TABLE OF CONTENTS

List of Acronyms

Executive Summary

Section 1: Introduction 1		
1.1	State Profile	1-2
1.2	Planning Process	1-29
1.3	Plan Integration with Other Initiatives	1-33
1.4	Plan Maintenance and Mitigation Project Monitoring	1-37
1.5	Compliance with Federal Laws and Regulations	1-38
1.6	Assurances/ Promulgation	1-43
Section 2: Risk Analysis 2-1 – 2		
2.1	Risk Analysis Overview	2-2
2.2	Flood	2-12
2.3	Tornado	2-43
2.4	Winter Storm	2-66
2.5	Landslide	2-79
2.6	Dam/Levee Failure	2-91
2.7	Wildfire	2-114
2.8	Seiche / Coastal Flooding	2-133
2.9	Earthquake	2-143
2.10	Coastal Erosion	2-163
2.11	Drought	2-169
2.12	Severe Summer Storms	2-183
2.13	Invasive Species	2-194
2.14	Land Subsidence	2-202
2.15	Future Potential Areas of Risk	2-209

Section 3: State Mitigation Strategy				
3.1	State Hazard Mitigation Goals, Objectives, & Actions	3-2		
3.2	State Mitigation Action Plan	3-10		
3.3	State Capability Assessment	3-23		
3.4	FEMA Mitigation Program Implementation Capability Assessment	3-55		
3.5	Commitment to a Comprehensive State Mitigation Program	3-60		
Section 4: Local Mitigation Program Coordination		4-1 – 4-25		
4.1	Local Capability Assessment	4-2		
4.2	Local Mitigation Planning Assistance	4-5		
4.3	Local Mitigation Plan Integration Into State Plan	4-10		
4.4	Prioritizing Local Mitigation Funding Assistance	4-22		
4.5	Assessment of Mitigation Actions	4-24		
Appendix A: State of Ohio Disaster History				

- Appendix B: Repetitive Loss Summary
- Appendix C: State-Owned Buildings & Critical Facilities
- Appendix D: Status of County/Local Mitigation Planning Efforts
- Appendix E: 2014 Mitigation Action Plan Table
- Appendix F: FEMA Mitigation Program Funding Summary
- Appendix G: Disaster Mitigation Strategy and Administrative Plan
- Appendix H: Ohio Hazard Identification & Risk Assessment

LIST OF ACRONYMS

<u>Acronym</u>	Definition
AFRRI	Appalachian Flood Risk Reduction Initiative
ARC	Appalachian Regional Commission
AUM	Abandon Underground Mine
BCA	Benefit Cost Analysis
BOCA	Building Officials and Code Administrators International CAR
CAR	Communities At Risk
CCC	Civilian Conservation Corps
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CHIP	Community Housing Improvement Program
CRS	Community Rating System
DAE	Disaster Assistance Employee
DAS	Ohio Department of Administrative Services
DMA 2000	Disaster Mitigation Act of 2000
DOW	Division of Water (Ohio Department of Natural Resources)
DSP	Dam Safety Program
EAP	Emergency Action Plan
EMAP	Emergency Management Accreditation Program
ENSO	El Niño - Southern Oscillation
EOC	Emergency Operations Center
EPL	Estimate of Potential Losses
FD	Fire Department
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FMA	Flood Mitigation Assistance
FPM	Flood Plain Management
GAR	Governors Authorized Representative
GIS	Geographic Information System
HAZUS-MH	Hazards United States - Multi-Hazard
HIRA	Hazard Identification & Risk Assessment
HMGP	Hazard Mitigation Grant Program
HSIP	Homeland Security Infrastructure Program
HUD	Housing & Urban Development
IA	Individual Assistance
ICC	Increased Cost of Compliance
JCARR	Joint Committee on Agency Rule Review

