects which were not selected for the 2017 non-disaster HMA programs. (HMA and Ohio EMA)

Cycle 1, Steps:
- The SHMT will review subapplications and make award recommendations to the Governor's Authorized Representatives (GAR)
- The Ohio EMA will submit HMGP subapplications to FEMA in May 2018
- FEMA will review and approve sub-applications and obligate HMGP funds

Cycle 2, Steps:
- The SHMT will review and rank pre-applications to expend 150–200% of the estimated remaining project funds selected for full project application development by May 2018
- Subapplicants will submit full subapplications to Ohio EMA by December 2018
- Ohio EMA will submit full subapplications to FEMA beginning in December 2018
- FEMA will review and approve subapplications and obligate HMGP funds in a timely manner

Goal 2: Ensure compliance with the Disaster Mitigation Act of 2000, Part 322 (Mitigation Planning Requirements)

Objective 2.1 Encourage communities in the declared area with HM plans that have not been adopted to complete the adoption and resolution process

2.1.1 FEMA will coordinate with the Ohio EMA to develop a letter to send to communities that have not adopted their local mitigation plan

- First, FEMA will provide a list of communities that have not adopted local mitigation plans
- Ohio EMA will send emails to the County Emergency Management Agencies advising that there are communities within their county that have not adopted to local plan
- Then, FEMA will send letters to the community to encourage communities to submit mitigation plan adoptions to the state

HM FLOODPLAIN MANAGEMENT AND INSURANCE

Floodplain Management and Insurance promotes community participation in the National Flood Insurance Program (NFIP); monitors compliance with NFIP regulations during rebuilding/ relocating; and provides floodplain management expertise to state, local, tribal, and territorial governments, and Joint Field Office (JFO) partners.

Insurance

For this declaration, FEMA will initiate the development of targeted Flood Insurance Outreach Strategy to encourage individuals to consider purchasing flood insurance. The strategy will be developed in coordination with FEMA Region V Floodplain Management and Insurance Branch and External Affairs.

Floodplain Management

Communities that participate in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed the minimum requirements of the Program. The requirements are intended to prevent loss of life and property and reduce taxpayer costs for disaster relief, as well as minimize economic and social hardships that result from flooding. In exchange for community adoption and enforcement, FEMA makes flood insurance available to all property owners throughout the community. There are 98 communities statewide that do not participate in the NFIP.

Communities that are identified as flood-prone, but do not participate in the NFIP are subject to sanctions. Federal grants and loans for development in SFHAs and Federal disaster assistance for flood damages are not available in these communities

Of the 98 non-participating communities, 14 have been identified as flood-prone and are subject to sanctions. (See Appendix 1)

For participating communities in the affected areas, one of the most demanding requirements of the NFIP in a post-disaster environment is to evaluate damaged structures to determine if they have been substantially damaged. Additionally, any substantially damaged structures are required to repair or reconstruct in compliance with the local ordinance. This often means elevating, flood proofing, or relocating structures to reduce their future risk to flooding.

For this disaster, FEMA and the State will coordinate to provide any technical assistance or training on substantial damage and other requirements of the NFIP as requested by communities in the affected areas. Rebuilding after an event also provides an opportunity to build back safer and stronger. Therefore, FEMA and the State will work with communities interested in adoption of higher standards.

Goal 3: Assist the State of Ohio in increasing awareness and knowledge of the NFIP and supporting floodplain management compliance and flood insurance.

Objective 3.1 *Encourage individuals and communities to evaluate their risk and protect their investments through a targeted Flood Insurance Outreach Strategy.*

3.1.1 FEMA will develop a strategy to deliver insurance outreach to communities and individuals in the affected areas

- Coordinate with RV to develop and implement an Insurance Outreach Strategy in the target area, Cincinnati, to include:
  - Agent training—Coordinate with H2O Partners for targeted agent training in Ohio (COMPLETE)
  - Outreach at special events—State and county fairs, first time homebuyers events
  - Coordination with State Insurance Commissioner's office and the Big I (Ohio Insurance Association)
  - Providing Publications to communities, libraries, and home repair stores
  - Analysis of private flood insurance coverage throughout the state
  - Coordination with External Affairs to provide proactive and accurate flood insurance messaging to penetrate the digital media market

Objective 3.2 *Encourage participation in the NFIP through outreach to non-participating communities throughout the state.*

3.2.1 Reach out to all non-participating communities throughout the State and invite them to join the NFIP
- Gather current contact information for non-participating/sanctioned communities
- Prepare letter, with attachments, to be signed by FEMA RV Mitigation Director and sent to communities
- Provide any technical assistance necessary to guide interested communities through the process, COMPLETE—technical assistance will be provided, as needed

Objective 3.3 *Provide appropriate technical assistance to communities on the requirements of the NFIP and opportunities to promote resilience and sustainability.*

3.3.1 Reach out to all participating communities in the affected area to remind them of their NFIP responsibilities and offer technical assistance
- ODNR emailed impacted communities (COMPLETE)
- Additional follow-up with Pomeroy may be required

3.3.2 Provide publications and technical assistance on compliance with NFIP minimum standards and encourage higher standards
- Cincinnati request (review of ordinance and suggestion for higher standards)
- New Richmond request (support of higher standards in campgrounds)
- Hamilton County (concerns over new National Flood Hazard Layer—no hyperlink to Letter of Map Amendment—coordinate with Risk Analysis)
- Columbus (support of higher standards for storage of materials)
- Publications requested for Hamilton County, Cincinnati, and New Richmond

COMMUNITY EDUCATION AND OUTREACH

During the preliminary damage assessment phase of the disaster, potential best practices and success stories were identified. A Best Practice Writer will support the development of potential best practices and successes. Additionally, FEMA and the State of Ohio will coordinate to provide training opportunities to communities.

Goal 4: **Advance education, outreach and community resilience in support of the Hazard Mitigation Strategy**

Objective 4.1 *Identify hazard mitigation measures that effectively reduce damages and develop them into Best Practices and Success Stories, media releases, stories for social media, and local newsletters.*

4.1.1 Capture and develop Best Practice story opportunities including those based on past Hazard Mitigation projects implemented in designated areas.

- The following leads have been identified for potential best practices or success stories:
  - Delhi—Successful HMGP projects
  - Cincinnati—East End avoided losses due to acquisition projects
  - Cincinnati—Highlight success of building codes/floodplain management standards as illustrated by an elevated school that avoided losses
  - New Richmond—Successful HMGP projects

Objective 4.2 *Identify hazard mitigation training needs and outreach opportunities and provide training and resources to support the needs*

4.2.1 Provide training to support project application development and submittal.

- Ohio EMA and FEMA have identified the following trainings for state and local officials responsible for preparing HMA applications:
  - HM Grant Application Development Workshop: 4-hour hazard mitigation workshop based on received pre-applications (this course will not result in a FEMA certificate)
  - BCA Training: A one-day training focusing on storm water and safe room projects (After May 2017 in Columbus)
  - Environmental and Historic Preservation (EHP) Training: A one-day training on EHP for HMA
  - Quality Application Development Webinar: A one-day training (Early to mid-June)

4.2.2 Provide training to support community compliance with NFIP requirements

- Ohio DNR and FEMA have identified the following trainings for NFIP stakeholders
  - Substantial Damage training for Cincinnati area communities
  - Elevation Certificate and Letter of Map Change Training for Ohio River Valley Professional Licensed Surveyor Organization (May 18)

4.2.3 Leverage and build on existing partnerships between the FEMA Region, and local and state organizations to maintain public awareness of hazard mitigation.

- Provide communities with publications for display and dissemination

HAZARDS AND PERFORMANCE ANALYSIS

Hazards and Performance Analysis (HPA) informs Response and Recovery operations with risk analysis and provides technical assistance to state, local, tribal, territorial, and federal partners.

With significant investment being made in mitigation, demonstrating cost-effectiveness is crucial for continued support, Loss Avoidance Studies (LAS) quantify the losses avoided (also known as damage prevented or benefits) due to the implementation of the projects. FEMA and Ohio EMA explored the possibility of conducting a LAS for this event, however, the detailed data on acquisition projects in the declared area required to complete a LAS were not available. In lieu of this data, FEMA and Ohio EMA decided to prepare Best Practice and Success Stories to document the projects for the state. Additionally, FEMA RV and Ohio EMA will work with the US Army Corps of Engineers to determine what is required to finalize draft LAS's completed for the communities of Findlay and Ottawa.

HM HPA analyzes past performance and projects for structural and infrastructure mitigation funded under Sections 404 or 406 of the Stafford Act and supports the development and adoption of more rigorous, risk informed building codes and standards. In this disaster, in support of Public Assistance (PA) projects, Mitigation will deploy 406 Specialists to work directly with the PA organization. The 406 specialists will be embedded on the PA teams. PA has requested 8 406 Mitigation Specialists, however, there are not 8 available. Therefore, PA will be assessing the PA Specialists that are deployed to the disaster to determine if they have knowledge and experience doing 406 Mitigation. Those that do have 406 capability will be redirected to provide that support and any remaining needed staff will be coordinated through the Mitigation Cadre.

HPA will prepare the Best Available Flood Hazard Information Memo in support of the disaster. The memo provides guidance on the following: for FEMA in complying with 44CFR Section 9.7(c) and Executive Order (E.O.) 11988 Sec. 2(a) (1) on the use of best available flood hazard information; and, on the use of work maps, Preliminary Flood Insurance Rate Maps (FIRMs) and Flood Insurance Studies (FIS) or when Advisory BFEs are available to communities for new and substantially improved/substantially damaged structures. The memo also acknowledges the coordination responsibilities for federal agencies to communicate and allow for an informed and collaborative approach to unifying environmental and historic preservation compliance reviews for disaster recovery work under the Unified Federal Review Process.

Goal 5: Provide risk analysis products to support sound decision making in the recovery and rebuilding process in order to reduce vulnerability and increase resiliency to future flood events.

Objective 5.1 *Coordinate with Public Assistance to assist in the identification of potential mitigation opportunities.*

5.1.1 Deploy 406 Mitigation staff to support the needs of PA and embed the staff within the PA organization

Objective 5.2 *Provide guidance to FEMA, the State, and communities on the best available flood hazard data for use in rebuilding and recovery.*

5.2.1 Prepare Memo on available flood hazard information in compliance with FEMA Policy #104-008-2

Objective 5.3 *Evaluate the possibility of conducting a losses avoided study and finalize previously prepared losses avoided studies that are still in draft format.*

5.3.1 Coordinate with Ohio EMA and ODNR to determine if data exists to conduct a losses avoided study for this disaster (Complete)

5.3.2 Coordinate with USACE and Ohio Silver Jackets to determine what is required to finalize draft losses avoided studies

HM STRATEGY WORK GROUP

State		
Steve Ferryman	Ohio EMA	State Hazard Mitigation Officer
Alicia Silverio	Ohio DNR	State NFIP Coordinator
Dena Barnhouse	Ohio DNR	Dam Safety and Floodplain Program Manager
FEMA Region V		
Julia McCarthy	FEMA RV	Group Supervisor
Pamela Broviak	FEMA RV	HMA Grants Specialist
John Kinley	FEMA RV	Floodplain Management Specialist
Christine Gaynes	FEMA RV	Engineer
Steve Greene	FEMA RV	Planner
Laurie Smith-Kuypers	FEMA RV	Outreach Specialist
FEMA IOF		
Patricia Beck	FEMA	Group Supervisor

SIGNATURES

5/22/18

Steven Johnson **Date**
Federal Coordinating Officer
FEMA-4360-DR-OH

5/22/18

Sima Merick **Date**
State Coordinating Officer / Governor's Authorized Representative
FEMA-4360-DR-OH

MARY B CARUSO

Digitally signed by MARY B CARUSO
Date: 2018.05.15 10:04:01 -05'00'

Mary Beth Caruso **Date**
Mitigation Division Director
FEMA Region V

APPENDIX 1

Community Declared Disaster - Non Participating

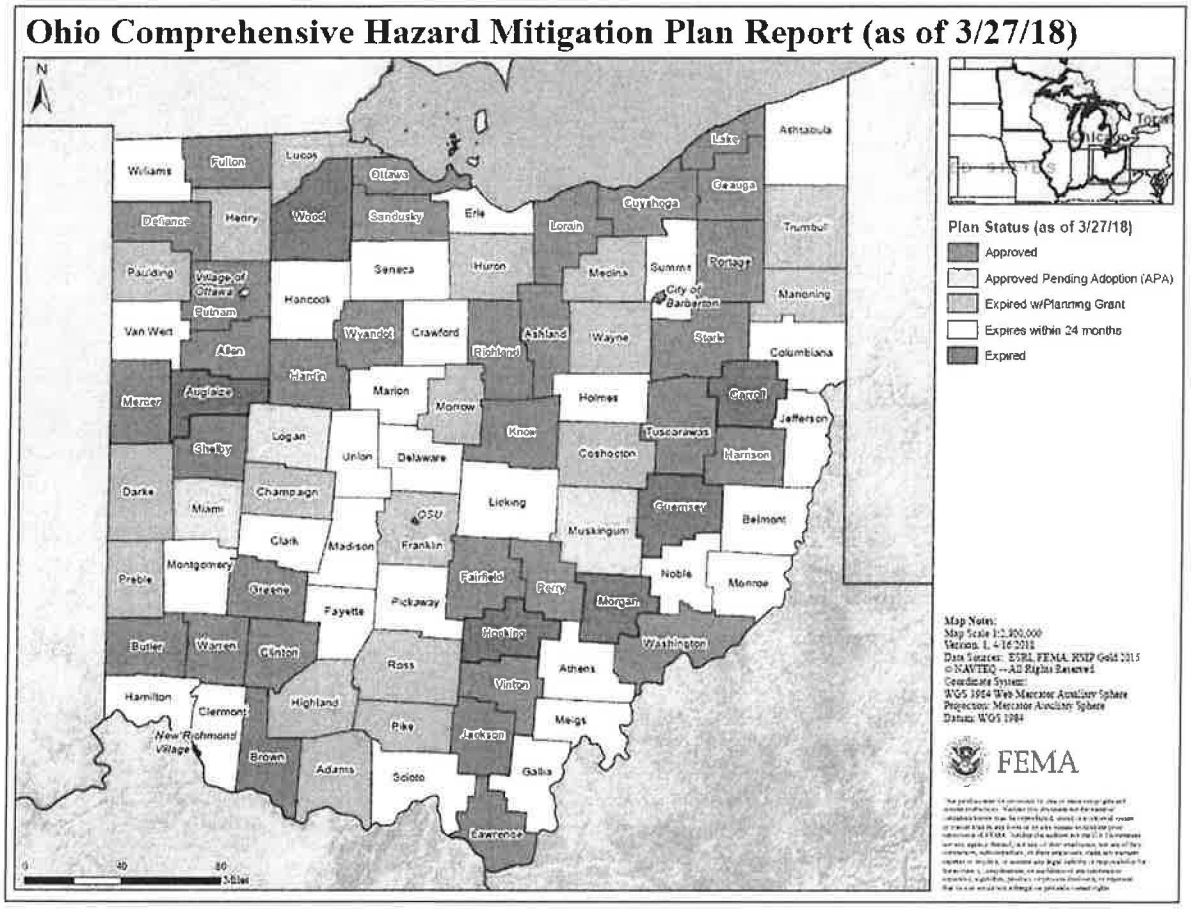
OHIO

Including Future Sanction Dates

CID	County	Community	Hazard Area Identified	Date Sanction
390819#	ADAMS COUNTY	CHERRY FORK, VILLAGE OF	09/22/78	09/22/79
390908#	ADAMS COUNTY	WEST UNION, VILLAGE OF	11/21/01(F)	11/21/02(F)
390017#	ATHENS COUNTY	CHAUNCEY, VILLAGE OF	06/21/74	06/21/75
390822#	ATHENS COUNTY	COOLVILLE, VILLAGE OF	11/03/78	11/03/79
390788#	BROWN COUNTY	FAYETTEVILLE, VILLAGE OF	08/05/77	08/05/78
390911#	BROWN COUNTY	SAINT MARTIN, VILLAGE OF	11/21/01(F)	11/21/02(F)
390789#	BROWN COUNTY	SARDINIA, VILLAGE OF	01/13/78	01/13/79
390851#	MUSKINGUM COUNTY	PHILO, VILLAGE OF	03/30/79	03/30/80
390815#	NOBLE COUNTY	BATESVILLE, VILLAGE OF	01/06/11(F)	01/06/12(F)
390431#	NOBLE COUNTY	DEXTER CITY, VILLAGE OF	08/23/74	08/23/75
390802#	PERRY COUNTY	RENDVILLE, VILLAGE OF	12/02/77	12/02/78
390710#	PERRY COUNTY	SHAWNEE, VILLAGE OF	02/07/75	02/07/76
390913#	SCIOTO COUNTY	OTWAY, VILLAGE OF	09/04/02(F)	09/04/03(F)
3907188	VINTON COUNTY	MCARTHUR, VILLAGE OF	11/26/76	11/26/77

