

SECTION 4: LOCAL MITIGATION PROGRAM COORDINATION

4.1 LOCAL CAPABILITY ASSESSMENT

OVERVIEW

The preparation of Local Hazard Mitigation Plans (LHMPs) is a precondition for receipt of Hazard Mitigation Assistance grant project funds under the Disaster Mitigation Act of 2000 (DMA 2000), which also requires that states examine LHMPs as part of their State Hazard Mitigation Plan (SHMP) process. FEMA has established mitigation planning requirements for local jurisdictions to meet, among other things, to demonstrate that proposed mitigation actions are based on a sound planning process that accounts for the inherent risk and capabilities of the individual communities.

The Ohio EMA Mitigation Branch administers the LHMP Program for the state. The Mitigation Branch supports and assists local governments in the development and update of LHMPs. In early 2000's, a significant amount of federal and state funds were provided to develop LHMPs. For the time period spanning from the 2005 plan to the 2008 update, the main planning emphasis of the Mitigation Branch has been to get LHMPs reviewed, adopted, and FEMA approved. From 2008 to 2011, the emphasis shifted to tracking LHMPs progress and effectiveness in a quantitative way, and integrating plan information more significantly into the state plan. The focus during 2011-2018 was populating the State Hazard Analysis, Resource and Planning Portal (<https://sharpp.dps.ohio.gov/ohiosharpp>) with local plan information that enhances mitigation planning efforts statewide. In June of 2018, the Ohio EMA signed a Program Administration by State (PAS) Pilot Operational Agreement. This agreement allows the state to review and approve LHMPs and decrease the amount of time that LHMPs are in review.

Currently, Ohio has a very high LHMP participation rate. A county-by-county plan status report is included in Appendix D. As of December 2010, every county in the state of Ohio had developed a baseline mitigation plan that had been approved by FEMA. Based on an October 2018 report from FEMA, Region V 87.4% of the population of Ohio was situated in a community with a locally adopted, FEMA approved plan. As of October 2018, there are sixty-five county plans that are current and have final Federal approval. An additional two county plans (Franklin and Meigs) are federally approved pending adoption. Fifty-three counties are updating their plans under a federal grant, while six counties are developing their plans without a grant.

The Mitigation Branch has engaged in multiple outreach efforts to counties with expiring LHMPs to emphasize the importance of updating the plan, offer technical assistance, and identify possible funding sources for local mitigation plan updates. Fourteen LHMP updates were funded with PDM 16 funds, eighteen LHMP updates were funded with PDM 17 fund and nineteen plans will be funded under DR-4360. The Mitigation Branch will continue local mitigation plan outreach and technical assistance efforts during the next SOHMP update cycle.

SHARPP highlights local mitigation planning and project efforts. Providing greater public access to local mitigation plans will help publicize local strategies for reducing risk, and support requests for investment in mitigation projects. In addition to the benefits provided by SHARPP, the local mitigation planning capability has been enhanced by the Mitigation Branch's efforts to conduct statewide HAZUS version 4.2 runs for the 25- and 100-year recurrence intervals (see Section 2.2) and earthquakes. These HAZUS version 4.2 runs were made available to local officials for inclusion in LHMP updates. The Ohio EMA Mitigation Branch will continue to utilize HAZUS and promote the use of the tool throughout the state.

Local authority to implement a comprehensive hazard mitigation program is ample. Ultimately, it is up to each local jurisdiction to determine which mix of authorities, programs, policies, and capabilities it wants to develop. All Ohio communities (cities, villages, and counties) have the power to develop and adopt many different kinds of plans including comprehensive plans, capital improvement plans, economic development plans, emergency operations/response plans, continuity of operations plans, and hazard mitigation plans. Communities have regulatory powers to adopt zoning, subdivision, development, floodplain management and health codes. Ohio communities have the power to levy taxes / assessments for special purposes (including petition ditch projects, storm water utilities) and have the authority to borrow funds (bonding). Finally, communities have the authority to create planning, emergency management, health, public works, economic development and other needed agencies. All of these authorities have, or potentially could have, a bearing on local hazard mitigation.

QUALITATIVE ANALYSIS OF LHMPs

Because the Mitigation Branch has reviewed each LHMP, some trends were evident. Again, these trends are based on a qualitative, not quantitative review of the LHMPs.

OVERALL PLAN QUALITY

Overall, LHMPs involved many local agencies/entities and are of a good quality. It was noted that the quality of the plan is not dependent on its size; rather, it is the format and quality of information in the plan that is more important. Some of the best LHMPs are small to moderate sized. Ohio EMA recommends that jurisdictions use FEMA's planning how-to publications including the Local Mitigation Plan Review Guide, Local Mitigation Plan Review Tool, Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards and the Local Mitigation Planning Handbook to guide the development of their plan.

One of the consistent issues across most, if not all, LHMPs is that the definitions used are not consistent. The areas where inconsistencies were most evident was in defining critical facilities, which seems to vary dependent on each jurisdiction's individual interpretation, building off of the definition within 44 CFR Part 201.6.

Another area of inconsistency was the way LHMPs conducted risk assessments and ranked the related hazard. There was a high level of variability in these processes, but variability in the risk assessment process and data sources used is not surprising given that communities have significantly different amounts and quality of data. In terms of ranking hazards, some LHMPs ranked the hazards based on a numerical ranking (using a matrix or scoring system), some developed a relative ranking system (one hazard ranked higher than another, but no number identified), and some developed a qualitative ranking system (ranking hazards as high, medium or low threat). However, flooding, severe summer storms, high winds/tornadoes, and severe winter storms were consistently ranked high or severe.

