

## **SECTION 3: STATE MITIGATION STRATEGY**

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### 3.1 STATE HAZARD MITIGATION GOALS, OBJECTIVES, & ACTIONS

#### OVERVIEW

According to 44 CFR 201.4(c)(3) a state hazard mitigation plan must contain a mitigation strategy that is the state's blueprint for reducing losses identified in the risk assessment. The state's mitigation strategy is described below, and has been updated as part of the 2019 revision. During the update of hazard mitigation goals, objectives, and actions, the Mitigation Branch:

- Identified applicable mitigation goals, objectives, and actions of the stakeholders that participated in the updating of the plan. This includes direct feedback from the SHMT, Emergency Support Function (ESF) Leads, ESF-14 Partners, and state agency staff.
- Identified and reviewed the goals, objectives and actions of the all hazard county mitigation plans that have been developed and approved by FEMA, the handful of community specific mitigation plans that have been developed and approved and any FMA plans that have not been incorporated into local DMA2K plans. These local goals, objectives and action items were compared to those found in the state plan and gave the Ohio EMA Mitigation Branch a clearer vision of what the locals felt was important.
- Identified and reviewed the goals, objectives, and actions of the 2014 State of Ohio Hazard Mitigation Plan.
- Reviewed the state's priority hazards, which include: flooding, tornado/wind, severe summer storms and severe winter storms.

The State of Ohio mitigation strategy in this section of the plan utilizes the following terminology, based on FEMA's *State and Local Mitigation Planning How-To Guide*:

- *Goals* – General guidelines that explain what is desired to be achieved. They are usually broad policy-type statements, long term, and represent global visions.
- *Objectives* – Strategies or implementation steps to attain identified goals. Unlike goals, objectives are specific and measurable.
- *Mitigation Actions* – Specific actions to achieve goals and objectives. The mitigation actions are described below and listed in the Mitigation Action Plan Table found in Section 3.2. This table prioritizes mitigation actions, identifies a lead agency for implementation, and is used to track implementation status.

#### PROGRESS ON 2014 GOALS/OBJECTIVES/ACTIONS; CHANGES IN 2019 UPDATE

The format used to report the goals, objectives, and mitigation actions in the 2019 plan update is consistent with previous state mitigation plan updates. For example, the plan generally identifies goals that are all hazard in nature, with specific objectives related to one or more hazards (with the exception of the goal of mitigating repetitive flood loss structures). A 2014 Mitigation Action Plan Update Summary Table is in the appendices (Appendix E); which provides commentary on the status of the action items identified in the 2014 Enhanced plan update.

Finally, the goals/objectives/actions items in this update incorporate priority goals and actions identified in local plans that have been submitted and approved by Ohio EMA and FEMA; incorporate any changes/updates in the strategic plans of agencies that have a role in hazard mitigation; and reflect current trends, issues and priorities. The 2019 mitigation strategy update outlined below was developed with input from the Ohio EMA Executive Staff, the State Hazard Mitigation Team, the Silver Jackets team, and various federal, state, and local entities.

**GOAL #1: REDUCE LOSS OF LIFE AND INJURY FROM HAZARD EVENTS**

*Goal Discussion.* Ohio is a populous state with over 11 million people. The population centers in Ohio are often concentrated in hazard areas, especially floodplains. This is due to their natural progression from communities whose economies were largely water dependent (steel mills needed water for cooling, water was needed for transportation). Events that historically caused loss of life were epidemiological – specifically outbreaks of cholera and influenza killed thousands of Ohioans in the 19<sup>th</sup> and early 20<sup>th</sup> centuries. More recently, hazards that have resulted in significant losses of life include: flooding (467 in Great 1913 flood, 26 in 1990 Shadyside flash flood); fires (322 in 1950 Columbus Penitentiary, 95 in 1963 Marietta nursing home); blizzards/winter storms (51 in 1978 blizzard); and tornadoes (35 in 1974 Xenia tornado).