Total : 14

APPENDIX 2


Ohio Comprehensive Hazard Mitigation Plan Report (as of 3/27/18)
N
Williams
Fulton
Lucas
Ottawa
Lake
Ashtabula
Geauga
Cuyahoga
Defiance
Henry
Wood
Sandusky
Erie
Lorain
Trumbull
Paulding
Seneca
Huron
Medina
Summit
Portage
Village of Ottawa
Putnam
Hancock
City of Barberton
Mahoning
Van Wert
Allen
Wyandot
Crawford
Richland
Ashland
Wayne
Stark
Columbiana
Mercer
Auglaize
Hardin
Marion
Morrow
Holmes
Carroll
Jefferson
Shelby
Logan
Union
Delaware
Knox
Coshocton
Tuscarawas
Harrison
Darke
Champaign
Licking
Guernsey
Belmont
Miami
Clark
Madison
OSU
Franklin
Muskingum
Preble
Montgomery
Greene
Fayette
Pickaway
Fairfield
Perry
Morgan
Noble
Monroe
Butler
Warren
Clinton
Ross
Hocking
Washington
Athens
Hamilton
Clermont
Highland
Vinton
Meigs
New Richmond Village
Brown
Adams
Pike
Jackson
Scioto
Gallia
Lawrence
0
40
80
Miles
Plan Status (as of 3/27/18)
Approved
Approved Pending Adoption (APA)
Expired w/Planning Grant
Expires within 24 months
Expired
Map Notes:
Map Scale 1:2,800,000
Version: 1, 4/16/2018
Data Sources: ESRI, FEMA, NSP Gold 2015
© NAVTEQ – All Rights Reserved
Coordinate System:
WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984
FEMA

State of Ohio
Hazard Identification and Risk Assessment (HIRA)

Ohio Emergency Management Agency
2855 West Dublin-Granville Road
Columbus, Ohio 43235

December 2018 Edition

Foreword

December 19, 2018

This 2018 edition of the State of Ohio Hazard Identification and Risk Assessment (HIRA) provides current research and updates on those natural, technological and human-caused hazards to which the state of Ohio is most vulnerable. Knowledge of these hazards, their frequency, and the state's overall vulnerability to them allows state and local government officials to better assess their risks and to plan and prepare for the consequences.

This revision is an update to the Spring / Summer 2013 HIRA. This HIRA has been reviewed in its entirety, with all information evaluated and updated as necessary. This document was prepared by Planning, Training and Exercise Branch at the Ohio Emergency Management Agency (Ohio EMA) with the assistance of all branches within the agency and other state/federal partners. The information contained in this HIRA is a compilation of research from federal, state, and local government sources, as well as from public sources.

SIMA S. MERICK
Executive Director

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Introduction

The intent of this document is to be a useful tool for state and local emergency management partners to rate the risk, determine vulnerability, and predict the adverse impact of disasters and emergencies. The HIRA does not provide policy or action-based recommendations to manage hazards. This document is one element of a comprehensive emergency management program that incorporates mitigation, preparedness, response and recovery. Mitigation plans, the State of Ohio Emergency Operations Plan, as well as standard operating procedures, round-out a comprehensive program to manage hazards.

Emergency management in Ohio is governed by Ohio Revised Code (ORC) 5502. Section 5502.21 mandates that the EMA, a division of the Department of Public Safety, is the primary coordinating agency for statewide emergency readiness activities to meet the threats posed by various hazards.[1] In cooperation with other state offices and agencies, the agency has developed this analysis of the primary hazards that may threaten both lives and property.

For the purpose of this HIRA, we will use the ORC definition of hazard. 'Hazards' in Chapter 5502.21 of the ORC are defined as: "… any actual or imminent threat to the survival or overall health, safety, or welfare of the civilian population that is caused by any natural, human-made, or technological event."[2]

A catastrophic incident, as defined in the FEMA National Response Framework, is "any natural or manmade incident, including terrorism that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions."

As defined by the ORC, "Hazard identification means an identification, historical analysis, inventory, or spatial distribution of risks that could affect a specific geographical area and that would cause a threat to the survival, health, safety, or welfare of the civilian population, the property of that population, or the environment."[3] The National Fire Protection Association (NFPA) Standard 1600 requires entities to "identify hazards, monitor those hazards, the likelihood of their occurrence, and the vulnerability of people, property and the environment, and the entity itself to those hazards"[4] as part of the risk assessment process.

Upon reviewing the literature in hazard analysis, over seventy hazards were identified. These hazards include those listed in NFPA 1600, the Homeland Security Council and DHS-developed National Planning Scenarios, Ohio EMA's State of Ohio Enhanced Hazard Mitigation Plan, and Ohio Homeland Security documents.

To help categorize the hazards, this HIRA analysis utilizes three major groups based primarily on the categories recommended in the Federal Emergency Management Agency's Comprehensive Preparedness Guide 101. The categories are Natural, Human Caused and Technological as shown in Figure 1. Each of the hazards identified are not mutually exclusive. Some hazards are not germane to Ohio and/or not likely enough a scenario to warrant consideration in this hazard identification and risk analysis.

A General Overview of Hazards in Ohio

The most damaging hazards/events in Ohio are floods and tornadoes. Other severe weather events, such as winter storms, have also led to floods or costly recovery actions. Drought has also led to agricultural losses and forced water users to seek assistance during these sustained periods of insufficient precipitation. Ice storms can take a greater toll, especially in regards to travel, infrastructure, and power and communication lines. When an ice storm strikes, roads can turn deadly, leaving schools and businesses closed.

For over 200 years, earthquakes, often centered in the Anna (Shelby County) Seismic Zone, have also occurred in Ohio, with most classified as “minor” in nature. Northeastern Ohio, east of Cleveland, has been particularly active in recent years. A large-scale (regional) event involving the New Madrid, Missouri fault, could significantly affect portions of southwestern Ohio.

Activities associated with humankind also have their effects such as woodland and field fires which represent high economic impact to costly resources. Mine closings have led to issues related to subsidence and landslides. From the 1940s until the present, closings were made without actions to prevent shaft collapses. Urban expansion, or new highway construction, has led to damages related to these collapses. Class I and other earthen dams also pose a potential threat to adjacent or downstream communities. Many of these dams serve as up-ground reservoirs or recreational sites. If not properly built or maintained, they may fail, leading to downstream flooding and strained response capabilities.

In addition to fossil fuels, electric power generation uses nuclear technology. Three nuclear generating facilities are sited in, or within five miles of, Ohio. The 50-mile ingestion pathway from the Enrico Fermi plant in Michigan also extends into Ohio. Three separate U.S. Department of Energy (DOE) facilities also pose a potential risk. The issue of on-site waste treatment and the removal from these sites poses a unique hazard for adjacent communities. In the event of a problem, local subdivisions (and the state) would be engaged in extensive recovery actions. Two of the three DOE facilities are in the process of being decommissioned.

Passenger and cargo airlines continue to cover the state’s airspace daily and railway accidents remain a matter of concern in areas of high traffic density. Like other hazards, transportation events may not occur regularly, but authorities in areas with a high density of air or rail traffic should weigh the potential of a transportation emergency.

Since 1964, nearly 60 major emergency events in Ohio have received a Presidential Declaration of Disaster. As a result, Ohioans have received hundreds of millions in federal assistance monies. The Ohio EMA has aided both the public and private sectors in obtaining this assistance. Although hazards may either decrease, or increase, from a strictly numerical standpoint, inflationary labor and material trends have caused overall recovery costs to rise. Each new event is more costly to the state and nation than its predecessors.

As national mutual aid between states grows, our state may have to respond to hazards not necessarily associated with Ohio. Most recently, Ohio sent personnel and equipment to Texas, Florida, Massachusetts, the Carolinas, the Virgin Islands, Puerto Rico, Hawaii, and North Dakota in response to EMAC requests.

An Ohio Profile

All geographical and political subdivisions of the state are vulnerable to some form of natural, technological, or other hazard. The effects of these hazards (regardless of type or size) will vary due to geography, climate or land use. Examination of the State's characteristics provides a better understanding of these hazards and their associated risks.

Geography and Climate

With a total land area of 40,952.6 square miles, and a 2017 population in excess of 11,658,609 (a gain of approximately 100,000 persons since the last risk assessment), nationally, Ohio ranks 34th in total area, and 7th in population.

Topographically, the state presents a varied combination of landforms, which are diagonally divided across the state between the flat, glaciated, areas of the north-northwest, to the unglaciated highlands in the south and southeast. The steeply incised landforms in the south and east often contribute to flooding, mudslides, and other effects via rapid runoff from heavy rains and melt water. In the north and west, the level topography is subject to flooding when heavy snowstorms are followed by rapid melt water discharges.

The state possesses a continental climate ranging through the year from cold, damp winters, to warm, humid summers with prevailing westerly wind patterns throughout the year. The average temperature in Ohio is 52.5°F with an average monthly high of 86°F (July) and average monthly low of 19°F (January). The average annual rainfall is 40.16 inches.

Ohio's Economy

Ohio has a diversified economy, with goods-producing activities including agriculture, natural resources and mining, construction, and manufacturing, which contribute $53.1 billion to the state's economy; an 18% increase from 2011. The majority of this increase is due to recent increases in the extraction of the shale oil resources of the southeastern highlands.

Ohio's $10 billion agricultural industry is dependent on the State having some of the most fertile and ideal farming conditions in the country. The west and northwest sections of the state are characterized by glaciated plains, with large deposits (up to 400 feet-deep) of fertile soil and wide expanses of lands that were flattened by glacial retreat, which make these rich lands ideal for agricultural production with modern, heavy farm machinery.

Major service industries/trade, such as utilities, healthcare, finance/insurance, and business services contribute another $163 billion to the state's growing economy.

An extensive transportation network of roads, rail lines, waterways, and air travel supports the state's economy. State, federal and interstate highways form connecting links to, or around, major metropolitan areas. The state's large and medium-sized cities host commercial air traffic carriers. Ohio's railway infrastructure ranks fourth nationally in rail route mileage, and eighth overall in carloads carried. Waterborne commerce (via barge or ship) contributes to local economies along the Ohio River and along the Lake Erie shore.

Historical Review of Disasters

For almost 200 years, the State of Ohio has recorded casualties (injuries and fatalities) associated with disasters varying in origins and effects. The more noteworthy of these, which resulted in loss of life or economic damages, are listed in Figure 1. Historical Events and Impacts below.

Figure 1. Historical Events and Impacts

Name of Disaster	Year	Hazard/Event Type	Location	Casualties
Cholera Epidemic	1849/50	Bio/Epidemiological	Statewide	5,000 +
Rail Bridge Collapse	1876	Transportation	Ashtabula	92
Collinwood School Fire	1908	Fire	Cleveland	17
Easter Flood	1913	Flood	S/SW Ohio	467
Influenza Epidemic	1918	Bio/Epidemiological	Statewide	Multiple Thousands
Sandusky/Lorain Tornado	1924	Tornadoes	Lorain and Sandusky	85
Cleveland Clinic Fire	1929	Fire	Cuyahoga	123
Millwood Mine Disaster	1930	Mine Fire – Collapse	Athens Co.	82
Penitentiary Fire - Columbus	1930	Prison Fire	Franklin Co.	322
Extreme Heat	1934	Heat Wave	Statewide	160
Winter Flood	1937	Flood	Statewide	250
Gas Explosion & Fire	1944	Technological + Fire	Cleveland	130
Blizzard	1950	Winter Storm	Statewide	Unknown
Penitentiary Fire - Columbus	1952	Prison Fire	Franklin Co.	0
Winter/Spring Floods	1959	Flood	Statewide	Unknown
Nursing Home Fire	1963	Fire	Marietta	95
Tornado	1965	Tornadoes	Toledo, Lima, Strongsville. Delaware, Mercer, Seneca, and Shelby counties	55
Lake Central/TWA Crashes	1967	Transportation	N&W Ohio	70 + (Combined)
Prison Riot - Columbus	1968	Other (Prison Riot)	Franklin Co.	5
Xenia Tornadoes	1974	Tornadoes	Greene Co.	30; 1150 injured
Blizzard	1978	Winter Storm	Statewide	51
Explosion/Fire - Miamisburg	1986	Technological + Fire	Butler Co.	0
Train wreck-HAZMAT Spill	1986	Transportation	Miamisburg	0
Flash Flood – Shadyside	1990	Flash Flood	Belmont Co.	26
Prison Riot – Lucasville	1993	Other (Prison Riot)	Scioto Co.	11
Floods (from snow runoff)	1996	Flood	Statewide	0

Name of Disaster	Year	Hazard/Event Type	Location	Casualties
Severe Storms/Floods	1997	Flood	Southern Ohio	5
Severe Storms/Floods	1998	Flash Flood	Central/east central & SE	12
Xenia Tornadoes	2000	Tornadoes	Greene Co.	1; 100 injured
Van Wert Tornado	2002	Tornadoes	Van Wert (1 of 83 tornadoes in 17 states)	5
Winter Storms	2004-05	Severe Winter Weather	Statewide	0
Severe Winter Weather	2005	Ice Storm	Statewide	0
Severe Storms	2007	Flooding	Statewide	0
Wind Storm	2008	High Wind Storm	Statewide	7
H1N1	2009/10	Pandemic	Statewide	119 (total influenza deaths, including H1N1)
Severe Weather & Tornadoes	2010	Tornado	Wood, Fulton, Ottawa & Lucas counties	6
Severe Weather; Flooding	2011	Flooding	Ohio River	0
Winter Storm	2012	Blizzard	NW Ohio	0
Severe Weather (Derecho)	2012	High Wind	From NW Ohio to SE Ohio	1 (subsequent heatwave may have caused other deaths)
Hurricane Sandy	2012	Hurricane; High Wind	Northern Ohio	0
Train Derailment/Explosion	2012	Technological - HazMat	Franklin	
Severe Weather and Tornadoes	2012	Tornado; Severe Thunderstorms	Clermont, Hamilton, Highland, Pike, Adams, Lawrence, Athens	4
Cridersville Tornado	2013	High Wind, Flooding	Auglaize, Perry, Morrow	0
Traffic Accidents (90 car pileup)	2013	Winter Storm	SW Ohio	1; 28 injured
Flooding	2014	Flooding	Summit, Clark, Highland	0
Toledo Water	2014	Harmful Algal Bloom	Lucas	0
Severe Weather	2014	Power Outage, Propane Shortage	Summit	0
Ebola Response	2014	Public Health Emergency	Summit	0

Name of Disaster	Year	Hazard/Event Type	Location	Casualties
Severe Weather	2014	Tornado, High Wind	Mahoning, Highland	0
Winter Storm	2014	Winter Storm, Power Outage	Gallia, Darke, Warren, Highland	0
Akron Plane Crash	2015	Aircraft	Summit	9
Argo Shipwreck	2015	HazMat	Lake Erie	0
Kettering Tornado	2015	Tornado	Montgomery	0
Stark County Radium Response	2016	Radiological	Stark	0
Tornadoes	2016	Tornado	Statewide (24)	0
Tornadoes	2017	Tornado	Statewide (39)	0
Cincinnati Fifth Third Bank Shooting	2018	Active Aggressor	Hamilton	4 (incl. shooter)/2 injured
Flooding	2018	Flood	SE Ohio and Ohio River	1
Ross Correctional Facility Unknown Substance	2018	Public Health Emergency	Ross	0

Source: *Ohio Almanac/Contributing agencies/Ohio EMA*

The previous figure shows some of the historically serious events (with hazards) occurring since 1849 by events and mortality statistics, but not property damages or other costs.

Since 1964, many events have received a Declaration of Disaster by the President of the United States as shown in Figure 2. Presidential Major and Emergency Disaster Declarations in Ohio with Costs, by County (1964-18) which provides a breakout of the types of federal assistance, funds provided, incident type, as well as date declared with federal disaster number.

These incidents have affected both people and property. Gubernatorial Declarations have often been used for a number of other events, not qualifying for federal assistance via Presidential Declarations, as “Emergencies” or “Disasters.” This process serves to initiate coordinated state response efforts for areas requiring assistance beyond local capabilities.