The final areas of inconsistency across the LHMPs is the manner in which hazards are grouped in the individual plans. Jurisdictions may choose to address each hazard separately or group similar hazards together, such as putting summer storms, hail and tornados together. The manner in which each hazard is addressed varies greatly depending upon the impacts to the local jurisdictions.

MITIGATION POLICIES, PROGRAMS & CAPABILITIES

Local mitigation policies and programs can be best understood by reviewing the local mitigation strategies. Those strategies should indicate whether policies or programs exist and need to be modified, or whether they exist at all. A few trends were noted.

It was evident that the majority of larger communities and counties have more extensive policies and programs in place versus smaller communities. Many of the local strategies pertaining to larger local governments tended to be geared towards refining or enhancing existing policies and programs versus creating them. The reverse was seen with smaller units of government. A similar trend was seen with local mitigation capability. Participants in the planning process for larger communities tended to be professional staff positions and/or multiple persons, while participants for smaller communities ranged from the mayor to council members to an appointed citizen.

Mitigation policies/programs/capabilities varied significantly from community to community and county to county. Some communities and counties had very sophisticated mitigation programs either demonstrated by the sophistication of their mitigation plans/goals/actions or the integration of mitigation programs. In addition, some communities developed their own, stand-alone plans. On the other end of the spectrum were communities that have virtually no involvement in hazard mitigation.

MITIGATION ACTIONS

While the mitigation actions in each LHMP can vary depending on the hazards and needs of each jurisdiction, there are several actions which occur in most if not all LHMPs. Education and outreach actions were the most frequently identified in LHMPs. Other actions that were frequently mentioned included flood mitigation projects (acquisitions/elevation, storm water), community and residential safe rooms, and warning systems (sirens/gages).

4.2 LOCAL MITIGATION PLANNING ASSISTANCE

44 CFR 201.4(c) (4) (i) requires the state to include a description of the process to support, through funding and technical assistance, the development of Local Hazard Mitigation Plans (LHMPs).

Hazard mitigation planning is a way, in a non-disaster environment, to understand hazards and prepare strategies and actions to reduce the impact of these hazards. The ever-rising recovery costs of disasters plaguing Ohio made it apparent that a pre-disaster planning and project focus with ongoing risk analysis could reduce these costs. The State of Ohio utilizes any available federal program funds for mitigation projects, and has documented success stories proving the necessity and effectiveness of the programs. The DMA 2000 stipulates that state and local jurisdictions need to have an approved LHMP to remain eligible for federal funding for mitigation projects. Ohio continues to take a very proactive role in the involvement with local jurisdictions to secure the availability of the funding programs and assist local communities in developing LHMPs. This effort has resulted in all 88 counties at one point in time have a FEMA approved local hazard mitigation plan.

CURRENT STATE EFFORTS

FEMA approved LHMPs are now prerequisites to obtaining funds from the FEMA Hazard Mitigation Assistance (HMA) programs. In addition, requirements published by FEMA on October 31, 2007 require all updated plans to meet FMA planning requirements (additional flood hazard mitigation strategy and strategy for repetitive loss programs). To keep abreast of and implement these changes, the Mitigation Branch will continue to prioritize the planning element of the state mitigation program.

TECHNICAL ASSISTANCE

Technical assistance that the state provides to Ohio communities includes:

- Mitigation planning process assistance including facilitating planning meetings, providing guidance documents for plan creation/update, etc.
- HIRA data development. The Ohio EMA Mitigation Branch and the ODNR, Floodplain Management Program both have competencies in running FEMA's HAZUS-MH program. Staff can provide assistance and training in HAZUS-MH and conduct HAZUS analyses that are available for communities to incorporate into LHMPs. In addition, state staff can provide other data that communities may not have (other flood studies, underground mine maps, etc.). State staff, with the assistance of Federal agency partners, often develop data after disasters.
- Information on mitigation actions including manuals, reference documents and other resources on different mitigation actions for all hazards.
- Mitigation action budget information. Since state staff is often involved in implementing mitigation projects statewide, they have a good understanding of the current costs of mitigation actions.
- Reviewing draft LHMPs for compliance with FEMA criteria.

FINANCIAL ASSISTANCE

44 CFR201.4(c)(3)(iv) requires the state to include identification of current and potential sources of federal, state, local or private funding to implement LHMP mitigation actions and to undertake mitigation planning.

It is important not only to provide financial assistance whenever possible, but also to identify sources of funding that can fund hazard mitigation planning and action item implementation (projects). LHMPs, if properly created, should not only identify mitigation actions that can be funded by FEMA, but other agencies as well. Table 4.2.a identifies several potential funding sources for hazard mitigation projects. For a more complete list, see the (Insert name and hyperlink to FEMA V funding summary very recently completed by Steve Greene).

The primary source for state and local hazard mitigation projects have been the federally funded cost-share programs. The state has historically matched a portion of FEMA hazard mitigation grant programs (primarily HMGP) through the state’s disaster relief fund and has contributed over \$26.2 million for hazard mitigation activities since 1990. As a general policy, the state requires local jurisdictions to contribute a portion of the non-federal matching funds. A summary of federal, state, and local contributions to all HMA programs can be found in Appendix F.