Less known, but more widespread are injuries from hazard events. In addition to minor or major physical injuries, mental injury (trauma, etc.) is an issue after any type of major hazard event. In addition, both injuries and loss of life are possible not only for direct victims of a hazard event, but also for those responding to / assisting those victims.

If the flood of 1913 occurred today, it is doubtful that there would be as many casualties. This would be due to current building and other safety codes. For example, over 700 communities in Ohio have adopted flood loss reduction regulations to participate in the National Flood Insurance Program. The regulations make buildings more resilient in flood events, which results in improved safety for building occupants. Similarly, building codes today contain standards for wind and fire resistance, and dam/levee construction and rehabilitation standards help prevent catastrophic failures of these structures.

Monitoring and warning systems today are far more sophisticated and effective than their predecessors. The Ohio STORMS (State of Ohio Rain/Snow Monitoring System) effectively monitors precipitation during hazardous weather events. Integrated warning systems (not just a siren on a pole) are effective in flash flood and tornado prone areas; which can also be very effective in reducing potential loss of life and injury.

*New or continuation?* This goal is a continuation from the 2008 update.

***Objective 1: Continue to map hazard areas, refine existing hazard mapping data, and develop/refine loss estimation and vulnerability analysis data***

- Action: Conduct HAZUS Level 2 flood analyses for all counties in the state using the best available data.
- Action: Continue to update and improve the vulnerability analysis for state - owned buildings and critical facilities.
- Action: Gather and incorporate structure specific risk data into the Risk Management Information System (RMIS).
- Action: Perform on-site appraisals of all state buildings valued at \$500,000 or more.
- Action: Perform desktop valuations for all state buildings valued at less than \$500,000 to determine current replacement value.

**Objective 2: Promote the use of effective early alert / warning systems**

- Action: Install pre-planned detour signage for recurring closures.
- Action: Install sensors in road shoulders or video detection to monitor flooding.
- Action: Ohio EMA will work with the National Weather Service and local emergency management agencies to adjust trigger points for flood warnings based on completed mitigation projects, changing flood levels and other factors.
- Action: Work with USGS, NOAA, and other partners to promote flood warning systems and the importance of stream and rain gauges.

**Objective 3: Prioritize acquisition of properties, including those in high risk areas (floodways) or those in imminent danger (e.g., landslide) for available funds from FEMA mitigation programs**

- Action: Ensure that grant application review tools and processes prioritize acquisition of repetitively damaged and highest risk properties.

**Objective 4: Ensure the continuation of an effective dam/levee safety program**

- Action: Inspect all class I-III dams once every 5 years.
- Action: Take enforcement actions on violations of state dam/levee safety laws for severely deficient and/or structurally unsound high hazard dams.
- Action: Increase the number of Emergency Action Plans through compliance and education efforts.

**Objective 5: Promote wind mitigation techniques and programs**

- Action: Continue to implement and improve the Ohio Safe Room Rebate Program.

**Goal #2: Minimize Damage to Property and Societal Disruptions from Hazard Events**

Goal Discussion. Property damage from hazard events is significant in Ohio. Between 1978 and September, 2018, there has been \$323,553,037.21 in paid claims from the NFIP in Ohio. Although this data is a good indicator – it does not account for all of the property losses due to flood. Only about 10% of flood prone structures have flood insurance, the data doesn't include flood claims available through private insurers (for large facilities like factories – private insurance through a secondary insurer is significant), and the data doesn't include crop losses due to flooding.

Similarly, tornadoes and straight-line winds have high loss potential. The 1974 Xenia tornado event resulted in over \$1 billion in damages in a multi-state region (including Ohio). The September 2008 straight-line wind event in Ohio resulted in over \$553.1 million in insured losses, which set a record for the highest amount of insured losses as a result of a single event in Ohio. This event also resulted in over \$52,643,099 in public assistance to communities for infrastructure repair and debris removal. In addition to property losses, societal disruptions occur after a hazard event. Consider the following impacts:

- Infrastructure disruption can result in the cutoff of evacuation routes, pollution due to sanitary facilities not working, lack of clean drinking water, and isolation of populated areas (such as in a road or bridge collapse). Loss of medical facilities, and or public safety facilities, can result in vulnerable populations should a subsequent disaster event occur.