Figure 2. Presidential Major and Emergency Disaster Declarations in Ohio with Costs, by County[5] (1964-18)

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR- 167	March 24, 1964	PA	Heavy rains and flooding	Adams, Athens, Auglaize Belmont, Brown, Butler, Carroll, Clermont, Clinton, Columbiana, Coshocton, Cuyahoga, Delaware, Fairfield, Franklin, Gallia, Geauga, Guernsey, Greene, Hamilton, Harrison, Hocking, Jackson, Jefferson, Lake, Lawrence, Licking, Medina, Meigs, Miami, Monroe, Morgan, Muskingum, Noble, Perry , Pickaway, Pike, Preble, Richland, Ross, Scioto, Summit, Trumbull, Tuscarawas, Vinton, Warren, Washington,	$571,482 (P)
DR- 191	April 14, 1965	PA	Tornadoes and high winds	Allen, Cuyahoga, Delaware, Hancock, Harrison, Highland, Lorain, Lucas, Medina, Mercer, Morrow, Pickaway, Seneca, Shelby, Van Wert	$275,248 (P)
DR- 238	May 4, 1968	PA	Tornadoes	Brown, Clermont, Gallia, Licking, Scioto	$270,000 (P)
DR- 243	June 5, 1968	PA	Heavy rains and flooding	Adams, Athens, Brown, Butler, Clermont, Clinton, Fairfield, Franklin, Fayette, Gallia, Greene, Guernsey, Hamilton, Hocking, Jackson, Lawrence, Licking, Meigs, Monroe, Montgomery, Morgan, Noble, Perry, Pickaway, Pike, Ross, Scioto, Vinton, Warren, Washington	$600,000 (P)
DR- 266	July 15, 1969	PA	Heavy storms and floods	Ashland, Ashtabula, Coshocton, Cuyahoga, Erie, Harrison, Holmes, Huron, Lake, Lorain, Lucas, Medina, Morgan, Muskingum, Ottawa, Richland, Sandusky, Seneca, Stark, Trumbull, Tuscarawas, Wayne, Wood	$1,000,000 (P)
DR- 345	July 19, 1972	PA	Storms and flooding	Ashtabula, Belmont, Cuyahoga, Jefferson, Lake, Lorain, Monroe	$1,328,098 (P)
DR- 362	November 24, 1972	PA	Storms and flooding	Erie, Lake, Lorain, Lucas, Ottawa	$615,863 (P)
DR- 377	April 27, 1973	PA	Storms and flooding	Ashtabula, Cuyahoga, Erie, Lake, Lorain, Lucas, Ottawa, Sandusky	$1,417,975 (P)
DR- 390	June 4, 1973	PA	Mudslides	Hamilton, Washington	$1,434,684 (P)

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR- 421	April 4, 1974	PA/IFG	Tornadoes and high winds	Adams, Butler, Clark, Delaware, Fayette, Franklin, Greene, Hamilton, Madison, Paulding, Pickaway, Putnam, Summit, Warren,	$10,250,454 (P) $1,945,833 (I)
DR- 436	May 31, 1974	PA	Heavy rains and flooding	Lucas, Ottawa, Sandusky	$858,824 (P)
DR- 445	July 11, 1974	PA	Heavy rains and flooding	Warren	$507,364 (P)
DR- 480	September 11, 1975	PA	Floods	Belmont, Cuyahoga, Jefferson, Lake,	$3,320,493 (P)
DR- 3055-EM	January 26, 1978	PA	Severe blizzard conditions	All 88 counties	$3,546,669 (P)
DR- 630	August 23, 1980	PA/IFG	Heavy rains and flooding	Belmont, Columbiana, Guernsey, Jefferson, Monroe, Muskingum, Noble	$1,653,327 (P) $669,820 (I)
DR- 642	June 16, 1981	PA/IFG	Tornado, high winds and flooding	Hancock, Morrow, Putnam, Wyandot (IA) Morrow (PA)	$346,950 (P) $47,382 (SCB)** $515,593 (I)
DR- 653	March 26, 1982	PA/IFG	Flood	Defiance, Fulton, Henry, City of Toledo (Lucas), Paulding, Wood County (IA)	$157,390 (P)
				Defiance, Paulding, Village of Grand Rapids (Wood only) (PA)	$268,187 (I)
DR- 738	June 3, 1985	PA/IFG	Tornadoes	Ashtabula, Columbiana, Coshocton, Licking, Portage, Trumbull (IA)	$1,556,950 (P)
				Trumbull (PA)	$419,751 (SCB)** $424,893 (I)
DR-796	June 9, 1905	IFG	Floods	Crawford, Marion, Morrow, Richland	$1,066,258 (I) $266,564 (SCB)**

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR- 831	June 10, 1989	IFG	Severe storms and flooding	Butler, Coshocton, Cuyahoga, Franklin, Geauga, Greene, Lake, Licking, Lorain, Mercer, Montgomery, Preble, Warren	$2,363,868 (I) $590,967 (SCB)**
DR- 870	June 6, 1990	PA/IFG/HMGP *	Severe storm, tornadoes, and flooding	Athens, Belmont, Butler, Columbiana, Fairfield, Hamilton, Harrison, Hocking, Jackson, Jefferson, Lawrence, Licking, Monroe, Muskingum, Perry, Pike, Richland, Vinton (PA/IA) Clermont, Franklin, Mahoning, Morrow, Madison, Ross, Trumbull (IA only)	$10,847,075 (P) $4,331,497 (I) $3,849,783 (SCB)** $630,000 (M) $630,000 (S)
DR- 951	August 4, 1992 (IA)	PA/IFG/HMGP *	Severe storms, tornadoes, flooding	Cuyahoga, Franklin, Logan, Mahoning, Medina, Mercer, Ross, Shelby, Summit, Trumbull, Van Wert (PA/IA)	$8,308,334 (P)
	August 14, 1992 (PA/HMGP)			Auglaize, Belmont, Columbiana, Erie, Fairfield, Fulton, Geauga, Jefferson, Lorain, Lucas, Ottawa, Portage, Wood (PA only)	$2,081,117 (I) $2,474,083 (SCB)** $250,000 (M) $350,000 (CDBG)+
DR-1065	August 25, 1995	IFG/HMGP	Severe storms and flooding	Champaign, Erie, Logan, Lorain, Licking, Marion, Mercer, Miami, Scioto, Shelby, Washington	$3,493,319 (I) $81,731 (SCB)** $721,500 (M)
DR-1097	January 27, 1996	PA/IFG/ HMGP	Ohio River flooding	Adams, Belmont, Columbiana, Gallia, Jefferson, Lawrence, Meigs, Monroe, Scioto, Washington (PA/IA) Brown, Clermont, Hamilton (IA)	$4,335,000 (P) $1,822,056 (I) $1,617,991 (SCB)** $1,721,655 (M)
DR-1122	June 24, 1996	PA/HMGP	Severe storms and flooding	Adams, Belmont, Brown, Butler, Clermont, Gallia, Hamilton, Hocking, Jefferson, Lawrence, Meigs, Monroe, Paulding, Scioto, Vinton, Williams	$10,811,838 (P) $2,702,960 (S) $1,137,951 (M)

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR-1164	March 4, 1997	IA/PA/HMGP	Flash flooding on inland rivers/streams and Ohio River flooding	Adams, Athens, Brown, Clermont, Gallia, Hamilton, Highland, Hocking, Jackson, Lawrence, Meigs, Monroe, Pike, Ross, Scioto, Vinton, Washington (IA/PA/HMGP) and Morgan (PA/HMGP)	$29,666,825 (P) $22,196,350 (I) $9,821,524 (M) $9,821,524 (S) $9,740,294 (NRCS)*+
DR-1227	June 30, 1998	IA/PA/MIT	Flash flooding, flooding, high winds and tornadoes.	Athens, Belmont, Coshocton, Guernsey, Harrison, Jackson, Jefferson, Knox, Meigs, Monroe, Morgan, Morrow, Muskingum, Noble, Ottawa, Perry, Pickaway, Richland, Tuscarawas, Washington; (IA only) Franklin, Sandusky (PA only) Holmes	$21,803,771 (P) $14,312,348 (I) $9,000,000 (M) $9,000,000 (S) $10,410,817 (NRCS)*+
DR-1321	March 7, 2000	IA/MIT	Flash flooding, flooding	Adams, Gallia, Jackson, Lawrence, Meigs, Pike and Scioto	$1,914,189 (I) $297,310 (M) $297,310 (S)
DR-1339	August 25, 2000	IA/MIT	Flooding	Lucas	$7,898,840 (I) $1,132,279 (M) $1,132,279 (S)
DR-1343	September 26, 2000	IA/PA/MIT	High winds and tornadoes	Greene	$189,051 (I) $3,430,810 (P) $558,025 (M) $558,025 (S)
DR-1390	August 8, 2001	PA/MIT	Flooding	Brown, Butler, Clermont and Hamilton	$ 7,712,456 (P) $ 876,439 (M) $ 876,439 (S)
DR-1444	November 18, 2002	IA/MIT	Tornados, Severe Storms	Ashland, Auglaize, Coshocton, Cuyahoga, Franklin, Hancock, Henry, Huron, Lorain, Medina, Ottawa, Paulding, Putnam, Sandusky, Seneca, Summit, Union, Van Wert, Wayne and Wood	$ 11,668,849 (I) $ 139,068 (M) – $ 48,409 (S) $ 2,297,222 (SDRP)
DR-1453*	March 24, 2003	IA/PA/MIT	Ice/Snow Storm	Adams, Gallia, Jackson, Lawrence, Meigs, Pike and Scioto (IA/PA); Athens, Belmont, Darke, Delaware, Fayette, Franklin, Greene, Guernsey, Harrison, Hocking, Licking, Madison, Miami, Monroe, Morgan, Montgomery, Muskingum, Noble, Perry, Preble, Ross , Union, Vinton and Washington (PA)	$ 16,689,841 (I) $ 39,621,605 (P) * $ 2,415,899 (M) $ 2,415,899 (S) -

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR-1478*	July 15, 2003	IA/MIT	Severe Storms, flooding	Auglaize, Columbiana, Crawford, Darke, Logan, Mahoning, Mercer, Pike, Shelby and Van Wert (IA/MIT); Adams, Auglaize, Darke, Logan, Mercer, Pike, Shelby and Van Wert (SDRP)	$ 6,451,793 (I) $ 145,762 (M)* $ 13,721 (S) $ 2,976,949 (SDRP)
DR-1484*	August 1, 2003	IA/PA/MIT	Severe storms, tornadoes and flooding	Carroll, Columbiana, Cuyahoga, Franklin, Jefferson, Mahoning, Medina, Portage, Richland, Stark, Summit and Trumbull (IA/MIT); Adams, Columbiana, Carroll, Jefferson, Mahoning, Medina, Monroe, Portage, Stark, Summit, Trumbull and Vinton (PA)	$ 135,723,395 (I) $ 13,160,834 (P)* $ 6,016,488 (M) $ 162,790 (S) -
EM-3187*	August 23, 2003	PA Only	Power Outage	Ashland, Ashtabula, Cuyahoga, Erie, Geauga, Huron, Knox, Lake, Lorain, Lucas, Portage, Summit and Trumbull	$ 2,067,222 (P)*
DR-1507*	January 26, 2004	IA/PA/MIT	Landslide, severe storms and landslides	Belmont, Jefferson, Morgan, Ross, Tuscarawas and Washington (IA/PA/MIT); Franklin, Licking (IA/MIT); Athens, Guernsey, Harrison, Monroe, Noble and Perry (PA/MIT)	$ 3,408,934 (I) $ 14,811,923(P*) $ 875,265 (M)* $ 164,804 (S) -
DR-1519*	June 3, 2004	IA/PA/MIT	Severe storms and flooding	Athens, Carroll, Columbiana, Cuyahoga, Delaware, Guernsey, Harrison, Hocking, Holmes, Medina, Noble, Perry, Portage, Summit and Tuscarawas (IA/PA/MIT); Crawford, Geauga, Licking, Logan, Lorain, Mahoning, Richland and Stark (IA/MIT) and Knox and Jefferson (PA/MIT)	$ 30,238,921 (I)* $ 14,060,750 (P) * $ 2,305,560 (M) $ 748,426 (S) -
DR-1556*	September 19, 2004	IA/PA/Mit	Severe storms and flooding	Athens, Belmont, Carroll, Columbiana, Gallia, Guernsey, Harrison, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Tuscarawas, Vinton and Washington (IA/PA/MIT); Lawrence, Mahoning, Stark and Trumbull (IA/MIT)	$ 47,455,690 (I) $ 35,597,480 (P)* $ 3,948,349 (M)* $ 2,300,000 (S)
EM-3198*	January 11, 2005	PA Only	Snow Removal and Response	Butler, Champaign, Clark, Crawford, Darke, Delaware, Erie, Franklin, Greene, Hamilton, Hardin, Huron, Logan, Madison, Marion, Miami, Montgomery, Morrow, Preble, Richland, Sandusky, Seneca, Shelby, Union, Warren and Wyandot	$ 11,116,398 (P)*

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR-1580*	February 15, 2005	IA/PA/MIT	Severe winter storms, ice and mudslides	Clark, Sandusky, Warren and Miami (IA/MIT); Ashland, Auglaize, Athens, Belmont, Coshocton, Crawford, Delaware, Fairfield, Franklin, Guernsey, Henry, Hocking, Holmes, Huron, Jefferson, Licking, Logan, Morgan, Muskingum, Pickaway, Pike, Richland, Ross, Scioto, Stark, Tuscarawas, Washington and Wyandot (IA/PA/MIT); Adams, Allen, Brown, Carroll, Champaign, Clermont, Columbiana, Darke, Fayette, Hancock, Hardin, Harrison, Highland, Knox, Lorain, Marion, Medina, Meigs, Mercer, Monroe, Montgomery, Morrow, Noble, Paulding, Perry, Putnam, Seneca, Shelby, Union, Van Wert and Wayne (PA/MIT)	$ 13,823,757 (I)* $123,935,836 (P)* $7,534,746 (M)* $1,500,000 (S) -
EM-3250	September 13, 2005	PA	Hurricane Katrina Emergency Shelter Operations	All 88 Counties were included in the federal declaration	$2,499,103 (P)*
DR-1651*	July 2, 2006	IA/MIT	Severe storms and flooding	Cuyahoga, Erie, Huron, Lucas, Sandusky and Stark	$25,001,761 (I)* $1,798,019 (M) $593,090 (S)
DR-1656*	August 1, 2006	IA/PA/MIT	Severe storms and flooding	Ashtabula, Geauga and Lake	$25,895,531 (I)* $9,282,843 (P)* $3,411,736 (M) $1,137,245 (S)
DR-1720	August 28, 2007	IA/PA/MIT	Severe storms and flooding	Allen, Crawford, Hancock, Hardin, Putnam, Richland, Wyandot (IA/PA/MIT); Seneca (IA/MIT)	$45,452,363 (I) $12,688,139 (P) $6,630,799 (M) $1,984,493 (S)
EM-3286	April 24, 2008	PA	Snow	Ashtabula, Brown, Clermont, Clinton, Crawford, Delaware, Fairfield, Franklin, Geauga, Greene, Hardin, Huron, Lake, Morrow, Richland, Union and Wyandot	$9,481,809 (P) est.

Disaster Declaration Number	Date Declared	Federal Disaster Programs	Incident Type	Counties Declared	Funds Provided
DR-1805	October 24, 2008	PA/MIT	Wind Event	Ashland, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Coshocton, Delaware, Fairfield, Franklin, Greene, Guernsey, Hamilton, Harrison, Highland, Hocking, Holmes, Knox, Licking, Madison, Miami, Montgomery, Morrow, Perry, Pickaway, Preble, Shelby, Summit, Tuscarawas, Union, and Warren	$47,968,724 (P) $6,507,249 (M)
DR-4002	July 13, 2011	PA/MIT	Severe storms, landslides	Adams, Athens, Belmont, Brown, Clermont, Gallia, Guernsey, Hamilton, Hocking, Jackson, Jefferson, Lawrence, Meigs, Monroe, Morgan, Noble, Pike, Ross, Scioto, Vinton, Washington	$45.8 Million (PA) $5,046,137 (M)
EM-3346	June 30, 2012	PA (for Direct Assistance only)	Severe storms,	All 88 counties	PA was for Direct Assistance only, no financial assistance
DR-4077	August 20, 2012	PA/MIT	straight-line winds (derecho)	Adams, Allen, Athens, Auglaize, Belmont, Champaign, Clark, Coshocton, Fairfield, Franklin, Gallia, Guernsey, Hancock, Hardin, Harrison, Highland, Hocking, Jackson, Knox, Lawrence, Licking, Logan, Meigs, Miami, Monroe, Morgan, Morrow, Muskingum, Noble, Paulding, Perry, Pickaway, Pike, Putnam, Shelby, Van Wert, Vinton, Washington, Wyandot	Initial Estimates of: $22.0 Million (PA) est. $3.4 Million (M) est.
DR-4098	January 3, 2013	PA/MIT	Severe storms, flooding	Ashtabula, Cuyahoga	Initial Estimates of: $17.8 Million (PA) est. $2.7 Million (M) est.
DR-4360	April 17, 2018	PA/MIT	Severe storms, flooding, landslides	Adams, Athens, Belmont, Brown, Columbiana, Coshocton, Gallia, Hamilton, Harrison, Jackson, Jefferson, Lawrence, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Scioto, Vinton, Washington	Initial Estimates of: $65 Million (PA) est. $9.75 Million (M) est.