The limited funding from local community budgets requires the use of alternate funding sources for the cost-share match. Different state agencies distribute funds that can be used for mitigation activities. A summary of state funded mitigation planning and project programs can be found in Section 3.3 of this plan. Table 4.2.a examines some of the federal, state, local, and private sources available to provide financial assistance to local communities to implement hazard mitigation plans and projects.

**Table 4.2.a
Potential Hazard Mitigation Funding Sources**

Program	Administered By	Federal / State / Local	Purpose / Contact	Used Before?
Hazard Mitigation Grant Program (HMGP)	Ohio EMA Mitigation Branch	Federal - FEMA	Provides funds after Federally declared disaster to implement certain hazard mitigation projects and plans. Can be used for any hazard, subject to state Administrative Plan and Mitigation Strategy. Commonly used to acquire/demolish, elevate, retrofit, buildings; construction of tornado/high wind safe rooms, stormwater management system improvements, etc. https://sharpp.dps.ohio.gov/ohiosharpp/	Yes, extensively. Largest mitigation program used in Ohio – over \$100 million Fed/state/local funds since 1990.
State Match to HMGP	Ohio EMA Mitigation Branch	State – Disaster Relief Fund	Dollars from the State Disaster Relief Fund are used to match federal HMGP project funds and state management cost awards for Hazard Mitigation Assistance grants in Ohio. The State Controlling Board must approve the use of Disaster Relief Funds.	The State of Ohio can contribute up to a 12.5% match to planning projects applied for under HMGP following a Federally declared disaster. Since DR-4077, the state have committed to \$92,232 dollars towards local hazard mitigation plans
Pre-Disaster Mitigation Grant Program (PDM)	Ohio EMA Mitigation Branch	Federal – FEMA	Provides funds annually based on Congressional appropriations to implement certain hazard mitigation projects (includes mitigation planning grants). Can be used for any hazard. Nationally competitive. Commonly used for activities similar to HMGP. https://sharpp.dps.ohio.gov/ohiosharpp/	Yes, increasingly used. Since PDM-11,
Flood Mitigation Assistance Program (FMA)	Ohio EMA Mitigation Branch	Federal – FEMA	Provides funds annually based on Congressional appropriations to implement certain flood hazard mitigation projects (includes flood mitigation planning grants). Each state receives an allocation of funds. Commonly used for flood mitigation activities similar to HMGP. These funds now include the RFC and SRL programs. https://sharpp.dps.ohio.gov/ohiosharpp/	Yes – FMA funds available since 1988. Ohio receives allocation of between \$200,000 and \$300,000 per year. Usually funds 1-2 projects from communities.

Table 4.2.a (Continued)

Program	Administered By	Federal / State / Local	Purpose / Contact	Used Before?
HUD Disaster Supplemental Funds	Ohio Department of Development	State or Federal depending on Congress	Can be used for mitigation projects and planning.	Yes, used for five previous disasters. When funds are available, can be used to supplement FEMA funds to increase the number and size of mitigation projects.
Planning Assistance to States (PAS)	USACE	Federal	Section 22 of the Water Resources Development Act (WRDA) of 1974, as amended, provides authority for the Corps of Engineers to assist the states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land. The Planning Assistance to States (PAS) Program is funded annually by Congress. Federal allotments for each State or Tribe from the nation-wide appropriation are limited to \$500,000 annually, but typically are much less. These studies are cost shared on a 50 percent Federal-50 percent non-Federal basis.	The PAS was used to conduct a Level 1 HAZUS-MH analysis for the HIRA section of the 2008 SHMP update. The study covered the 25-year and 100-year flood analysis for 49 of the 88 counties in Ohio.
Flood Control (Structural & Non-Structural)	USACE	Federal	USACE, without specific authorization, may study, adopt, and construct small flood control projects, stream clearing and snagging projects, and participate in planning and preparedness. The cost share for Flood Control projects are 65 percent Federal-35 percent non-Federal	
Silver Jackets Partnership Program	USACE	Federal	Authorized by Section 206 of the Flood Control Act of 1960, the Flood Plain Management Services provides funding for interagency work between the U.S. Army Corps of Engineers (USACE), federal, state, and local agencies to better manage and reduce flood risks. These are dubbed "Silver Jackets" teams and are uniquely implemented by state.	The Silver Jackets team in Ohio cooperated to conduct Level 2 HAZUS-MH 100-year and 25-year flood runs for 25 counties in the state to enhance local vulnerability assessments.
"Partners in Watershed Management" Project Assistance Program	Muskingum Watershed Conservancy District	Local	In an effort to support the work of agencies and groups involved in conservation programs, water quality issues, and flood reduction and mitigation projects, the Muskingum Watershed Conservancy District (MWCD), has developed the "Partners in Watershed Management" Project Assistance Program (PWM). This competitive grant program provides assistance to local communities, agencies and groups involved in projects and programs that support the conservation and flood control aspects of the MWCD. Political subdivisions of the state, IRS Section 501 groups, and other organizations in the Muskingum River watershed are eligible for potential assistance through this program. Applications are accepted on a year-round basis for assistance with non-federal match to FEMA Hazard Mitigation Assistance programs.	This program was created in 2009 and has been used as non-federal match for two HMA projects in the Muskingum Watershed.