- Direct loss of facilities used by employers, or indirect loss due to infrastructure disruption, can lead to lost wages and lost tax revenues for all levels of government.
- Research has shown that mental health problems, divorce rates, and physical/emotional abuse increase after a significant hazard event.
- Local “gathering places” that are destroyed in a hazard event result in disruption of the social fabric of a community.

Strengthening of laws, regulations, and ordinances for new and existing facilities is not only critical to the protection of property and life but, also, the reduction of massive physical, social, and economic disruption that accompanies disasters. Regulations and ordinances help communities design and construct new facilities or alter existing facilities in a manner that resists the forces of nature and ensures safety. Local land use laws can support this effort by keeping buildings and development out of the most hazardous areas through local land use planning. It is essential that mitigation planning be incorporated into all land use planning activities at the local and state levels.

*New or continuation?* This goal is a continuation from the 2005 plan.

***Objective 1: Evaluate and improve safety & loss reduction codes/standards for hazards that affect Ohio***

- Action: Support communities who choose to adopt standards beyond NFIP minimums for flood loss reduction.
- Action: Review and consider the most recent version of the ICC Commercial Codes for incorporation into the Ohio Building Code.
- Action: Review and consider the most recent version of the ICC Residential Codes for incorporation into the Ohio Building Code.

***Objective 2: Develop mitigation resource information for the business community***

- Action: Continue to participate in the public/private partnership effort between Ohio EMA and the business community.

***Objective 3: Identify funding sources and obtain funds from a variety of Federal, state, regional and local entities to implement mitigation activities***

- Action: Formalize a state level hazard mitigation grant program for Ohio communities.
- Action: Work with Ohio EMA to document a process to be followed if CDBG-DR funds are ever available in the state.
- Action: Explore the possibility of using Alternative Stormwater Infrastructure Loan Program to target properties purchased with HMA grants as future green infrastructure project sites.
- Action: Seek funding to expand local vector control programs.

***Objective 4: Promote sustainable communities and hazard resilient development***

- Action: Develop a priority list of generator needs for Center for Medicaid/Medicare funded facilities.
- Action: Ensure that federally-funded housing, community development, and economic development programs administered by the ODSA are conducted in accordance with state

and local floodplain management regulations.

- **Action:** The Department of Commerce will partner with ODNR Floodplain Management Program to develop educational information for floodplain managers and the manufactured home community on the Manufactured Homes Program.
- **Action:** Limit construction or assist with relocation of electrical substations, distribution, and transmission lines in flood-prone areas that serve critical infrastructure customers.
- **Action:** Implement ODA commitments delineated in the Ohio Domestic Action Plan for Lake Erie.
- **Action:** OPWC will continue to incorporate hazard mitigation principles into emergency projects whenever possible.
- **Action:** Support dialogue between stakeholders about utilization of quality building components to mitigate damage.

**Objective 5: Promote sustainable communities and hazard resilient development**

- **Action:** Work with industry to ensure a streamlined and consumer-focused claim filing and premium payment process during and after a disaster event.
- **Action:** Monitor the uptake of flood insurance on the private insurance market.
- **Action:** Support insurers offering hazard mitigation discounts to customers.
- **Action:** Support dialogue between the National Flood Insurance Program, insurance companies and the lending community.
- **Action:** Empower Ohioans with educational toolkits that will help them better understand hazard risks, insurance needs, and disaster preparedness.