(M) – Hazard Mitigation Grant
(S) – State Match to Federal Hazard Mitigation funds
(P) – Public Assistance
(I) Individual Assistance includes FEMA Disaster Housing, SBA loans for homes, personal property and businesses and FEMA/State Other Needs Assistance grants for families and individuals
(NRCS)*+ - Natural Resources Conservation Service
* Indicates the disaster is not officially closed.
HMGP first available with disaster declared after 1987.
(SCB)** - State Controlling Board funds
(SDRP)**State Disaster Relief Program
(CDBG)+ - Community Block Grant funds provided by the Ohio Department of Development
EM 3187 is an Emergency Declaration for Public Assistance

Detailed Hazard Overview

Natural Hazards - Meteorological

Flood, Flash Flood, Seiche

Ohio can experience four types of floods. *Riverine* (The overflow of rivers and streams from rains or melt water); *Flash* (A fast rising of streams or "dry-gulch" waters after heavy rain/snowmelt); *Urban and Small Stream* (An overflow of storm sewers and streams after a heavy rainfall); and *Coastal (Seiche)* (Floods along the Lake Erie shoreline, often associated with severe storms and/or seiche waves).

Flood/Riverine (Total Risk = 633) constitutes a significant threat to life and property in the state of Ohio. Riverine floods result from prolonged heavy rain over a large area. Riverine floods are more common in winter and spring when the soil is saturated or frozen. Large-scale weather systems producing heavy rain are most common during these seasons. The National Weather Service issues flood warnings several hours or days before riverine floods develop. Also, there may be two or more days of preparation before the flood crests on the major rivers in Ohio. Heavy rains in Ohio may cause floods on the rivers flowing into the Ohio River, such as the Muskingum, Scioto, and Miami Rivers, without causing a large flood on the Ohio River. On the other hand, heavy rains in Pennsylvania and West Virginia may cause a flood on the Ohio River even if heavy rain has not fallen over Ohio.[6]

Flash Floods and Seiche (Total Risk = 564) are the result of intense local rainfall and usually last a few hours. Normally, little warning precedes flash flooding. One of the deadliest flash floods occurred in Shadyside, a community on the Ohio River in Belmont County, late on June 14, 1990. Twenty-six people lost their lives in a brief flash flood on Wegee Creek and Pipe Creek near Shadyside. Flash flooding began at 9:30 p.m. and was over in 30 minutes.

Lake Erie is particularly prone to short-term, wind-caused fluctuations because of its shallowness and elongation. These can lead to extreme seiche waves of up to 16 feet between the ends of the lake. The seiche effect can cause oscillation back and forth across the lake for some time until it settles down again. In May 1942, two seiche-related waves unexpectedly battered the Ohio shore between Bay Village and Conneaut. Madison-on-the-Lake received the brunt of the waves. The first wave ranged between 4 and 20 feet, and the second, following 15 minutes later, was 6 to 8 feet high. The seiche wave killed seven people.

Although often confined to specific drainage systems or geographic regions, floods can pose a threat to over 700 communities and potentially hundreds of thousands of residents in all 88 counties. Protective actions (evacuation/sheltering) may deplete both material and fiscal resources. Floodwaters have also damaged key infrastructure elements (roads, bridges and sanitary facilities). Infrastructure damages may also lead to an increase in infectious diseases in some affected areas. Other collateral problems include power outages and transportation delays. Mudslides, a component of the 1990 Shadyside event, are often a flood-related concern in the

south-southeast areas of the state. The costs in labor, time and monies for flood-related mitigation and preparation actions may also be exceedingly high.

In the late 1990s, two major floods affected the state within a space of 16 months. The first, in February 1997, caused flash and riverine flooding in 18 southern counties. In June 1998, a varied weather pattern with tornadoes, severe storms, and flash flooding struck 23 counties on a northwest to southeast track. Variable weather patterns in late winter frequently cause flooding throughout Ohio and especially in southern counties where rivers converge. In February 2018 severe storms were followed by disastrous flooding resulting in federal declarations for 22 counties. These events affected thousands of residents and caused millions of dollars in business and residential losses The following chart provides a comparison of the 1998 and 2018 events.

Figure 3. Flood Damage Comparison Chart for Ohio[7]

Critical Element	1998	2018
Overall Financial Impact	$184.3 million	$74.75 million (est.)
Federally Declared Counties	23	22
Casualties (Deaths)	12	1

Flooding increases environmental vulnerability in several ways. Pipelines can be exposed if cover is washed away, leaving them vulnerable to breakage and spills which can contaminate the environment. Similarly floods can carry contaminants to unspoiled places, causing exposure to chemicals and other toxins. Flooding also poses problems for sewage and water treatment infrastructure, increasing risk of contaminating surface and groundwater sources and downstream ecosystems.

Windstorm, Tornadoes

Windstorms and Tornadoes (Total Risk = 690) are the primary natural hazard to the state. These violent, rotary windstorms can attain wind-speeds up to 300+ mph and often accompany or follow severe thunderstorms. They may occur anywhere, at any time of the year with unpredictable, severe effects. In Ohio, tornadoes are more frequent in the spring and summer months of April, May, June, and July. Other severe storm associated winds, not classified as tornadoes, may be almost as violent and damaging. Tornadoes and windstorms have a high potential to cause loss of life, damage or destroy property, and overwhelm local response capabilities.

Tornado effects vary according to wind-speed, duration on the ground, and topography. From 1950 to 2010, the National Weather Service reported 1053 tornado touchdowns in Ohio. Ohio averages 16 tornados per year resulting in an average of 3 fatalities per year with Northwest counties at highest risk. Estimated losses over a 30-year period are in excess of $110+ million. The Lorain and Xenia storms cost more than 100 lives and caused millions of dollars in property damages. As in the case of floods, the costs and duration of recovery may extend over years.

On April 9, 1999, a tornado in Clinton, Hamilton, and Warren counties killed four and injured 42 while destroying or damaging over 400 dwellings. Estimated financial losses were in the millions for the storm, which the National Weather Service termed as the most devastating in terms of casualties since the 1985 event, which killed 18 Ohioans.

One of the most destructive windstorms in the state's history hit Ohioans on September 14, 2008. Remnants from Hurricane Ike moved through Ohio with tropical storm force winds, leaving nearly two million homes and businesses without electricity during the height of the emergency. Eighty-four of Ohio's 88 counties reported some type of windstorm damage, fallen debris or power

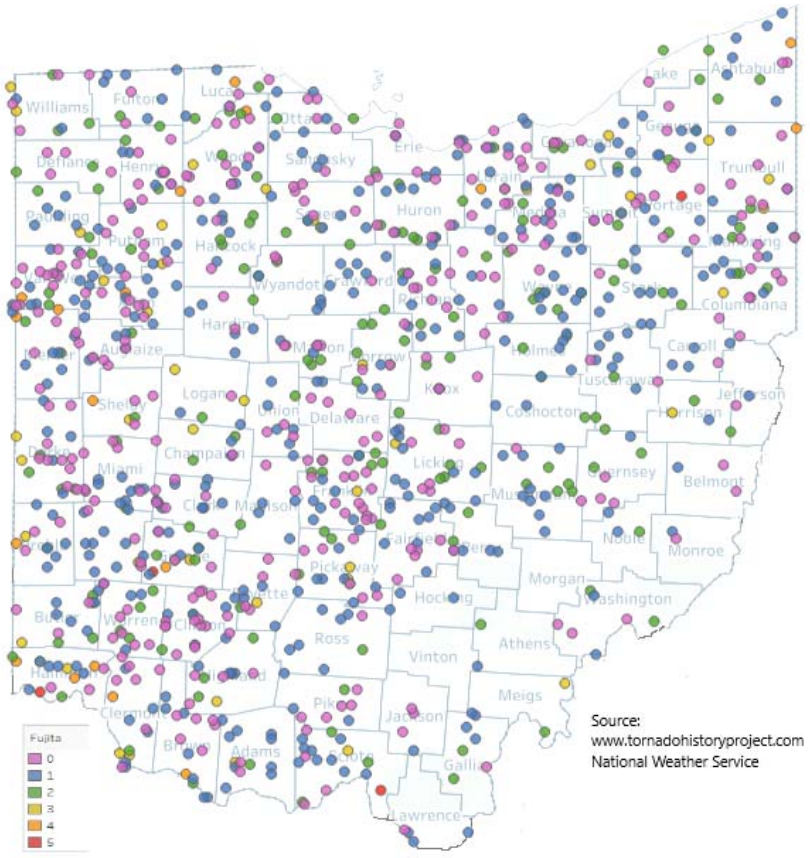
outages. Seven Ohioans died from injuries sustained from the windstorm. This event also resulted in a Presidential Declaration for 33 counties.

In 2010, three significant events severely impacted Ohio's communities. The first event occurred June 5-6, 2010, when a major tornado outbreak affected the Midwestern United States and Great Lakes Region. The event resulted in seven people dead in Wood County. The second event occurred when severe weather and tornadoes swept across the state in the afternoon of September 16, 2010. The National Weather Service confirmed 11 tornadoes in Athens, Delaware, Fairfield, Holmes, Meigs, Perry, Tuscarawas, and Wayne counties and in the Tarlton, Ohio area. No deaths were associated with the event.

The third event occurred October 27, 2010, when a very intense area of low pressure pushed east through the Great Lakes Region, with a strong cold front moving through the Ohio Valley. Wind gusts of 50-60 mph were recorded in some areas of the state. The National Weather Service confirmed eight tornadoes in Auglaize, Fayette, Franklin, Licking, Paulding, Pickaway and Van Wert counties. No deaths occurred with this event. Late season tornado outbreaks are rare but not unlikely. On November 5, 2017, Ohio experienced a statewide outbreak of 17 tornadoes in a single day.

Windstorms and tornadoes are not typically associated with causing environmental problems, though they have the ability to create massive amounts of woody debris and construction debris, which requires coordination with environmental regulators, haulers and landfills. This was noted and experienced during the response and recovery operations in the Village of Moscow (Clermont County) in March 2012.

Figure 4. Ohio's Tornado History (1950-2016)



Snow, Ice, Hail and Sleet

Blizzard or Ice Storm (Total Risk = 665) are the fourth leading weather-related threat to the state. These include heavy snowfall with extreme cold and ice, or a combination of the three.

Over 500 Winter Storms from 1950 to present are reported by the National Weather Service. The storms of 1913, 1940, 1950, 1977, 1978, 1994, 1996, and 2004/2005 were especially damaging. Some winter storms have occurred in specific sectors of the state; south/southeast (1984); east/northeast (1993); and south/central (1994). However, the storms of 1950 and 1978 were statewide in nature and of a severity that required massive state/federal response and recovery efforts.

In addition to structural and power line damages, these storms have a potential for collateral effects; isolation and economic disruption (from roadway and business closings) along with ice dams and floods caused by the melting process.

Winter weather is not associated with increased environmental vulnerability.

Natural Hazards - Biological

Public Health Emergency

Public Health Emergency (Total Risk = 808) which includes emerging diseases, such as plague, smallpox, anthrax, West Nile Virus, foot and mouth disease, Severe Acute Respiratory Syndrome (SARS), Pandemic Influenza, Bovine Spongiform Encephalopathy (BSE), commonly known as mad cow disease, are becoming increasingly prevalent on the world stage. This type of event would likely affect multiple states and would likely have global impact. The impacts of Pandemic Influenza, Ebola and other viruses have become a planning priority for the state of Ohio as well as at the federal level. Likewise, certain health conditions such as the Methicillin-resistant Staphylococcus aureus (MRSA) staph infection are coming to prevalence in the media.

A pandemic outbreak has the potential to infect large numbers of Ohio citizens, which could easily overwhelm the health care system in the state, and impact the personnel needed to respond and recover from such an event. A pandemic outbreak could also jeopardize essential functions by causing high levels of absenteeism in critical services areas. Large numbers of people would likely become ill or expire. Examples such as the 1918/19 Influenza Pandemic demonstrate the potential for loss of human life and significant impacts on society.

A continuous significant concern has been the emergence of a Pandemic Influenza or other human infectious disease, such as the recent Novel Influenza A (H1N1). The outbreak initially emerged in April 2009 for two months and then increased activity again in October 2009 for another four months. The H1N1 was not considered to have a high severity; however, it was considered extremely virulent in younger populations and pregnant women. From August 30 through January 30, 2010, the cumulative total for Ohio influenza confirmed hospitalizations is 3,194 individuals per Ohio Disease Reporting System (ODRS). At least 51 people hospitalized with H1N1 infection died in Ohio during that period. Fortunately there was not a significant impact to infrastructure or on personnel needed to respond and recover.

Diseases which cause widespread human deaths would have an impact on the environment in terms of the disposal of human remains and the handling of bio-hazardous waste.

Environmental and regulatory factors would have to be evaluated in the disposal of both human remains and bio-hazardous waste.

Diseases which cause widespread deaths of animals, both captive and wild, would have an effect on public health and the environment in terms of disposal of the carcasses. Whether the infected animals are buried, burned or left in place, a large quantity and concentration of carcasses may impact air, soil and groundwater.

Natural Hazards - Geological

Earthquakes

Earthquakes (Total Risk = 574) are defined as a rapid motion of the ground accompanied by shaking, faulting (surface and subsurface) and ground failure. Earthquakes from two points affect Ohio: events having epicenters within the state, and those occurring along the New Madrid, Missouri Fault Zone. Figure 6 shows a map of earthquake epicenters for Ohio and adjacent areas.

More than 200 earthquakes with magnitude of 2.0 or greater with epicenters in Ohio have occurred since 1776, and 15 of these events are known to have caused minor to moderate damage. Fortunately, these events have not resulted in fatalities, only minor injuries.