LHMP	Local Hazard Mitigation Plan
LULC	Land Use/Land Cover
MCD	Miami Conservancy District
MHIRA	Multi-Hazard Identification and Risk Assessment
MMI	Modified Mercalli Intensity
MSA	Metropolitan Statistical Area
NCDC	National Climatic Data Center
NDMC	National Drought Mitigation Center
NEHRP	Nation Earthquake Hazards Reduction Program
NFIP	National Flood Insurance Program
NID	National Inventory of Dams
NOAA	National Oceanic Atmospheric Administration
NPDP	National Performance of Dams Program
NUCI	National Urban Change Indicator
NWS	National Weather Service
OAC	Ohio Administrative Code
OAKS	Ohio Administrative Knowledge System
OBBC	Ohio Basic Building Code
OBC	Ohio Building Code
OBM	Office of Budget and Management
ODC	Ohio Department of Commerce
ODH	Ohio Department of Health
ODI	Ohio Department of Insurance
ODNR	Ohio Department of Natural Resources
ODNR-DDS	Ohio Department of Natural Resources - Division of Dam Safety
ONDR-DOW	Ohio Department of Natural Resources - Division of Water
ODNR-FPM	Ohio Department of Natural Resources - Flood Plain Management
ODOD	Ohio Department of Development
ODOT	Ohio Department of Transportation
ODSA	Ohio Development Services Agency
OEPA	Ohio Environmental Protection Agency
Ohio EMA	Ohio Emergency Management Agency
ОНРО	Ohio Historical Preservation Officer
OHS	Ohio Historical Society
OLCA	Ohio Lake Communities Association
OLEC	Ohio Lake Erie Commission
ОМВ	Office of Management and Budget
OMHC	Ohio Manufactured Homes Commission
OMPAT	Ohio Mitigation Plan Advisory Team
OMSIUA	Ohio Mine Subsidence Insurance Underwriting Association
OPWC	Ohio Public Works Commission
ORC	Ohio Revised Code

ORM	Office of Risk Management
OSU	The Ohio State University
OWRC	Ohio Water Resources Council
PA	Public Assistance
PAS	
-	Planning Assistance to States
PDA	Preliminary Damage Assessment
PDM C	Pre-Disaster Mitigation Grant Program
PDM-C	Pre-Disaster Mitigation-Competitive Grant
PDSI	Palmer Drought Severity Index
POC	Point of Contact
PUCO	Public Utilities Commission of Ohio
REC	Review of Environmental Consideration or Rural Electric
RFC	Repetitive Flood Claim
SBA	Small Business Administration
SCIP	State Capital Improvements Program
SFHA	Special Flood Hazard Area
SHARPP	State Hazard Analysis Resource and Planning Portal
SHMO	State Hazard Mitigation Officer
SHMP	State Hazard Mitigation Plan
SHMT	State Hazard Mitigation Team
SOHMP	State of Ohio Hazard Mitigation Plan
SOI	Southern Oscillation Index
SRL	Severe Repetitive Loss
STORMS	State of Ohio Rain/Snow Monitoring System
SWL	Still Water Level
SZEA	State Zoning Enabling Act
TRAC	Transportation Review Advisory Council
U.S.C.A.	United States Code Annotated
USACE	United States Corps of Engineers
USFW	United States Fish & Wildlife Service
USGS	United States Geological Survey
VOAD	Voluntary Organizations Active in Disasters
WMAO	Water Management Association of Ohio
WPCLF	Water Pollution Control Loan Fund
WUI	Wildland Urban Interface
WWTP	Waste Water Treatment Plant

STATE OF OHIO HAZARD MITIGATION PLAN - EXECUTIVE SUMMARY

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

The development of the state plan began in 2002, and it involved the participation of numerous state and federal agencies, adjacent state EMA representatives, and various subject-matter experts. The plan was approved by FEMA in 2005, and updated and re-approved in 2008, 2011, 2012, and 2014. The 2019 revision of the plan analyzes Ohio's highest priority hazards: flooding, tornado, winter storm, landslide, dam/levee failure, wildfire, coastal flooding/seiche, earthquake, coastal erosion, drought, severe summer storm, invasive species and land subsidence. The plan also evaluates future and emerging hazard risks. The state's vulnerability to those hazards is analyzed utilizing data from multiple sources to evaluate risk including: HAZUS software, historical damage data, input from subject-matter experts, and information from local hazard mitigation plans. The state hazard mitigation plan describes the unique vulnerabilities associated with the highest priority hazards in Ohio.

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

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

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

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

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