**Goal #3: Integrate Hazard Mitigation Policies and Programs**

*Goal Discussion.* Hazard mitigation, which includes loss reduction, has historically occurred in piecemeal fashion – where a need existed or an opportunity made available, mitigation happened. However, with the requirements to do mitigation planning at the state and local level, mitigation programs have the potential to be more robust and have a need to be integrated. Policies and programs at all levels of government tend to be stove-piped, and it is often up to communities to understand how the programs fit together – many times with little help.

As indicated in the previous goal, incorporating actions identified in local mitigation plans such as suggested code and/or land use changes by actually updating local codes and land use plans is one significant way hazard mitigation policies and programs can be integrated. Another is to promote interagency coordination at the state and national level.

*New or continuation?* This goal is a continuation from the 2008 plan update.

**Objective 1: Expand the SHMT to include other federal, state and local entities**

- **Action:** Invite at least two additional entities each year to participate on the SHMT.
- **Action:** OPWC will continue participation on the State Hazard Mitigation Team

**Objective 2: Work with non-traditional partners to better align programs and policies to facilitate hazard mitigation**

- **Action:** Continue inter-agency participation on the USACE Silver Jackets Initiative.

- Action: Review the OFMA substantial damage mutual aid process and incorporate recent Stafford Act changes.
- Action: Develop statewide procedures providing guidance to state agency fiscal officers on disaster cost tracking policy.

***Objective 3: Ensure better coordination of state and local mitigation planning activities***

- Action: Develop and implement strong state incentives for maintaining local mitigation plans.
- Action: Continue participation in the FEMA pilot program that enables Ohio to review and approve local hazard mitigation plans.

***Objective 4: Work with partners to improve customer experience with mitigation grant/planning programs***

- Action: Ohio EMA will work with FEMA legal staff to develop modified deed language for properties acquired with HMA funds in Ohio that clarifies the property re-use review and approval process.

**Goal #4: Eliminate Vulnerable Repetitive Loss Flood-Prone Structures in the State of Ohio**

*Goal Discussion.* Ohio ranks in the top twenty states in the nation in the number of FEMA identified repetitive loss flood prone structures. Furthermore, flooding is Ohio's most costly natural hazard. Although there are various definitions of repetitive loss, these structures represent the most vulnerable and flood prone building stock in Ohio. For such structures, the best and preferred mitigation option is acquisition/demolition. However, it may be possible to use other mitigation techniques (i.e., flood proofing) especially when the structure use is non-residential.

The Ohio EMA Mitigation Branch and ODNR, Floodplain Management Program continue to be active in this area. The Mitigation Branch utilizes repetitive loss lists published by FEMA to identify repetitive loss structures and target them for outreach regarding FEMA mitigation grant programs that may be available. The ODNR Floodplain Management Program addresses repetitive loss properties through education and training of local floodplain administrators. The Floodplain Management Program's efforts ensure that the local floodplain administrators are aware of the requirements to conduct "substantial damage" determinations, which require compliance with local flood damage reduction regulations to ensure that vulnerable structures are mitigated during the repair/renovation process. Structures that are substantially damaged/improved, and have flood insurance, may also have access to additional funds available through the property owner's flood insurance policy to make such changes. During the year, substantial damage training is provided in workshops statewide. After significant flood events, the Floodplain Management Program conducts NFIP briefings that focus on a community's responsibility to conduct substantial damage determinations. Finally, the Floodplain Management Program works with the Ohio Building Official's Association to train a volunteer cadre of building officials to conduct substantial damage determination field inspections.

*New or continuation?* This goal is a continuation from the 2008 plan update.

***Objective 1: Continue to educate Ohio Floodplain Administrators and volunteer cadres such as the Ohio Building Officials Association on the post-event "substantial damage" process***

- Action: Conduct training and/or post-disaster briefings for appropriate audiences on substantial damage assessments.

***Objective 2: Educate owners of repetitive loss properties on mitigation techniques and programs that are available***

- Action: Develop and implement an outreach strategy targeting repetitive loss property owners on mitigation techniques and funding programs.