HMA GRANTS

FEMA’s Hazard Mitigation Assistance (HMA) programs provide the two largest funding sources for local hazard mitigation plans (LHMP) in Ohio. Per FEMA, the Hazard Mitigation Grant Program (HMGP) is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. States, Federal-recognized tribes and territories may apply on behalf of state agencies, federally-recognized tribes and tribal agencies, private non-profits, and local governments/communities for assistance in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration. In Ohio, the state may contribute up to 12.5% of a planning projects’ cost if applied under for HMGP.

The other primary funding source for LHMP's in Ohio is the Pre-Disaster Mitigation Grant Program (PDM) that provides funds for hazard mitigation planning and projects on an annual basis. Authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the PDM grant is opened yearly and is nationally competitive. States, Federal-recognized tribes and territories may prioritize and apply on behalf of state agencies, federally-recognized tribes and tribal agencies, private non-profits, and local governments/communities to obtain mitigation planning funding that meets the requirements outlined in 44 CFR Part 201. Table 4.2.b details the HMA funding history specifically for local hazard mitigation plans. More information and guidelines regarding FEMA's Hazard Mitigation Assistance programs can be found at: <https://www.fema.gov/media-library/assets/documents/103279>.

Table 4.2.b

LHMP HMA Grants						
Grant No.	Award Date *	No. of Plans	Federal Share	State Share	Local Share	Total
PDM-02	2002	38	\$ 416,713.00	\$ 300,955.00	\$ 238,909.00	\$ 956,577.00
PDM-03	Aug-03	18	\$ 218,571.00	\$ 226,815.00	\$ 148,462.00	\$ 593,848.00
LPDM-08	Aug-08	2	\$ 92,422.77	\$ -	\$ 30,808.36	\$ 123,231.13
LPDM-09	Sep-12	2	\$ 134,500.00	\$ -	\$ 44,850.00	\$ 179,350.00
PDM-11	Jun-11	1	\$ 18,985.23	\$ -	\$ 6,328.41	\$ 25,313.64
PDM-13	Jul-13	1	\$ 34,999.30	\$ -	\$ 11,666.44	\$ 46,665.74
PDM-14	May-15	5	\$ 110,437.19	\$ -	\$ 36,812.81	\$ 147,250.00
PDM-15	Jan-16	6	\$ 116,397.75	\$ -	\$ 38,800.57	\$ 155,198.32
PDM-16	Dec-16	14	\$ 383,495.99	\$ -	\$ 127,619.85	\$ 511,115.84
PDM-17	Jul-18	18	\$ 395,129.79	\$ -	\$ 131,710.00	\$ 526,839.79
DR-1519	Jul-07	3	\$ 38,538.00	\$ 22,432.00	\$ 21,469.25	\$ 82,439.25
DR-1651	Dec-06	1	\$ 18,750.00	\$ -	\$ 6,250.00	\$ 25,000.00
DR-1805	Dec-09	26	\$ 353,530.00	\$ -	\$ 119,316.00	\$ 472,846.00
DR-4002	Jan-12	12	\$ 217,260.00	\$ -	\$ 73,515.00	\$ 290,775.00
DR-4077	Jun-13	6	\$ 102,084.00	\$ 16,537.00	\$ 17,777.00	\$ 136,398.00
DR-4098	Jan-14	3	\$ 41,700.00	\$ 7,065.00	\$ 7,065.00	\$ 55,830.00
DR-4360	Applied	19	\$ 411,777.00	\$ 68,630.00	\$ 68,630.00	\$ 549,037.00
Total **		175	\$ 3,105,291.02	\$ 642,434.00	\$ 1,129,989.69	\$ 4,877,714.71

*Award dates are of the earliest planning project award date within that specific grant.

**Total amounts do not account for State hazard mitigation plans, management costs, costs over/under-runs, and withdrawn projects.

NEW STATE-WIDE HMA PLANNING GRANT APPLICATION

Since 2017, the Ohio Emergency Management Agency began applying for PDM and HMGP grants on behalf of local counties and communities looking to update their hazard mitigation plans. All applications were compiled and rolled into a single state-wide application and submitted to FEMA. This is done in an effort to stream-line the application process for local governments and lessen the work necessary for them to obtain funding for a hazard mitigation plan that meets federal and state requirements. Counties are not selected based on geographic location, but chose to apply based on the expiration date of their current plan which have already expired, or will be expiring within two and a half years.

Subsequently, this state-wide application method has allowed the state to reach out and encourage local communities to undergo meaningful hazard mitigation planning processes. PDMC FY-17 was a relative success in that all 18 counties that applied were awarded the full grant amounts. The total grant amount for the state-wide application came out to \$526,810 dollars (not including management costs or over/under-runs). The State of Ohio is looking to replicate this success in its HMGP application following DR-4360 that will provide 19 counties the funding to complete their hazard mitigation planning projects for a total of \$549,037.