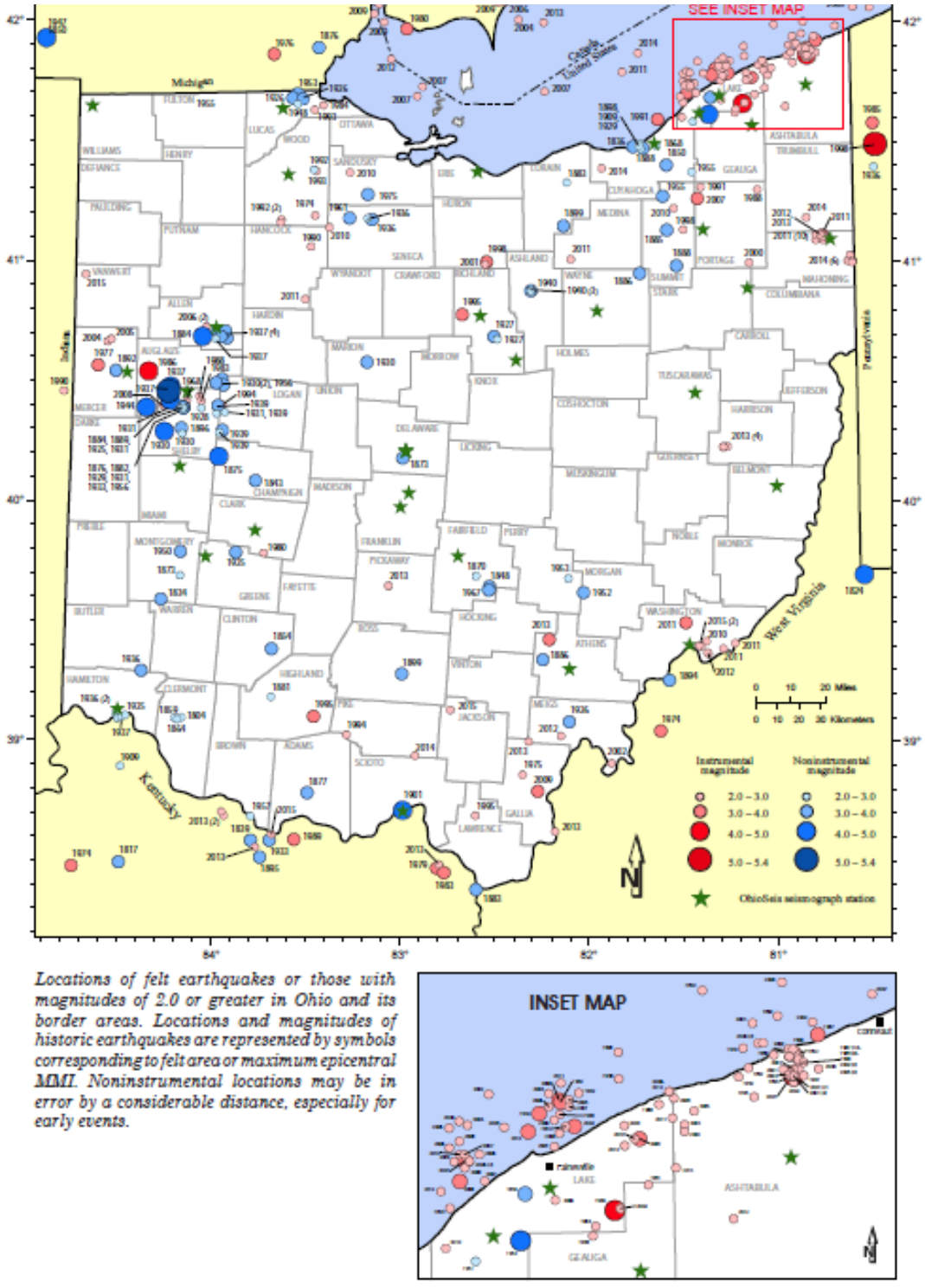
Most earthquakes that occurred in Ohio before the 1960s have been located and assigned intensities and approximate magnitudes based on newspaper accounts. Epicentral locations for many of these events probably have a considerable margin of error. Non-instrumental data should be used cautiously. (Hansen, 2015, p.4)[8]

Seismic activity is concentrated in, but not confined to, three areas of the state. Historically, the most active area, with at least 40 earthquake events since 1875, is the Anna Seismogenic Zone centered in Shelby County, (western Ohio). Many other events have occurred in the Lake County area, or in the southeast, and have caused minor to moderate damage.

Other counties with documented earthquake epicenters include Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Brown, Butler, Champaign, Clermont, Cuyahoga, Gallia, Geauga, Greene, Hamilton, Hancock, Hardin, Highland, Hocking, Jackson, Lake, Lucas, Marion, Meigs, Mercer, Montgomery, Muskingum, Perry, Pike, Portage, Preble, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Summit, Washington, Williams, Wood, and Wyandot.

The state would also be affected by events generated by the New Madrid Fault Zone, extending from Arkansas to Indiana along the Mississippi and Ohio River Valleys. This fault generated the most powerful earthquakes ever documented in the Continental U.S. in a four-month period during 1811 and 1812. If earthquakes of this intensity occur again, devastating damages in our southwestern counties could be expected. Figure 5 lists the counties potentially impacted, and effects from a major New Madrid earthquake in Ohio.

Figure 5. Earthquake Epicenters in Ohio and Adjacent Areas



Locations of felt earthquakes or those with magnitudes of 2.0 or greater in Ohio and its border areas. Locations and magnitudes of historic earthquakes are represented by symbols corresponding to felt area or maximum epicentral MMI. Noninstrumental locations may be in error by a considerable distance, especially for early events.

Source: *Ohio Department of Natural Resources, Ohio Division of Geological Survey, 2012, Earthquake epicenters in Ohio and adjacent areas*

Figure 6. Effects of a Major New Madrid Earthquake in Ohio

Mercalli Intensity	Effects	Counties Potentially Affected
VI	Felt by all, indoors & outdoors. Many people frightened and excited. Liquids set in strong motion. With slight damage in poorly built structures. Fallen & cracked plaster with a considerable quantity of broken dishes & glassware.	Allen, Ashland, Auglaize, Crawford, Cuyahoga, Defiance, Erie, Geauga, Hancock, Hardin, Henry, Huron, Lake, Logan, Lorain, Mahoning, Marion, Medina, Mercer, Morrow, Ottawa, Paulding, Portage, Putnam, Richland, Sandusky, Seneca, Shelby, Stark, Summit, Trumbull, Van Wert, Wayne, Wood, & Wyandot. (Approx. 4 million people in 36 counties)
VII	Many people find it difficult to stand. Slight damage in ordinary buildings., Considerable amounts of fallen plaster & numerous broken windows & fallen cornices	Athens, Belmont, Carroll, Champaign, Clark, Columbiana, Coshocton, Darke, Delaware, Franklin, Fulton, Gallia, Guernsey, Harrison, Holmes, Jackson, Jefferson, Knox, Lawrence, Licking, Lucas, Madison, Meigs, Miami, Monroe, Morgan, Noble, Tuscarawas, Union, Washington, and Williams (Approx. 3 million people in 31 counties)
VIII	Alarm approaches panic. Branches of trees broken. Changes in the flow of well & spring water. Considerable damage in ordinary substantial buildings. Fallen walls, factory stacks, towers, & monuments. Heavy furniture overturned.	Adams, Brown, Butler, Clermont, Clinton, Fairfield, Fayette, Greene, Hamilton, Highland, Hocking, Montgomery, Muskingum, Pickaway, Perry, Pike, Preble, Ross, Scioto, Vinton, & Warren (Approx. 3 million people in 21 counties)

Source: *U. S. Geological Survey, Maximum Seismic Interactions Map for New Madrid Seismic Zone; Algermission & Hopper*

Collateral effects from an earthquake could be extensive and may include hazardous material spills, landslides, subsidence, dam failures, fires, groundwater contamination, pipeline breaks, infrastructure disruptions, epidemics, floods, along with theft/looting.

Earthquakes can cause a tremendous increase in environmental vulnerability. Beyond the tremendous amounts of debris that will need to be managed, the possibility of broken pipelines increases the likelihood of cascading impacts that include contamination. The possibility of water and sewage treatment facilities being damaged and taken offline similarly increases the risk to ground and surface waters and the ecosystems they feed. Sustained fires, also a possibility following earthquake associated structural collapses, would also lead to a possibility of toxic fumes and a certainty of degraded air quality.

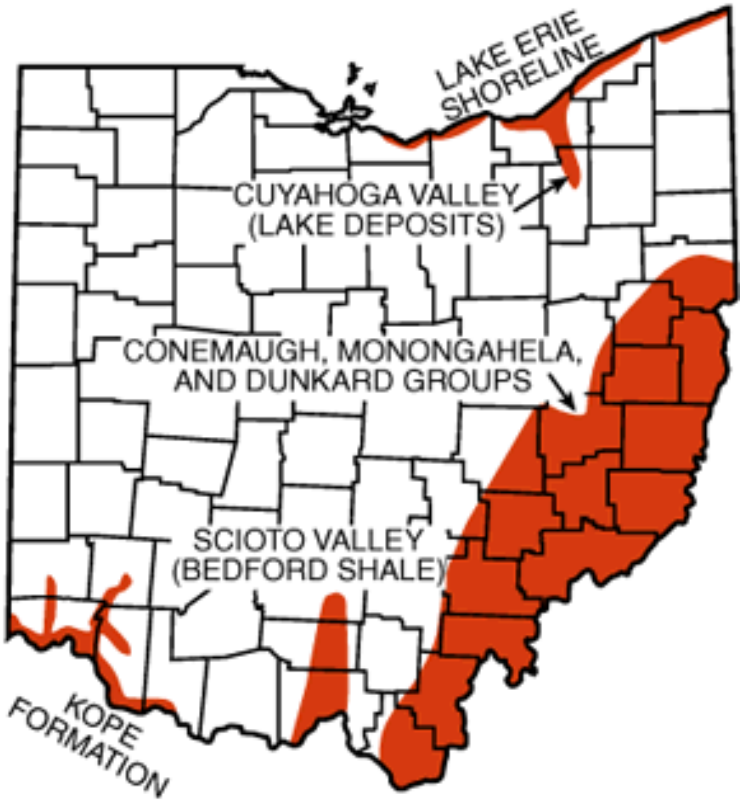
Landslide, Mudslide, Subsidence (and Mines)

Landslide, Mudslide and Subsidence (Total Risk = 375) are the second major geological threat. *Subsidence* is defined as a drop in the earth's surface due to a collapse in bedrock or other underlying material (coal pillars, rock, etc.) into underground mines or other open space.

Land or Mudslides are defined as downward and outward movements of slopes due to rains or melting snow with accompanying damage and debris deposition. They may also include sudden collapses of mines, tunnel walls, or supports with resulting damage to surface structures or features (buildings and highways).

Landslides include three types. A *Rotational Slump* occurs when weak rock or sediment moves as a mass in a slow or imperceptible movement. A more common event, *Earthflow*, involves rock, sediment, or weathered surface materials moving down slope in a mass. *Rock fall* is seen as the most common and dangerous form of movement. Rock from a cliff or cut will fall onto roadways or structures. This action is common during periods of late winter or early spring thawing. Traffic vibration, undercut slopes, increased weight on slopes, or the removal of vegetation and ensuing erosion may also contribute to these events. Events have been traced back to 1923 at various sites. They occur mainly through the Ohio or Scioto River Valleys, or elsewhere in the eastern portion of the state with some occurring along the eastern Lake Erie Shoreline shown in red on Figure 3 below.

Figure 7. Ohio Subsidence and Landslides



During and after WWII, when the demand for mineral resources was high, the state had over 700 active coal mines. As the supply of coal in many mines was exhausted, the mines were abandoned with little or no preparation. Supporting pillars of coal in shaft mines were mined away prior to closings. In the mid-1990s, over 6,000 closed or abandoned underground mines were estimated to exist in 37 counties with over 61,000 acres of land affected by closings or site abandonment.

Abandoned mines have also occasionally collapsed with damage to surface structures or costly infrastructure damage. On March 5, 1995, a twelve foot section of Interstate 70 in Guernsey County collapsed due to an abandoned underground mine subsidence. In addition, landslides and mudslides affecting roadways have led to costly repair actions by state and local governments. It is estimated that repair or replacement costs could reach $9 million or more if a major highway is involved. The ODNR Division of Geological Survey has detailed maps for approximately 4,200 abandoned mines in Ohio and estimate there are approximately an additional 2,000 abandoned mines not detailed on maps.

Subsidence and landslides, particularly during floods, have also led to the temporary relocation of farmsteads, housing units, or businesses. Landslide, Mudslide, Subsidence and Mine Collapses have the potential, albeit on a lesser scale, to cause similar environmental impacts as earthquakes (see above).

Human-caused - Accidental

Radiological Incidents (Nuclear Power Generating Sites)

Radiological Incidents (Nuclear Power Generating Sites) (Total Risk =1186) are the greatest human-caused, accidental hazard and ranked as the 2nd hazard in the state overall. The release (or potential for release) of radioactive materials could initiate protective actions (evacuation or sheltering) for populations residing within a 10-mile Emergency Planning Zone (EPZ), and affect the ingestion pathway within a 50-mile EPZ of a site. Ohio residents could potentially be affected by three nuclear power generating facilities operating in or near the state:

- Davis-Besse Nuclear Power Station located in Port Clinton (Ottawa County)
- Perry Nuclear Power Plant located in North Perry (Lake County)
- Beaver Valley Power Station located in Shippingport, Pa. (Beaver County)

In an emergency involving a single power plant, over 95,000 residents could be affected by accidental emissions. Response and recovery actions could cost millions of public and private sector dollars.

Environmental impacts of a nuclear disaster can cause the permanent contamination of some areas downwind from plants that receive fallout. These areas would not be suitable for agriculture for generations nor could they be occupied.

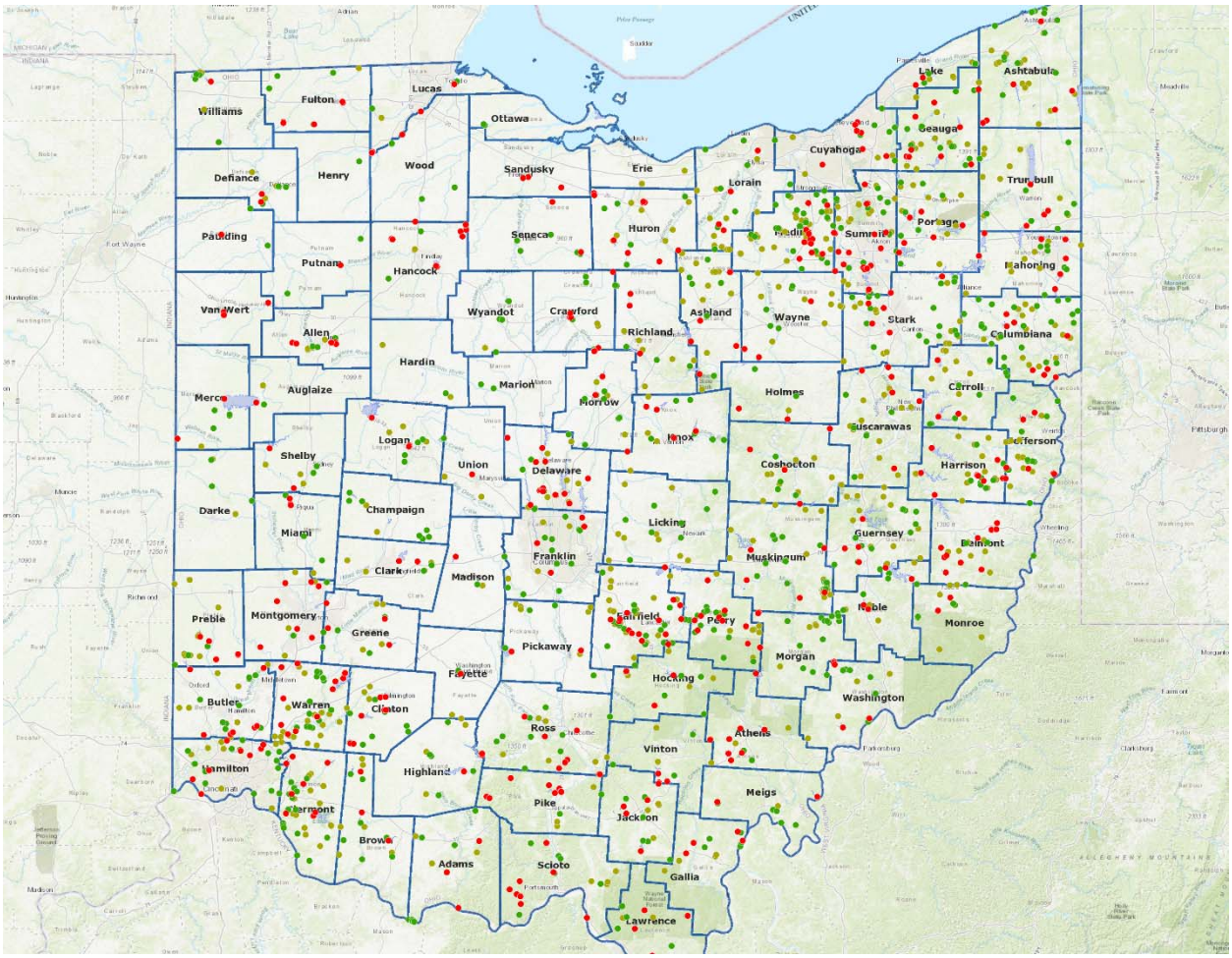
Water Control Structure (Dam/Levee Failure)

Water Control Structure (Dam/Levee Failure) (Total Risk = 570) is the second greatest human-caused hazard and ranked thirteenth in the state, a change from 6th overall in the 2013 HIRA. The change is perhaps a reflection of the state's successful response to the failing Buckeye Lake Dam and its timely remediation which nears completion in 2018. Dam/Levee Failure is defined as a gradual or immediate collapse or failure of water impounding systems or structures, resulting in downstream damages.

Dams in Ohio have been divided into four classes; I, II, III, IV, based upon a downstream threat potential. Figure 9 shows the number of Class I dams by county. There are 365 Class I dams in the state. The failure of a Class I dam would result in the probable loss of life or pose a serious hazard to health, property and high-value industrial or commercial properties or public utilities in

the below-dam inundation plain. A Class I dam is one with a volume capacity of over 5,000 acre-feet or a height greater than 60 feet. Although damages to Class I dams pose the greatest threat to human life, Class II and III units could also pose a similar threat if affected.