***Objective 3: Prioritize repetitive loss properties for available funds from FEMA mitigation programs***

- Action: Reduce the number of severe repetitive loss properties each year by assisting such owners with successful funding of mitigation projects through FEMA mitigation programs.

**Goal #5: Promote Research, Education, and Outreach Activities to Create a Culture of Mitigation in Ohio.**

*Goal Discussion.* To take effective mitigation actions, individuals, communities, and the state must have data upon which to make decisions. This data must be based on the best and latest scientific research (ranging from data on the hazard itself to the mitigation actions taken) and must be disseminated effectively.

*New or continuation?* This goal is a continuation from the 2008 plan update.

***Objective 1: Develop publications and information on all hazards that could potentially impact Ohio***

- Action: Develop success stories in wind resistant construction codes and mitigation techniques.
- Action: Update the Debris Management Course, deliver pilot offerings, and train Ohio EMA Regional staff to deliver the course.
- Action: Create Ohio version of mitigation planning and project courses.
- Action: Vector control recommendations communicated to the public to eliminate/avoid sources of standing water and overgrown brush that allow for the breeding of disease-carrying vectors.
- Action: Ohio EMA will continue to actively participate on the Ohio Committee for Severe Weather Awareness.

***Objective 2: Utilize the State Hazard Analysis, Resource, and Planning Portal to promote hazard mitigation***

- Action: Continue to maintain, populate, and enhance the State Hazard Analysis Resource and Planning Portal.
- Action: Develop an interactive digital summary of the State of Ohio Hazard Mitigation Plan.
- Action: Conduct open space monitoring of properties purchased with HMA funds and report to FEMA every three years using SHARPP to collect data.

***Objective 3: Seek opportunities to partner with academic institutions to promote mitigation and resilience principles***

- Action: Sustain the Mitigation Branch internship program.
- Action: Continue the local mitigation planning studio course with The Ohio State University.

**Objective 4: Identify hazard risk data gaps and promote research projects that expand knowledge**

- Action: Incorporate a “weather resilience” data category into the Traffic Operation Assessment Systems Tool (TOAST)

**Objective 5: Educate the public on government, private sector and non-profit programs that reduce hazard risk.**

- Action: Educate potential applicants on how OPWC programs can be used to assist with mitigation.

**Goal #6: Provide leadership in hazard mitigation**

*Goal Discussion.* Mitigation and Recovery Branch staff strive to integrate hazard mitigation principles in a variety of ways to make Ohio communities more sustainable and citizens more resilient in the face of future disaster events. The Branch is the leading voice for mitigation in the State of Ohio.

The Branch Chief leads and coordinates activities for the State Hazard Mitigation Team (SHMT). The role of the SHMT is twofold: to facilitate a collaborative discussion of mitigation policies, programs, and procedures in Ohio, and to have a mechanism for efficiently and objectively reviewing project applications for many of FEMA's hazard mitigation programs. Additionally, the Branch is the state entity responsible for implementing FEMA's Hazard Mitigation Assistance programs, and assists Ohio communities in their mitigation planning efforts. State and local governments rely on Mitigation and Recovery Branch staff technical assistance to develop mitigation plans and projects both before and after a disaster.

The Branch is very active in state and federal associations and workgroups in order to provide hazard mitigation guidance that is aligned with the Branch vision and mission. Such groups include (but are not limited to) the External Stakeholder Workgroup, FEMA's Cooperating Technical Partnership, the Association of State Floodplain Managers, and the Ohio Floodplain Management Association.

*New or Continuation?* This goal is a continuation from the 2011 update.

**Objective: Continue to be a leading voice in mitigation nationwide through increased involvement in national and state initiatives, dialogues and workgroups**

- Action: Continue to support efforts to comply with the Emergency Management Accreditation Program (EMAP).
- Action: Continue participation on emergency management and floodplain association workgroups.
- Action: Participate in earthquake table top exercise with mitigation component.