PROGRAM ADMINISTERED BY STATES (PAS) PILOT OPERATIONAL AGREEMENT

Following the Presidential Disaster Declaration FEMA-4360-DR, a Program Administered by States (PAS) pilot agreement between the Federal Emergency Management Agency (FEMA) and the Ohio Emergency Management Agency (OEMA) was signed. This delegated to the Ohio Emergency Management Agency the ability to review and approve all local hazard mitigation plans. To ensure that the program is being administered correctly, Ohio EMA and FEMA have agreed to the following:

- Ohio EMA will submit quarterly programmatic and financial reports within 30 days following the end of the quarter.
- Ohio EMA submits mitigation plan monthly reports that describe plan review activity for the month.
- FEMA will do full reviews of one in every five plans submitted. One-fifth of the plans reviewed will be found approvable pending adoption.

As federal reviews are no longer required in four-fifths of the plans submitted, this agreement has allowed the state and local governments to cut down the required time to have a federally-approved hazard mitigation plan. This time saved helps ensure that opportunities to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster. The state will continue to conduct reviews to ensure that all local hazard mitigation plans have met the federal requirements established in 44 CFR 201.6.

4.3 LOCAL MITIGATION PLAN INTEGRATION INTO STATE PLAN

44 CFR 201.4(c)(4)(ii) requires a description of the state’s process and timeframe by which the LHMPs will be reviewed, coordinated, and linked to the State Mitigation Plan.

LOCAL HAZARD MITIGATION PLAN REVIEW AND COORDINATION PROCESS

The Ohio EMA Mitigation Branch reviews all Local Hazard Mitigation Plans (LHMP); however, FEMA is the final approval authority. Following Presidential Disaster Declaration DR-4360, a PAS Pilot agreement between FEMA and Ohio EMA delegated to the State the ability to review and approve four out of five local hazard mitigation plans. The State reviews the draft to ensure compliance with 44 CFR 201.6 local mitigation plan criteria within 45 days of arrival. If the plan is found to have met all requirements, the jurisdiction will be sent a letter saying that the plan is now “Approved Pending Adoption” (APA). The state will also notify FEMA when it has determined any approved plans along with the APA letters and completed local mitigation plan review tools. For quality assurance of the PAS Pilot Agreement, every fifth plan that the state receives will have to undergo both state and Federal reviews. If found to have met all requirements, FEMA will issue the APA letter for the plan as it did before the agreement. LHMPs are to be logged into the State Hazard Analysis Resource and Planning Portal (SHARPP) whether or not it has to go through FEMA review.

LHMP TRACKING

Local Hazard Mitigation Plan status is tracked through the SHARPP. When a local official uploads a draft plan into SHARPP for state review the status of the plan is tracked from the time of submittal to FEMA final approval. Once the plan receives final federal approval, it is posted to SHARPP for view by the public. A report can be generated in SHARPP that summarizes the status of all LHMPs in the state.

SHARPP is a repository for past, present, and future versions of all local natural hazard mitigation plans in Ohio. These documents are stored as PDF files and can be searched and retrieved by local jurisdictions or the general public. Providing easier public access to these documents will help inform citizens about local natural hazard risk and the actions that communities have planned to undertake that will reduce risk. As local mitigation plans are updated they will be uploaded into SHARPP.

LINKING LHMPs TO THE SHMP

Because LHMPs are developed based on Federal guidance and must meet specific Federal criteria, there are some similarities in their content. Nonetheless, LHMPs tend to be very different from one another in terms of: the quantity and quality of data presented in the HIRA; the techniques used to complete risk assessments and vulnerability analyses; and the “structure” of goals, objectives and action items. For that reason, the Mitigation Branch has determined that the two most logical areas where the LHMP should link back to the state plan are in the Risk Assessment and the State Mitigation Strategy.

LINK TO STATE MITIGATION STRATEGY

Because the state mitigation strategy is a global view, its objectives and actions may be of a different nature than those found in LHMPs. However, the goals in the state mitigation strategy reflect and are complimentary to LHMP goals. LHMP goals/objectives/actions are useful to identify trends, needs, and do have a bearing in the development of state mitigation strategy goals and action items. To determine whether or not a particular local objective / action is reflected in the state plan, it is evaluated to determine whether it has statewide applicability and whether it is a need expressed in a large number of LHMPs.

SHARPP has simplified the task of reviewing mitigation action items in LHMPs. Local officials enter information into SHARPP that summarizes the local mitigation action items identified in their jurisdictions mitigation plan. SHARPP captures basic information about the proposed mitigation action including: project lead, cost, potential funding sources, estimated start and end dates. SHARPP can generate a report that summarizes the locally proposed mitigation action items in each community. Analyzing these datasets will help the state to identify trends, needs, and assist in project identification and development. Local officials can update the status of proposed mitigation action items as they are implemented to help track progress.

LOCAL RISK ASSESSMENT INTEGRATION

The LHMPs were reviewed and used to “ground truth” the data the state used to determine the most serious hazards facing the state. In Section 2, flooding, tornadoes, severe summer storms and winter storms were identified among the most significant risk facing the state. These four were also the highest ranked hazards based on the number of LHMPs reviewed indicating them as serious hazards. Coastal flooding, landslides, and invasive species are ranked high in the state plan; however only some LHMPs identified these hazards as significant. This is likely due to the more limited geographical extent of these hazards. Narrative descriptions and summaries of LHMP data are included throughout the state HIRA.

Analyses in the state plan HIRA are utilized by local officials and may be incorporated into LHMP updates. The Mitigation Branch has completed and provided HAZUS runs for every county in the state for the 25 and 100 year recurrence intervals. The Mitigation Branch regularly informs county emergency management agency directors of the availability of these HAZUS runs and encourages them to incorporate this information into their LHMP updates.