Figure 8. Class I Dams in Ohio



Source: ODNR - Division of Water Resources, 2018

The Ohio Department of Natural Resources has identified most dams in the state and categorized each by their impact to citizens in the event of failure. A review of similar events in other states illustrates the possible consequences: Buffalo Creek, W.Va. suffered 125 casualties and $400 million in property damages; Lawn Lake, Colorado incurred three casualties and $21 million in property damages; and the town of Toccoa, Georgia, suffered 39 casualties and $30 million in property damages.

Water control structure failures have the potential to cause similar environmental impacts as flooding, landslides and subsidence and earthquakes.

Transportation Failure (including Bridge/Structure Collapse)

Transportation Failure (Total Risk = 402) is primarily related to bridge/structure collapse. Bridges are the most common type of collapse in the state. There are over 42,000 bridges in the state of

Ohio. The Ohio Department of Transportation (ODOT) is responsible for nearly 15,000 bridges on the state highway system. Our state has the second largest number of bridges in the country. Ohio law requires all bridges to be inspected on an annual basis. This applies to all bridges maintained by ODOT as well as county and city bridges.

The 2007 Interstate 35W bridge collapse in Minneapolis, Minnesota, brought to light challenges states face with structurally deficient bridges. Like Minnesota, Ohio has over a dozen highway deck truss bridges that share the same design structure as the I-35W Bridge. In 2009, Lake County replaced a similarly-designed bridge with twin bridges on Interstate 90 over the Grand River. The bridge partially collapsed in 1996 due to deteriorating corroded steel plates. No injuries were reported, but the bridge was closed for months for repairs. In another comparable case, the city of Cleveland's Inner belt Bridge is undergoing more than $150 million in repairs.

In 1983 a bridge collapsed in Antwerp (Paulding County) killing five people. The 30-foot stone and asphalt structure caved-in and four cars plunged into a dry creek bed. Another notable bridge collapse occurred in Ohio on December 15, 1967. The Silver Bridge over the Ohio River collapsed killing 46 people. The bridge connected the towns of Point Pleasant, West Virginia, and Managua, Ohio.

More recently, Ohio resources have been used to respond to building structural collapse rescues. On July 7, 2010, the Ohio Regional Urban Search and Rescue and the northwest area's Regional Structural Collapse Response Unit responded to a significant structural collapse in Fremont. Support columns inside a food processing plant partially collapsed the roof structure. Area-wide assistance was requested for two workers trapped under the debris. One person was killed and the other was trapped for hours beneath the rubble.

Structural/building collapse will remain a primary human-caused hazard in Ohio, primarily due to the threats faced in this state. Significant threat concerns include the impact from tornadoes, earthquakes, snow loads, landslides, gas explosions, acts of terrorism, and environment.

The collapse of a building or other structure may lead to environmental damages through hazardous materials releases, the atmospheric release of asbestos or other harmful substances, and the contamination of the water table through sewage release or other chemicals. Contaminated debris may pose special challenges for waste disposition or recycling.

Impact on plants, animals and humans and associated eco-systems is a concern when in immediate proximity to the collapse. Multiple deaths are expected as well as long-term consequences to the eco-system in the immediate area. Depending on the purpose of the structure and its date of construction lead and asbestos may be present and their contamination could readily be spread through water and wind movement.

Urban Fire

Urban Fire (Total Risk = 540) ranks fairly high as a human-caused hazard, primarily due to its impact on people. Cleveland is noted by fire historians for the Collinwood School Fire in 1908 that killed 172, as well as the Cleveland Clinic Fire in 1929 that killed 123.

Structural fires pose many of the same environmental challenges of building collapse with an added immediate impact to the atmosphere. Depending on what materials are in the structure, it is possible that air quality could deteriorate for an unknown length of time and pose an immediate threat to life and long term threat to well-being.

Hazardous Materials

Hazardous Materials (Total Risk = 674) incidents remain the most common form of accidental threat to Ohio, occurring almost daily. A hazardous materials spill can be the result of human negligence, an intentional act, or a natural hazard. Human negligence occurs predominantly during the manufacture, transport, or storage of the hazardous material. An intentional act would be considered either a terrorist act, criminal act, or act of vandalism. A hazardous materials spill can be a secondary effect of a natural hazard (e.g., flooding, earthquake, or severe weather).

Environmental impacts - Although major chemical accidents and spills seem most threatening, it is the smaller, more routine accidents and spills that have a greater impact on humans, wildlife, economy, and environment. Some of the most common spills involve tanker trucks and railroad tankers containing gasoline, chlorine, or other industrial chemicals. The National Environmental Law Center reported that 34,500 accidents involving toxic chemicals were reported to the EPA's Emergency Response and Notification System between 1988 and 1992, meaning that on average, a toxic chemical accident was reported nineteen times a day in the United States, or nearly once every hour. [9]

Human Caused Hazards - Intentional

Terrorism (CBRNE)

Terrorism incidents, involving CBRNE - Chemical (Total Risk = 1055), Biological (Total Risk = 947), Radiological (Total Risk = 1193), Nuclear & Explosives (Total Risk = 330), are ranked as the highest human-caused intentional hazard. The Federal Bureau of Investigation (FBI) defines terrorism incidents as the "…unlawful use of force or violence against persons or property to intimidate, or coerce a government, civilian population, or any segment thereof in the furtherance of political and social objectives." The victims of terrorism may not always, however, be the intended, or most concerned, elements of society.

Although events such as the World Trade Center Bombing/Destruction (1993 & 2001) and Oklahoma City bombing (1995) did not occur in Ohio, the threat, real or implied, to employ terrorism in this state, remains. Threats often involved the employment of Weapons of Mass Destruction (WMD), to include bombs and pathogens, and can be directed at targets in both rural and urban-industrial settings.

In 1995, an Ohio resident with ties to unorganized militias was able to order, via mail, samples of Plague bacilli. Although that attempt was thwarted, the events of 2001 show that the bio-terrorist threat remains viable.

One of the most dangerous emerging threats to our country is the criminal and terrorist use of Improvised Explosive Devices (IEDs). IEDs have the potential to make a lethal impact, with relatively low-tech skills needed to produce them. IEDs have been the weapon of choice for foreign terrorists since the first World Trade Center attack in 1993 and for domestic terrorists since the Oklahoma City bombing in 1995. This threat has expanded to include both Vehicle-born Improvised Explosive Devices (VBIEDs) and small arms attacks.

IEDs have an enormous potential for influencing public perception and for creating an atmosphere of fear and uncertainty. A car bomb exploding in the middle of a busy urban setting can quickly undermine emergency response efforts to protect the public.

An act of terrorism's impact on the environment can be very large and can be felt by the environment in several different ways.

Chemical incidents are unlikely to have a significant effect on electric utilities, natural gas utilities, pipelines nor water courses. Such incidents would create some debris, though not an unmanageable amount. Chemical terrorism would however have a large impact on both the short-term quality of the air, and long-term quality of waste water systems, aquatic ecosystems and soils that sustain wildlife.

A biological incident probably would not compromise utilities, displace waterways, create large amounts of debris, nor have a large-scale effect on air quality, but could certainly effect sewage systems, septic systems, waterway ecosystems, soil usability - and subsequently the plant life and wild life that depend on them.

A radiological incident has the potential to make a large impact on air quality due to fallout from the device; contamination of water utilities, storm sewers, sewage and septic systems; contamination of water eco-systems; and soil contamination from both the device itself and from radioactive water leeching into the soil. Such an incident has less likelihood of effecting electric, natural gas, pipelines, utilities; watercourses; or of creating an immediate debris problem.

A nuclear incident would have a huge impact on the environment. All utilities and wastewater systems would be compromised. Air quality would be hampered by smoke, lead, and asbestos from damaged older structures. Water courses could be displaced thereby altering their ecosystems. Soil would be contaminated not only from fallout/debris, but also by released hazardous material and raw sewage. The harm to wildlife habitat would be catastrophic and long-lasting.

Explosive incidents have the potential to impact electric, water, natural gas, pipelines, and utilities. These types of incidents would pollute the air with smoke, lead fumes and asbestos. Explosive incidents would alter water ecosystems by rerouting, damming or displacing waterways. Explosive incidents would potentially contaminate soil with not only hazardous materials, but also debris. All of which in turn effect wildlife habitat and the environment. Such an incident has less likelihood of affecting storm sewers, sewage and septic systems, or of creating overwhelming amounts of debris.

Primary sources of data for determining the likelihood or probability of occurrence for human-caused, intentional acts of terrorism are risk assessments by the Ohio Department of Natural Resources and Ohio Homeland Security's Ohio Strategic Analysis Information Center (SAIC). Other sources of data include weekly Ohio SAIC intelligence summaries, U.S. Coast Guard risk assessments on intentional pollution in both ports and in rivers, U.S. Forest Service intelligence summaries, and classified federal intelligence reports containing vulnerability information.

From that, risk to the environment can be assessed not in terms of percentage, but in terms of magnitude and of impact on plant, animal, and human life as well as the eco-systems in which they interact. In accordance with the Magnitude factor used throughout the Hazard Identification and Risk Analysis Update 2011, magnitude of risk to the environment due to terrorism of all types is overall rated as "Localized." This term does not mean that resulting damage would be unimportant, but rather when all the possible types are considered collectively, the average is

projected to be small in geographical scope with less than 10 of 88 counties expected to be impacted.

Vulnerability of the environment can be assessed similarly using the Impact on Humans factor used in the 2018 HIRA. Impact on plants, animals and associated eco-systems is rated at “High” because they will be either the focus of such an attack, or will be in immediate proximity to an attack without means of evacuation. The movement of wind and water could easily spread the damage. Multiple deaths are expected as well as long-term consequences.

Hazard Grouping

Figure 9. Threats and Hazards Identified

Natural Hazards	
Biological	Disease, Human
	Public Health Emergency
Geological	Earthquake
	Landslide / Erosion
Meteorological	Blizzard or Ice Storm
	Drought
	Flood, Riverine, Areal, Coastal (Forecasted)
	Flood, Seiche / Standing Wave (Unpredicted)
	Hurricane
	Space Weather
	Temperature Extremes
	Tornado/High Wind/Thunderstorm
	Urban/Flash flood
	Wild Fire
Human-Caused	
Intentional	Active Aggressor (stalking, abduction, workplace violence, threat)
	Aircraft Incident
	Animal/Crop Eco-terrorism
	Civil Disturbance
	Cyber Attack/IT System Security Breach
	Electromagnetic Pulse (EMP)
	Electrical Grid Failure
	Hostage Situation
	IT Infrastructure Disruption
	Labor Action
	Mass Communications Interruption
	Planned Public Event
	Terrorism, CBRNE (bomb, suspicious powder, etc.)
Accidental/ Technological	Accidental Hazmat Release
	Dam Failure
	Emergency Generator Failure
	Fuel Shortage Nuclear Accident
	Pipeline Failure
	Sewer Failure
	Shortage of Critical Materials
	Space Debris
	Transportation Incident
	Urban Fire
	Water Supply Incident

Example Hazard Scenarios

Each type of hazard that could affect the State will have varying consequences based on the severity of the event. For instance, the consequences of an earthquake to the impact factors in this analysis would differ greatly based on the magnitude of the earthquake scenario being considered. For hazards that have historically occurred in the State, the scenarios considered as part of this consequence analysis were developed based on the magnitude of events that have actually occurred. Following is a brief description of the hazard scenarios used by the authors to evaluate the consequences of each hazard.

Flood (Riverine)
Storms that produced heavy rains in March result in severe flooding in southern, Ohio. Widespread damages to private and public property occur throughout the area. Eighteen counties are declared Federal and State Disaster areas. Nearly 20,000 people are evacuated. Over 6,500 residences and 833 businesses are affected. Five deaths are attributed to the flood and preliminary damages are estimated at over $200 million (Ohio River flooding March 1-2, 1997, USGS Water-Resources Investigation Report 97-4149).

Windstorm, Tornado
Severe weather and tornadoes swept across the state. The National Weather Service confirmed 11 tornadoes in Wayne, Holmes, Fairfield, Athens, Perry, Pickaway, Meigs, Delaware and Tuscarawas counties and in the Tarlton, Ohio area that borders 3 counties. The tornadoes ranged from EF-0 to EF-3. Athens, Meigs, Pickaway, Perry and Wayne Counties declared a local state of emergency. Thirteen people were injured in Athens County, and six were injured in Meigs County. The following structure damage estimates were compiled by the State and county teams: 62 destroyed, 77 with major damage, 113 with minor damage and 373 structures as affected. Residential loss equated to 2,227 insurance claims totaling $11,400,000, while business losses included 287 claims totaling $4,700,000. There were 421 auto insurance claims resulting in a loss of $1,200,000 (State Hazard Mitigation Plan, Section 2.3).

Flash Flood, Seiche
Three to four inches of rain fall in a little over one hour causing a flash flood in southeastern Ohio. The total rainfall over a three hour period is estimated at 5.5 inches. Soils saturated from previous rains and narrow, steep-sided valleys cause the water to rise quickly. A wall of water rushing down the valley claims 26 lives, destroys 80 homes and damages 250 residences. There are also significant impact to roads and bridges in the valley (Shadyside, Ohio event June 1990).

Snow, Ice, Hail, Sleet
A February storm produces heavy snowfall across the majority of the State and freezing rain and ice along the Ohio River. The storm causes widespread power outages, road closures, business and school closures. Households are isolated and sensitive populations are at risk as many are without heat and communication systems have been damaged. Storm debris on roads delays early attempts to restore critical facilities and services. Fifteen counties are declared Federal and State disaster areas. Insured losses exceed $25 million and government expenses and uninsured losses exceed $10 million (FEMA DR-1453 Hazard Mitigation Post-Event Strategy).

Radiological Incidents (Nuclear Power Generating Site)
During the July 4th weekend, a massive heat wave created a breaking point to the electric grid resulting in a loss of power at the Beaver Valley Power Station. The primary containment vessel

is compromised, creating a major release of radiation across portions of Ohio and Pennsylvania. Residents living within a 10-mile radius of the plant are evacuated. Thousands of other residents living outside the radius self-evacuate due to fear creating transportation issues.

Disease – Human
An elevated number of E. coli O157:H7 cases have been reported in various jurisdictions across Ohio. A total of 5 cases have been reported and one child is hospitalized with hemolytic uremic syndrome (HUS). Other cases of coli O157:H7 and HUS have occurred in seven other states.

Water Control Structure (dam/levee failure)
Near record spring precipitation, compounded by a series of spring storms led to a Class I dam failure upstream of a highly populated area in central Ohio. The inundation area downstream of the dam contains business, residential, commercial and other uses. There were 550 casualties and thousands of injuries. Property and infrastructure damage totals over $600 million. Bridges, culverts and other stream crossings were destroyed 20 miles downstream of the dam. The event caused significant environmental contamination downstream of the dam and habitat degradation in the reservoir and surrounding park.

Disease – Animal
Emerging diseases and others, such as anthrax, foot and mouth disease, Avian and Swine Influenza, Bovine Spongiform Encephalopathy (BSE), commonly known as mad cow disease, are becoming increasingly prevalent on the world stage. Outbreaks are often regional, if not global, in nature. Disease outbreaks are a planning priority for the State of Ohio and also at the federal level. Diseases which cause widespread deaths of animals, both captive and wild, would have an effect on the environment in terms of disposal of the carcasses. Whether the infected animals are buried, burned or left in place, a large quantity and concentration of carcasses may impact air, soil and groundwater.

Building/Structure Collapse
Bridges are the most common type of collapse in the state. There are over 42,000 bridges in Ohio, the second largest number of bridges in the country. The Ohio Department of Transportation (ODOT) is responsible for nearly 15,000 bridges on the state highway system. Ohio law requires all bridges to be inspected on an annual basis. This applies to all bridges maintained by ODOT as well as county and city bridges.

The 2007 Interstate 35W bridge collapse in Minneapolis, Minnesota, brought to light challenges states face with structurally deficient bridges. Like Minnesota, Ohio has over a dozen highway deck truss bridges that share the same design structure as the I-35W Bridge. In 2009, Lake County replaced a similarly-designed bridge with twin bridges on Interstate 90 over the Grand River. The bridge partially collapsed in 1996 due to deteriorating corroded steel plates. No injuries were reported, but the bridge was closed for months for repairs. In another comparable case, the city of Cleveland's Inner belt Bridge is undergoing more than $150 million in repairs. The I-71 bridge in Morrow County (Jeremiah Morrow Bridge), similar in structure to the I-35 bridge, was replaced. In 1983 a bridge collapsed in Antwerp (Paulding County) killing five people. The 30-foot stone and asphalt structure caved-in and four cars plunged into a dry creek bed.

More recently, Ohio resources have been used to respond to building structural collapse rescues. On July 7, 2010, the Ohio Regional Urban Search and Rescue and the northwest area's Regional Structural Collapse Response Unit responded to a significant structural collapse in Fremont. Support columns inside a food processing plant partially collapsed the roof

structure. Area-wide assistance was requested for two workers trapped under the debris. One person was killed and the other was trapped for hours beneath the rubble.

Terrorism (CBRNE)
Approximately 40,000 are gathered at a 32-acre park that is surrounded by a residential neighborhood and downtown Columbus for a popular annual community event. It is a clear Saturday in late June, with a temperature of 88 degrees and a mild wind blowing in a northeasterly direction. A radiological dispersion device (RDD) detonates at the northern end of the park. Debris recovers the streets and a cloud of dust quickly envelops the park and nearby homes. On-scene security and first responders are reporting countless injuries from the blast. As additional responders arrive, including initial Columbus bomb squad, a monitor detects radiation. As fire & EMS deal with the wounded, the bomb squad conducts an assessment and discovers radiation within the park's perimeter. There is mass chaos along with fears of radiation exposure from the crowd as well as near-by residents.

Explosion/Fire
A vehicle borne improvised explosive device is detonated in the parking garage of a government facility resulting in 150 confirmed fatalities with 500 injured. The building suffered vast damage and the effective blast radius affected approximately sixteen city blocks. (This was evidenced by the Oklahoma City blast of 1995.)

Fuel/Resource Shortage
A gulf-coast hurricane disrupts production, refinement and transportation of fuels. Refineries and pipelines are damaged and will be offline for months. Heading into the winter months and the requirements for heating fuels, this could have a tremendous impact on the availability and price of fuels. Hurricane Katrina caused these kinds of damages and caused some supply disruptions, especially for southwestern Ohio.

Earthquake (5.4 magnitude)
A 5.4 magnitude earthquake occurs at 5:00 PM on a weekday near the border of Lake and Geauga Counties in northern Ohio. Most people in these two counties run outdoors and the shaking is felt all along the Akron Magnetic Boundary. The communities of Mentor, Painesville and Chardon are the most heavily impacted. Damage to buildings varies depending on the quality of building construction. Some older buildings near the epicenter are destroyed and many other older buildings sustained damage. There are hundreds of collapsed chimneys and many automobile accidents 20 miles from the epicenter (Based on the March 9, 1937 earthquake in Anna, Ohio).

Landslide, Mudslide, Subsidence
Above normal rainfall amounts were recorded at the three climate stations in Ohio during the months of March, April, and May, with April being the wettest month overall. Rainfall was above normal across the entire State, but the Cincinnati area experienced rainfall in April that surpassed the previous record by 4 inches. As a result of this significant rainfall, groundwater levels, soil moisture, lake and reservoir levels, and stream flow were well above normal for an extended period of time. During this time many roads are washed out due to flash flooding. Bridges and culverts suffered flood damage and over 500 slope failures occurred. The prolonged event results in over $45 million dollars in damages to roads, bridges and other infrastructure (Hazard Mitigation Strategy for FEMA-DR-4002).

Extreme Temperatures (heat, cold)
Severe summer storms damage trees causing downed power lines and outages statewide. Due to the widespread nature of the storms, many areas are without power for 4 - 6 days.

Immediately after the storms, an extended heat wave affects the State. Since many areas are without power, cooling stations and shelters are opened in most counties. Hospitals emergency rooms are filled with sensitive populations overwhelmed by heat exhaustion and related symptoms. Despite efforts to remind citizens to check on their neighbors, 10 elderly people die from heat related complications.

Hazardous Material
In Miamisburg, Ohio on July 8, 1986 fifteen cars derailed rupturing a tank car carrying 12,000 gallons of white phosphorous. The white phosphorous ignited in the atmosphere and created a plume of phosphoric acid. In the hours and days following the derailment, the situation degraded, forcing the evacuation of an estimated 30,000 people; 569 persons were treated for various complaints during the incident. This evacuation represents the largest ever U.S. evacuation due to a train derailment involving hazardous materials, and the largest emergency evacuation in Ohio history.

Product Defect/Contamination
In 2010, an Ohio food producer issued a recall of romaine lettuce products that were linked to an outbreak of a foodborne illness from *E. coli* 0145 bacteria. Although no deaths were reported, 19 people were sickened, with 12 hospitalized, including three who developed a potentially life-threatening complication called hemolytic uremic syndrome, or HUS. The lettuce was shipped to 23 states, and the most cases of illness were reported in New York, Michigan and Ohio.

Civil Disturbance, Public Unrest, Riot
In 2001, the Cincinnati race riots is considered one of the largest urban disturbances in the United States since the Los Angeles riots of 1992. The four days of rioting were a reaction to the fatal shooting of a 19-year-old black male, by a white police officer. Full-scale rioting lasted nearly a week, with millions of dollars in property damage reported.

Drought
In July 1995, higher than normal temperatures and dry vegetation for two straight weeks create extreme drought conditions in 13 southern Ohio counties. Crops are adversely affected, as well as lawns, gardens, and other urban landscapes. Many municipalities mandated water-use restrictions by the end of June as water supplies approached critically low levels.

Mine Collapse
Thousands of abandoned coal mines in 35 Ohio counties pose a risk to residents, buildings and roads as they collapse, creating open holes or sinking patches of earth. In 2009, a house in village of Sugarcreek bowed and cracked its building façade and walls due to mine subsidence. Records from the Ohio Department of Natural Resources Division of the Geological Survey showed that an old abandoned coal mine ran under large portions of Sugarcreek. According to date from the geological survey office, Ohio is now home to about 5,000 documented abandoned underground mines (AUMs). As many as 2,000 additional AUMs might exist for which there are no records. Known AUMs are in Ohio's coal-rich Appalachian counties. More than 550 lane miles of Ohio's roads run over AUMs.

Fire (forest, range, urban, wildland)
A lighted cigarette tossed from a car window sparks a 200 acre wildfire in Lawrence County. Fire crews from neighboring townships, counties, cities and villages are dispatched to the scene. Despite conditions being relatively dry, and a moderate wind, fire crews are able to control the fire in two days. The area is sparsely populated and all residents were able to be evacuated ahead of the fire. Three fire fighters were injured, and two residential structures were

destroyed in blaze (Based on historical wildfire data in Section 2.7 of the State of Ohio Hazard Mitigation Plan).

Geomagnetic Storm
A Geomagnetic Storm associated with a gigantic solar Coronal Mass Ejection (CME) produced widespread commercial power grid failures in Ohio and across the Midwest. As a result, the entire State and many surrounding states were without power for 36 hours. Damage to communication satellites affected banking, fuel distribution systems, cellular telephone networks and Global Positioning System signals. Several cities in the State experienced minor rioting and looting.

Energy/Power/Utility Failure
Twelve counties in northeast Ohio experience complete “blackout” for 5 days during a blizzard in mid-February after an unknown source corruptions electrical grid control systems.

Cyber Attack
An unknown cyber threat group breaches a variety of financial systems throughout Ohio and the United States siphoning funds from thousands of accounts from various banks and financial institutions.

Animal or Insect Infestation or damage
Since the discovery of Ohio’s first Emerald Ash Borer (EAB) infestation in 2003, this exotic, invasive species has caused millions of dollars in damage to the State’s wooded ecosystems, residential properties, urban forests, as well as to landscape and nursery businesses. The U.S. Department of Agriculture Forest Service estimated that there were 3.8 billion white ash trees in Ohio in 2003. The current estimate of all ash trees in the State is 254 million.
Northwestern Ohio, with its high percentage of ash trees and proximity to the Michigan EAB introduction site, was especially hard hit. Assistance requests from EAB-impacted landowners and communities are high. An ODNR Division of Forestry survey of communities returned a request of $11 million from more than 60 communities to provide for ash tree removal and replacement assistance. In the City of Toledo alone, more than 7,500 ash trees needed to be removed, dramatically impacting the urban right-of-way landscape (ODNR Division of Forestry website).

Air/Water Pollution/Contamination
In the late 1960s, about 2,500 pounds of sulfur dioxide escaped into the air from a burst pipe at a chemical plant located in the northern industrial part of Cincinnati. The release of sulfuric dioxide started at midnight and lasted for about 8 hours. People who are staying at about 200 meters to the east of the plant were affected. People were awakened by a rotten-egg smell and difficulty in breathing. Fortunately nobody was killed.

Communication Systems Interruptions
In June 2012, portions of Ohio’s communications systems were severely disrupted due to a destructive windstorm “Derecho” that resulted in millions without electrical power during a record summer heat wave across the nation. The 2012 derecho severely disrupted 9-1-1-related communications called Public Safety Answering Points (PSAPs). In Ohio, 74 MARCS towers were on generator power during the height of the derecho.

Transportation Accident
In 1994, a commercial airline, Atlantic Coast Airlines, crashed on approach after a flight from Washington Dulles International Airport to Port Columbus International Airport. Five passengers and crew were killed and three people survived the accident. The aircraft slowed to a stall

resulting in the aircraft impacting the ground less than 2 miles from the runway. After the impact, a fire started in or near the left engine, which spread to the rest of the aircraft.

Criminal Activity
A subject in a major urban area purchased an unusually high quantity of a chemical which could be used in the creation of an explosive device. A concerned citizen reported this information to the local fusion center which, in turn, processed and developed additional information, and shared information with the Federal Bureau of Investigation – Joint Terrorism Task Force and the Department of Homeland Security, and subsequently preventing an attack through successful interdiction. From this information/investigation, it is learned the subject has ties to a designated terrorist organization. In addition, it is learned the subject is in the process of building a significant explosive device to launch against American citizens.

Lightning Strikes
A three day outdoor music festival was held in western Ohio in July. The event drew 50,000 people to an open field area in a rural part of the State. A quickly developing severe summer storm directly hits the festival area causing two casualties from lightning strikes.

Space Debris
About 40,000 to 60,000 tons of space material falls onto the Earth each year, but most of it is mere dust. Larger materials fall during regular cycles called meteor showers, but again most of it is small enough to harmlessly burn up as it hits the Earth's atmosphere at high speeds. Material that does manage to strike the Earth's surface lands in random locations, and since 70% of the Earth's surface is water, these meteorites mostly go unnoticed by ordinary people. There is a 1-in-3,200 chance of satellite debris hitting a person on the ground. Throughout the entire 54 years of the Space Age there has been no report of anyone being injured or impacted by any re-entering debris.

Risk Assessment: The Analysis Process

Methodology

A hazard identification and risk assessment consists of three elements –establishing threat and hazard profiles, assessment of vulnerability related to each threat or hazard, and consequences expected should an incident occur. Research for this assessment involved the collection of both historical and statistical data, including review of available literature and interviews with professionals in various disciplines at the local-level and at the state-level. Information was then systematically analyzed for potential risk value. Composite risk values are calculated based on scores for several factors under each of the three elements. Because the analysis incorporates data applicable to the entire state, the data for any specific (county) jurisdiction may differ.

Figure 9. Threats and Hazards Identified lists the threats and hazards identified and as they were consolidated by subject matter experts for planning purposes.

Figure 11. Total Risk Values (Probability x Consequence) provides the numerical score, the hazard profile, vulnerability, and overall risk total for each hazard. The hazards are categorized primarily by FEMA's Comprehensive Preparedness Guide 101.

Threat and Hazard Profiles were determined based on: ***Frequency, Duration, Speed of Onset, and Magnitude.*** Vulnerability is determined based on impacts to: ***Business, Humans, Property, and the Environment.*** The consequence analysis further estimates the impacts to people, property and the environment by evaluating impacts to: ***the Public, First Responders, Business Continuity, Public Confidence, Economy, Facilities/Infrastructure, and the Environment (estimated remediation required).***

Generally, these factors were considered for an average occurrence of the hazard, not an incidence of catastrophic occurrence. The resulting risk total values allow hazards to be compared against each other to obtain a prioritization of hazards. Although this assessment considers the hazard analysis documented by the Ohio EMA's Mitigation Branch in the Ohio Enhanced Hazard Mitigation Plan, the threats and hazards identified and risk values determined in this report are used for planning purposes only. The outcome of this risk assessment is referenced in the State of Ohio Emergency Operations Plan and as Step 1 of the annual statewide Threat and Hazard Identification and Risk Assessment (THIRA) process.

Factors for Threat and Hazard Profiles

Frequency. *A key factor in the risk of a particular hazard is the frequency with which it occurs. Some hazards have been relatively frequent in this state while others were only sporadic. For this hazard analysis, the frequency with which an event occurs is based on historical reports and query of subject matter experts from various state and local authorities as well as the number of Gubernatorial Declarations associated with the hazard agent. Using these criteria provides a wider variety of hazards than utilizing presidential declarations alone. State declaration records from Ohio's Secretary of State date back to 1991.*

4	Highly Likely	Near 100% probability in next year. Many state declarations have occurred.
3	Likely	Between 10 and 100% probability in next year, or at least one chance in 10 years. Some state declarations have occurred.
2	Possible	Between 1 to 10% probability in the next year, or at least 1 in the next 100 years. Very few state declarations have occurred.
1	Unlikely	<1% probability in next 100 years. No state declarations are likely.

Duration *may be defined as "time on the ground" or the time-period of response to a hazard or event. Transportation accidents may last a few hours whereas a tire fire may last a week and a flood several weeks. Duration, therefore, may not always be indicative of the degree of damage, but it remains an important planning factor.*

5	Excessive	More than 30 days
4	Long	7 to 30 days
3	Medium	1 to 7 days
2	Short	12 to 24 hours
1	Minimal	Less than half a day

Speed of Onset *may affect all other factors due to lack of warning or time to prepare for impact. The lead-time required protecting lives and property varies greatly with each event. For instance, a slow-rising Ohio River flood may allow time to evacuate residents and begin flood fight measures, but flash floods can occur with little warning.*

4	Short-None	Minimal to no warning
3	Short	6 to 12 hours
2	Medium	12 to 24 hours
1	Extended	More than 24 hours

Magnitude *is the geographic dispersion of the hazard. For instance, comparing the number of counties impacted by a flood on the Ohio River versus a transportation accident involving hazardous materials.*

4	Catastrophic	More than 50 counties impacted
3	Critical	25 to 50 counties impacted
2	Limited	10-25 counties impacted
1	Localized	Less than 10 counties impacted

Factors for Vulnerability

Impact on Business *refers to enduring economic impact of the hazard on the community by an event.*

4	Complete shutdown of critical facilities for 30 days or more
3	Complete shutdown of critical facilities for at least two weeks
2	Complete shutdown of critical facilities for one week
1	Shutdown of critical facilities for less than 24 hours

Impact on Humans. *This factor relates to the number of lives potentially lost to a particular hazard.*

4	High	Multiple deaths
3	Medium	Multiple severe injuries
2	Low	Some injuries
1	Minimum	Minor injuries

Impact on Property*. This factor relates to the amount of property potentially lost to a particular hazard agent. This factor can vary between jurisdictions based on economics, geographic amount owned, and demographics of the particular populations.*

4	High	More than 50% of property severely damaged
3	Medium	More than 25% of property severely damaged
2	Low	More than 10% of property severely damaged
1	Minimum	Less than 10% of property severely damaged

Impact on Environment. *This factor considers the impacts from the hazard event to the air, water, land, and biota.*

4	High	Catastrophic Impacts to the environment as a result of the event and/or cascading effects. Environmental impacts would have immediate and long term health effects to people. Significant resources required for remediation.
3	Medium	Localized and temporary Impacts to the environment as a result of the event and/or cascading effects. No immediate health threat to people and environmental remediation would restore the environment to acceptable limits.
2	Low	Impact to the environment would be minimal and only require a local response.
1	Minimum	Impact to the environment would not require remediation.

The impact categories considered for each hazard reflect broad impact categories in a nationally recognized consequence analysis standard. Each hazard was evaluated by subject matter experts using the high, medium, and low criteria (a rating of 4 represents “catastrophic impact” for each category, reserved for the most severe incidents) and the results are summarized in the Consequence Analysis Summary. Following is a brief description of some of the factors considered when determining how to rate the impact for each of the hazards.