When local officials upload a mitigation plan into SHARPP, they are asked to input data that summarizes their local hazard analysis and vulnerability assessment. In order to standardize the local data collected, SHARPP utilizes the factors considered in the HIRA methodology used by the State of Ohio. Local officials use information collected in their mitigation plans to complete the hazard analysis summary screen in SHARPP. Collecting the information in a standardized format allows the state to analyze risk statewide based on local risk assessments. Many local plans also contain estimates of the potential dollar losses to vulnerable structures. Vulnerability analysis information can be entered into SHARPP as part of the local mitigation plan upload process. Each approved hazard mitigation plan is highly encouraged and, often times, required to be uploaded onto SHARPP. The Mitigation Branch provides training to local officials and contractors on how to use SHARPP.

Standardizing the local HIRA information in the form of SHARPP was an effort to allow the state to analyze vulnerability and potential loss to structures based on local risk assessments. However, it remains difficult to compare each of the counties’ potential losses because there is no requirement for a standardized plan template in local hazard mitigation plans. Therefore, each county had the liberty to use its own methodology and approaches for determining potential loss. Although this assessment considers the hazard analysis documented by the 2018 State of Ohio Hazard Identification and Risk Assessment (HIRA), the source behind the methodology in this section are specifically from local hazard mitigation plans entered onto SHARPP. The results of the local HIRA analysis through SHARPP tend to agree with the State HIRA, the risk analyses done throughout section 2 of the SOHMP, and the state priorities for local mitigation project funding.

METHODOLOGY

The Ohio EMA has incorporated and analyzed data from local mitigation plans with the assistance of SHARPP. Hazard Analysis Data from local counties were assessed and a total of 57 local hazard mitigation plans was reviewed as part of this analysis. These 57 plans were the plans that were approved and not expired as of April 2018.

When entering a plan onto SHARPP, there are 13 default hazards that the LHMP can assess. 12 are which the hazards assessed in the State Hazard Mitigation Plan, with the addition of Windstorm. If a hazard/event does not apply, the County can enter it as “N/A”. If there are additional hazards assessed in the Local Hazard Mitigation Plan, the County can enter them into empty boxes below the default hazards. Figure 4.3.a shows the overlay when entering in Hazard Analysis data onto SHARPP.

Figure 4.3.a

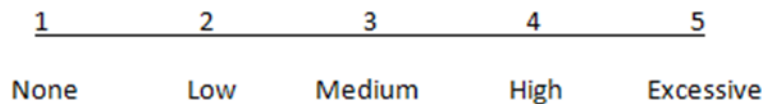
Hazards	Frequency	Response	Onset	Impact	Business	Human	Property
Coastal Erosion	NA	1	1	1	1	1	1
Dam/Levee Failure	1	1	1	1	1	1	1
Drought	2	2	2	2	2	2	2
Earthquake	3	3	3	3	3	3	3
Flooding	4	4	4	4	4	4	4
Invasive Species	5	5	1	1	1	1	1
Land Subsidence	1	1	1	1	1	1	1
Mud/Landslide	1	1	1	1	1	1	1
Severe Summer Storms	1	1	1	1	1	1	1
Tornado	1	1	1	1	1	1	1
Wildfire	1	1	1	1	1	1	1
Windstorms	1	1	1	1	1	1	1
Winter Storms	1	1	1	1	1	1	1
Power Outages/	1	1	1	1	1	1	1
Hazmat Inciden	1	1	1	1	1	1	1
Extreme Temps	1	1	1	1	1	1	1
Disease impact	1	1	1	1	1	1	1
	NA	1	1	1	1	1	1
	NA	1	1	1	1	1	1

There are seven factors for each hazard: Frequency, Response, Onset, Impact (magnitude), Impact on business, Impact on people, and Impact on Property. Each have four or five level of inputs that the county can enter. For frequency, all hazard scores were derived from inputs of every one of the 57 plans

assessed—even if a majority of the plans did not assess or entered a “N/A” input for some hazards. For example, only seven of 57 county plans saw coastal erosion as a hazard, but the “Frequency” scores entered was weighed amongst all 57 plans. This resulted in the hazard scoring lower in frequency on a state-wide assessment even though it may have a high frequency in the counties that did consider it a hazard. For the other six factors, hazards were assessed based on the scores of only the plans that have considered it a hazard. For example, “Invasive Species” was only considered a hazard in 16 of 57 plans but the State-wide “Response” score was obtained by averaging only the 16 scores inputted for that hazard. The goal of this methodology was to assess “Frequency” on a broad state-wide scale while assessing the other six factors solely by the attributes of the hazard.

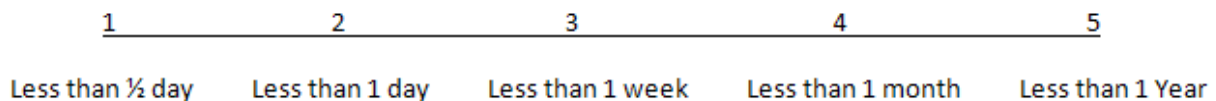
FREQUENCY

If a hazard/event does not apply it is given a value of NA. If a hazard/event resulted in no local disaster declarations, it scored a one. If the hazard/event resulted in one – two local disaster declarations, it has a Low Probability of occurrence and scored a two. If it resulted in three – five declarations, it has a Medium Probability and numerical score of three. If the hazard/event resulted in six – eight local disaster declarations, it has a High Probability and scored a four. If the hazard/event resulted in nine or more declarations, it should receive an Excessive Probability rating and a score of five. It is important to note that frequency was considered a key factor in determining the hazard profile. To that end, an Adjusted Frequency score was added for this factor and multiplied by 1.5 to weight the score more importantly than other factors.