Factors for Consequence Analysis

Public. *This category considers the overall impact to the citizens of the State caused by the hazard. The short and long term impacts caused by the hazard were considered in addition to efforts at the State and local level to mitigate, prepare for, respond to and recover from the event. The ranking is a general reflection of the State's resilience to the hazard being evaluated.*

3	High	Impacts to the public would likely exceed State resources and necessitate Federal assistance. Impacts would include multiple casualties.
2	Medium	Impacts to the public would likely not exceed State resources. Some casualties and injuries would occur.
1	Low	Impacts to the public would be managed at the local level.

First Responders. *This category considers the impact of the hazard event to police, fire, EMT, emergency management and other State and local officials that respond to the event. The threats to the health and safety of first responders posed by the hazard were considered in addition to staffing, training, and overall preparedness of first responders.*

3	High	Extreme threat posed to first responders, which would likely exceed local and State resources.
2	Medium	Significant threat posed to first responders, but would likely not exceed State and local resources.
1	Low	Threat posed by hazard would be managed at the local level.

Continuity of Operations. *This category considers the impact of the hazard event to State government's ability to continue or reestablish essential services.*

3	High	Impacts to essential functions as a result of the hazard event and/or cascading effects would be catastrophic. This failure would have an immediate cascading effect to public health and safety.
2	Medium	Impacts to essential functions as the result of the hazard event and/or cascading effects would be significant, but localized and temporary. This impact would create delayed response to public health and safety, but no immediate concerns.
1	Low	Impact to essential functions would be minimal and only require a local response.

Facilities/Infrastructure (i.e. Property). *This category considers the impacts of the hazard event to the built environment.*

3	High	The hazard event would result in catastrophic damages to the built environment. Damage to the built environment would have cascading and long term effects. Impacts would strain Federal resources and require extensive long term recovery efforts.
2	Medium	The hazard event would result in significant damages to the built environment and likely require the need for Federal resources to effectively recover.
1	Low	Effects to the built environment would be limited and likely not exceed the response and recovery efforts at the State and local level.

Economy. *This category considers the impact to the State economy from the hazard event.*

3	High	Cost to respond and recover from the event would quickly exceed the amount budgeted in the State Disaster Relief Fund requiring federal resources.
2	Medium	Cost to respond and recover from the event would likely not exceed the amount budgeted in the State Disaster Relief Fund.
1	Low	Cost to respond and recover from the event would likely not exceed local resources.

Environment (est. remediation). *This category considers the overall impact to the citizens of the State caused by the hazard. The short and long term impacts caused by the hazard were considered in addition to efforts at the State and local level to mitigate, prepare for, respond to and recover from the event. The ranking is a general reflection of the State's resilience to the hazard being evaluated.*

3	High	Impacts to the environment as the result of the hazard event and/or cascading effects would be catastrophic. Environmental impacts would have immediate and long term health effects to people. Significant resources would be required for environmental remediation.
2	Medium	Impacts to the environment as the result of the hazard event and/or cascading effects would be localized and temporary. There would be no immediate health threat to people and environmental remediation would restore the environment to acceptable limits.
1	Low	Impact to the environment would be minimal and only require a local response.

Public Confidence. *This category considers the impact a hazard event of each type could have on the public's confidence in the government and emergency management community.*

3	High	Significant negative impact. Downturn in public trust for the government's ability to respond to or recover from disaster.
2	Medium	Some negative impact. Public trust is eroded but recoverable as the recovery ensues.
1	Low	Little or no impact on the public trust.

Calculating Total Risk

Threat/Hazard Value (T) = (Duration + Speed of Onset + Frequency + Magnitude)/1.7
where 1.7 is a normalizing factor to adjust the scores to the model used in the FEMA Critical Asset Risk Management MGT-315, October 2016

Vulnerability Rating (V) – Compare the calculated vulnerability (below) to the table provided by FEMA to determine the vulnerability rating, which is used for final calculation and plotting on the risk graph.

Vulnerability Score = (Business + Human + Property + Environment)/2.2
where 2.2 is a normalizing factor to adjust scores to the 35 point scale for vulnerability ratings in FEMA Critical Asset Risk Management MGT-315, October 2016.

Figure 10. Vulnerability Ratings Table

Vulnerability Score	*Rating*
0-2	*1*
3-5	*2*
6-8	*3*
9-11	*4*
12-14	*5*
15-17	*6*
18-20	*7*
21-23	*8*
24-26	*9*
27-29	*10*
30-32	*11*
33-35	*12*

Consequence Value (C) = sum of scores for each of the seven factors described in the Consequence Analysis section above divided by 2 to adjust scoring of six Ohio factors vs three factors used in *FEMA Critical Asset Risk Management MGT-315, October 2016*.

Hazard and vulnerability are used to calculate an overall Probability (P), which is then multiplied by Consequence to assign a Total Risk Value.

Probability (P) = T x V

Total Risk = P x C

The table below provides the calculated results for each of the risk measures above. Throughout the series of calculations, the spreadsheet functions round the values to integers for ease of display. This compounds the rounding error and presents data totals which appear to be "miscalculated." For this reason, the table should be viewed as representative values rather than attempting to re-create the totals through the calculations.

Data Summary and Hazard Ranking

Figure 11. Total Risk Values (Probability x Consequence) Ranked within Hazard Grouping

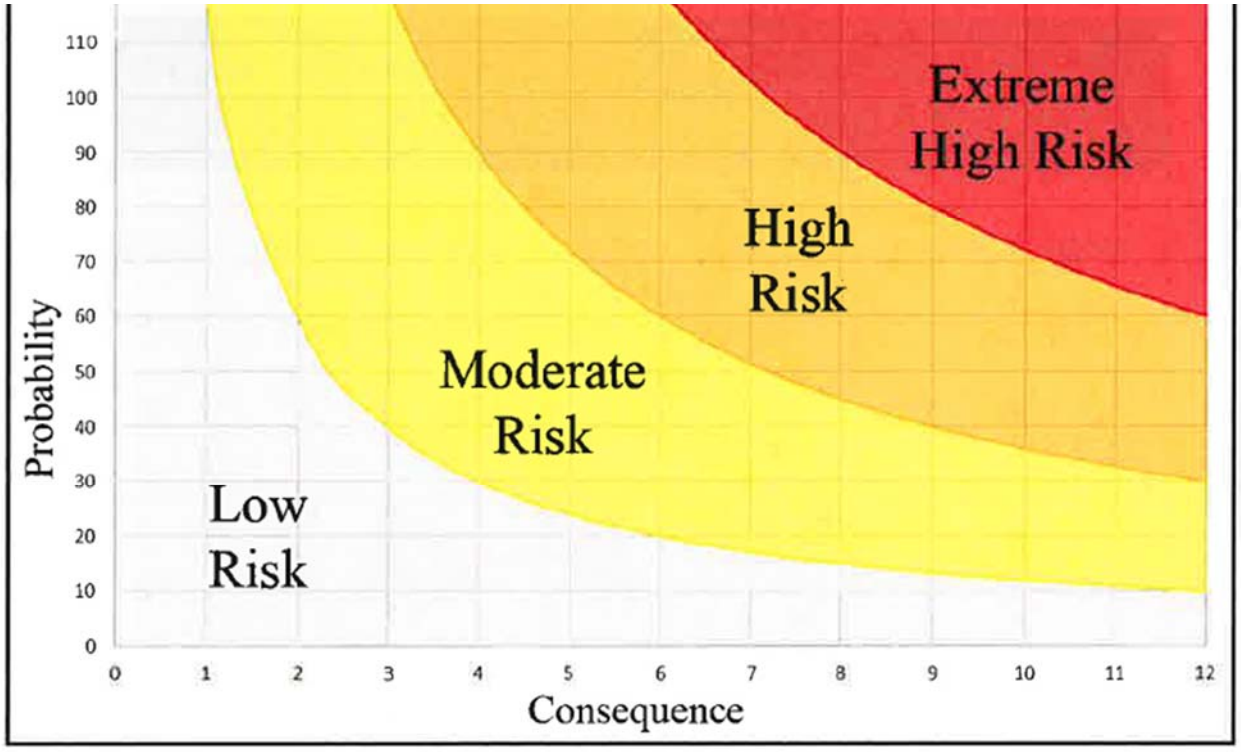
Hazard	Total Risk Value	Probability Value (P)	Consequence Value (C)	Threat/Hazard Value (T)	Vulnerability Rating (V)
Natural Hazards - Meteorological					
Tornado	690	64	11	7	9
Blizzard or Ice Storm	665	69	10	8	9
Flood, Riverine	633	64	10	7	9
High Winds	565	64	9	7	9
Urban/Flash flood	564	58	10	6	9
Wild Fire	536	53	10	6	9
Drought	470	52	9	6	8
Temperature Extremes	445	54	8	8	7
Hurricane	375	37	10	4	9
Severe Thunderstorm	356	42	8	7	6
Space Weather	287	35	8	6	6
Natural Hazards - Geological					
Earthquake	574	53	11	6	9
Landslide / Erosion	375	42	9	5	8
Natural Hazards - Biological					
Public Health Emergency	808	74	11	8	9
Mass Casualty Incident (Medical)	744	69	11	8	9
Human-Caused – Accidental/Intentional					
Electrical Grid Failure	597	58	10	8	7
Mass Communications failure	533	54	10	8	7
Water Supply Failure	517	52	10	6	8
Aircraft Incident	500	53	9	6	9

Hazard	Total Risk Value	Probability Value (P)	Consequence Value (C)	Threat/Hazard Value (T)	Vulnerability Rating (V)
IT Infrastructure Disruption	457	49	9	8	6
Transportation Failure	402	45	9	6	7
Sewer Failure	359	42	8	7	6
Human-Caused – Intentional					
Terrorism, Radioactive	1193	91	13	8	11
Terrorism, Chemical	1055	84	13	8	11
Terrorism, Biological	947	76	12	8	10
Animal/Crop Eco-terrorism	565	52	11	6	8
IT System Security Breach	515	58	9	8	7
Public Event Disturbance	399	45	9	6	7
Suspicious Powder	344	39	9	6	6
Bomb Threat	330	39	9	6	6
Hostage Situation	303	39	8	6	6
Civil Disturbance	300	35	8	6	6
Abduction	284	39	7	6	6
Mail/Package Bomb	283	32	9	5	6
Workplace Violence	275	35	8	6	6
Labor Action	274	35	8	6	6
Stalking	272	39	7	6	6
VIP Situation	247	32	8	5	6
Human-Caused - Accidental					
Nuclear Accident	1186	91	13	8	11
Mass Casualty Incident (Trauma)	675	64	11	7	9
Accidental Hazmat Release	674	64	11	7	9
Dam Failure	570	53	11	6	9
Urban Fire	540	58	9	6	9

Hazard	Total Risk Value	Probability Value (P)	Consequence Value (C)	Threat/Hazard Value (T)	Vulnerability Rating (V)
Shortage of Critical Materials	486	49	10	7	7
Natural Gas Failure	452	49	9	7	7
Fuel Shortage	420	45	9	6	7
Emergency Generator Failure	313	39	8	6	6
Flood, Internal	295	35	8	6	6
Space Debris	235	28	8	5	6

The relative severity of risk is graphically represented by plotting the Probability and Consequence Values as in Figure 5 below.

Figure 12. Total Risk Graph



Source: FEMA Critical Asset Risk Management MGT-315, October 2016

Hazards Ranked by Total Risk Value

1	Terrorism, Radioactive
2	Nuclear Accident
3	Terrorism, Chemical
4	Terrorism, Biological
5	Public Health Emergency
6	Mass Casualty Incident (Medical)
7	Tornado
8	Mass Casualty Incident (Trauma)
9	Accidental Hazmat Release
10	Blizzard or Ice Storm
11	Flood, Riverine
12	Electrical Grid Failure
13	Earthquake
14	Dam Failure
15	High Winds
16	Animal/Crop Eco-terrorism
17	Urban/Flash flood
18	Urban Fire
19	Wild Fire
20	Mass Communications failure
21	Water Supply Failure
22	IT System Security Breach
23	Aircraft Incident
24	Shortage of Critical Materials
25	Drought
26	IT Infrastructure Disruption
27	Natural Gas Failure
28	Temperature Extremes
29	Fuel Shortage
30	Transportation Failure
31	Public Event Disturbance
32	Landslide / Erosion
33	Hurricane
34	Sewer Failure
35	Severe Thunderstorm
36	Suspicious Powder
37	Bomb Threat
38	Emergency Generator Failure
39	Hostage Situation
40	Civil Disturbance
41	Flood, Internal
42	Space Weather
43	Abduction
44	Mail/Package Bomb
45	Workplace Violence
46	Labor Action
47	Stalking
48	VIP Situation
49	Space Debris

Impact on State Emergency Operations

Emergency managers have the task of coordinating mitigation, preparedness and planning, response and recovery efforts for the threats and hazards that Ohioans face. The State Emergency Operations Center and the emergency management staff coordinating its operations require all available information, tools, and expertise in their efforts to lessen the impact of disasters and to ensure as rapid a return to normal operations as possible.

Although Ohio EMA analyzed the consequences of all hazards (natural and human-caused) for their effect on the state's emergency operations, the most likely hazards determined to affect state emergency operations are those which impact the critical lifeline sectors of energy, water/sewer, and information technology.

In addition to critical lifelines, the State Emergency Operations Center's has vulnerabilities attributed to its proximity to an active airport (OSU Airport) to the south of the property and an active rail line to the east, which contributes substantial risk to egress to/from the facility as well as the potential for hazardous materials accidents which would require evacuation and relocation.

Although less likely, a public health emergency, such as the pandemic flu experienced during the H1N1 outbreak in 2009/2010, is of higher consequence to the state's emergency operations due to the resulting reduction in workforce for a prolonged period.

Method and Schedule for Review, Maintenance and Revision

The HIRA is reviewed informally by the general public via its availability on the Ohio EMA's website and is distributed, upon request, to any interested party. Formally, the HIRA is reviewed by planning partners representing the whole community (the State THIRA Workgroup members) who are identified for their subject matter expertise and support of core capabilities for emergency management. Effective with this revision, the HIRA is now included as Step 1 (Identification of Threats and Hazards) of the THIRA process, which is conducted annually.

As part of routine maintenance, this document, any reviews, and changes must be verified to conform to the current, approved Emergency Management Accreditation Program (EMAP) standard, and primarily to sections 4.1.1 to 4.1.3.

The HIRA will be revised as needed to remain current or correct typographical errors. Formal publication and re-approval will be completed at least once every five years. Significant revisions will be recorded in the Record of Changes on the following page.

Record of Changes

Change Number	Description of Change (with page number)	Date	Authorized by
001	Section added on Assessing Risk and Vulnerability to the Environment for Building Collapse and Terrorism...	July 2008	Ted Filer
002	Added Record of Changes	July 2008	Patrick Sheehan
003	HIRA Update Change from Human-Caused Hazard to Manmade / Adversarial	December 2011	Portia Pulsifer
004	HIRA Update • Formatting changes and updates • Update Data in Tables • Update Environmental Impacts Analysis Statements and Scoring • Update footnotes and references that have changed • Added consequence analysis	Spring / Summer 2013	Pulsifer Sheehan Dragani Ferryman Little Merick
005	Reviewed and added analysis of risk and vulnerability State of Ohio Emergency Management Operations	Summer 2013	Sheehan
006	HIRA Update • Formatting changes and updates • Update data tables, analysis statements and scoring for consistency with FEMA Critical Asset Risk Management formulae • Update footnotes and references that have changed • Incorporated consequence analysis as part of total risk valuation • Updated analysis of risk and vulnerability to State of Ohio Emergency Management Operations	December 2018	Susan Wyatt

Endnotes

[1] See Ohio Revised Code 5502.22 accessed at http://codes.ohio.gov/orc/5502.22
[2] See Ohio Revised Code 5502.21 (I) accessed at http://codes.ohio.gov/orc/5502.21
[3] See Ohio Revised Code 5502.21 (J) accessed at http://codes.ohio.gov/orc/5502.21
[4] See National Fire Protection Association. NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity Programs, 2010 Edition, Pp. 1600-18
[5] As reported by the Ohio EMA Disaster Recovery Branch, information accurate as of October 2018
[6] *Thunder in the Heartland, A Chronicle of Outstanding Weather Events in Ohio*, 1996
[7] Ohio EMA Disaster Recovery Branch materials
[8] Hansen, Michael C. *Earthquakes in Ohio*, Ohio Department of Natural Resources, 2015.
[9] Pollution Issues, http://www.pollutionissues.com/