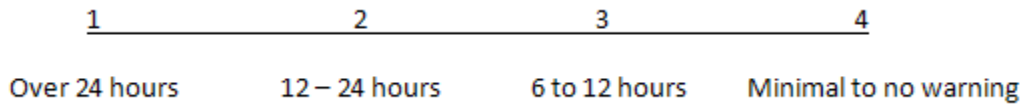
AVERAGE RESPONSE DURATION

Average Response 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 or a flood several weeks. Duration, therefore, may not always be indicative of the degree of damage but it remains an important planning factor.



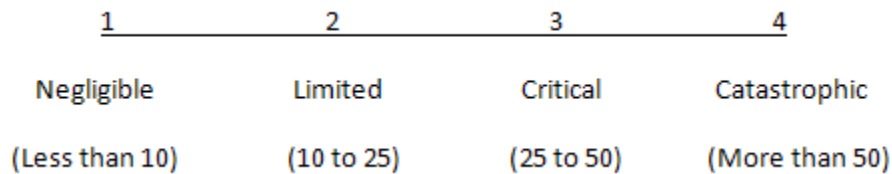
AVERAGE SPEED OF ONSET

Average 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 winter storm may develop so slowly that there is time to alert crews and emplace plows, but flash floods can occur with no warning.



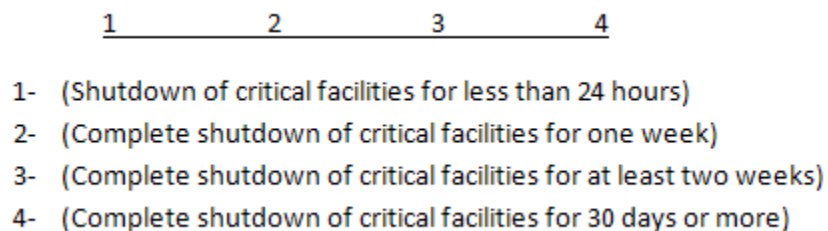
AVERAGE MAGNITUDE (IMPACT)

Average Magnitude is the geographic dispersion of the hazard. For instance, how much of your community would be impacted by a flood or hazardous material incident? Similar to the Frequency, this factor is deemed more important and therefore received a weighted value of 1.25 above the raw score. The score is based on the percent of land area impacted by an event.



IMPACT ON BUSINESS

The Impact on Business refers to enduring economic impact of the hazard on the community by an event. A score of one compares to a shutdown of critical facilities for less than 24 hours. Two equals a complete shutdown of critical facilities for one week. A score of three means a complete shutdown of critical facilities for at least two weeks. A score of four equals a complete shutdown of critical facilities for 30 days or more.



IMPACT ON PEOPLE

This factor relates to the number of lives potentially lost to a particular hazard agent. This factor can vary between jurisdictions based on economic, geographic, and demographics of the particular populations. Therefore, some generalization should be inflected on this factor.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Minimum	Low	Medium	High
(Minor injuries)	(Some injuries)	(Multiple severe injuries)	(Multiple deaths)

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. Therefore, some generalization need be inflected on this factor.

- | | | | |
|----------|----------|----------|----------|
| <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
|----------|----------|----------|----------|
- 1- (Less than 10% of property severely damaged)
 - 2- (More than 10% of property severely damaged)
 - 3- (More than 25% of property damaged)
 - 4- (More than 50% of property severely damaged)

Results

Frequency		
Hazard	Score	Rank
Flooding:	5.55	1
Severe Summer Storms:	5.26	2
Winter Storms:	5.11	3
Tornado:	3.45	4
Drought:	3.24	5
Earthquake:	2.18	6
Dam/Levee Failure:	1.71	7
Landslide:	1.42	8
Land subsidence:	1.34	9
Wildfire:	0.92	10
Invasive Species:	0.82	11
Coastal Erosion:	0.39	12

Response Time		
Hazard	Score	Rank
Flooding	2.95	1
Tornado	2.53	2
Winter Storms	2.51	3
Severe Summer Storms	2.23	4
Wildfire	2.20	5
Landslide	2.17	6
Drought	2.07	7
Dam/Levee Failure	2.06	8
Earthquake	2.06	9
Land subsidence	1.96	10
Invasive Species	1.38	11
Coastal Erosion	1.29	12

Onset Time		
Hazard	Score	Rank
Invasive Species	3.81	1
Drought	3.79	2
Coastal Erosion	3.43	3
Winter Storms	3.14	4
Land subsidence	2.93	5
Flooding	2.54	6
Dam/Levee Failure	2.38	7
Landslide	2.29	8
Severe Summer Storms	2.15	9
Wildfire	1.60	10
Earthquake	1.49	11
Tornado	1.49	12

Impact (Magnitude)		
Hazard	Score	Rank
Winter Storms	4.63	1
Severe Summer Storms	3.80	2
Flooding	3.78	3
Drought	3.66	4
Tornado	3.60	5
Earthquake	3.45	6
Dam/Levee Failure	2.89	7
Invasive Species	2.64	8
Land subsidence	2.23	9
Landslide	2.21	10
Wildfire	2.19	11
Coastal Erosion	1.56	12

Impact on Business		
Hazard	Score	Rank
Earthquake	2.30	1
Tornado	2.19	2
Flooding	2.11	3
Dam/Levee Failure	1.89	4
Winter Storms	1.68	5
Severe Summer Storms	1.53	6
Wildfire	1.45	7
Drought	1.38	8
Coastal Erosion	1.29	9
Landslide	1.25	10
Land subsidence	1.18	11
Invasive Species	1.00	12

Impact on People		
Hazard	Score	Rank
Tornado	2.57	1
Earthquake	2.19	2
Dam/Levee Failure	2.04	3
Flooding	1.96	4
Severe Summer Storms	1.72	5
Winter Storms	1.70	6
Wildfire	1.40	7
Landslide	1.33	8
Drought	1.23	9
Land subsidence	1.18	10
Invasive Species	1.13	11
Coastal Erosion	1.00	12

Impact on Property		
Hazard	Score	Rank
Tornado	2.23	1
Flooding	2.19	2
Earthquake	2.00	3
Winter Storms	1.77	4
Severe Summer Storms	1.75	5
Dam/Levee Failure	1.72	6
Drought	1.55	7
Wildfire	1.45	8
Coastal Erosion	1.43	9
Landslide	1.29	10
Invasive Species	1.25	11
Land subsidence	1.14	12

Overall Hazard Ranking		
Hazard	Score	Rank
Flooding	21.09	1
Winter Storms	20.54	2
Severe Summer Storms	18.44	3
Tornado	18.04	4
Drought	16.91	5
Earthquake	15.67	6
Dam/Levee Failure	14.71	7
Invasive Species	12.02	8
Landslide	11.97	9
Land subsidence	11.97	10
Wildfire	11.21	11
Coastal Erosion	10.39	12

STATE OF OHIO HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA)

Separate from the assessment of local HIRA’s above, the 2018 State of Ohio HIRA also provides research and updates on hazards that the state is vulnerable to. While the SHARPP assessments primarily focuses on natural hazards from local hazard mitigation plans, the state HIRA assesses a wider range of hazards that are natural, technological, and human-caused. There are 49 hazards assessed in the State of Ohio HIRA. There are 12 hazards that relate to the 12 hazards assessed in the SOHMP. Because of how certain hazards are categorized, it may be difficult to directly compare the ranking of hazards between the two documents. However, it is worth noting that three of the top four natural hazards in either documents are also the top four of the other.

<u>State of Ohio HIRA</u>	<u>SHARPP Local Hazard Mitigation Plan Assessment</u>
1. Terrorism, Radioactive	1. Flooding
2. Nuclear Accident	2. Winter Storms
3. Terrorism, Chemical	3. Severe Summer Storms
4. Terrorism, Biological	4. Tornado
5. Public Health Emergency	5. Drought
6. Mass Casualty Incident (Medical)	6. Earthquake
7. Tornado	7. Dam/Levee Failure
8. Mass Casualty Incident (Trauma)	8. Invasive Species
9. Accidental Hazmat Release	9. Landslide
10. Blizzard or Ice Storm	10. Land subsidence
11. Flood, Riverine	11. Wildfire
12. Electrical Grid Failure	12. Coastal Erosion
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	

BARRIERS TO LOCAL PLANNING AND APPROACHES TO ADDRESS THEM

The majority of local hazard mitigation plan updates in Ohio are done on a countywide, multi-jurisdictional basis. While there are clear benefits in undergoing the planning process and having a federally approved hazard mitigation plan, there are also barriers in the local planning process. This section will attempt to summarize the most common barriers. However, the problems encountered when undergoing planning processes and doing mitigation actions often results from a combination of multiple barriers.

Local Motivation

The underlying reason behind this lack of local motivation may stem from various factors including the perceived return from having a hazard mitigation plan to local officials. This positive return may not outweigh the perceived effort of undergoing a planning process. Hazard mitigation planning can be a time-consuming and expensive process. County emergency management directors are responsible for many roles in emergency management including hazard mitigation and this can lead to having many competing priorities that limit the amount of time that can be reasonably spend on mitigation.

An approach that the Ohio Emergency Management Agency have taken to address this barrier is by embracing a dual approach to grant funding. Counties are encouraged to apply for federal grant programs such as the Pre-disaster Mitigation (PDM) grant, and the Hazard Mitigation Grant Program (HMGP). Counties are highly encouraged to apply along the midway point of 5-year approval period of their current plan. Any county with an expired plan is encouraged to apply for either PDM or HMGP grants whenever an opportunity opens. Obtaining a federal grant often reduces the major financial limitations a county or jurisdiction may face by paying for up to 87.5% of a Hazard Mitigation Plan update. In these grant programs, the county or jurisdiction may meet their match commitment with an in-kind contribution. Having this source of funding allows counties and jurisdictions to pay a contractor to assist them with the update, or to fund the update done in-house.

The second part of this approach is by streamlining the grant application process for counties and jurisdictions. Since the PDM FY-17 grant, the State of Ohio began rolling all local planning applications into a statewide application for each grant opportunity. By doing this, the State assumes the applicant role and the county or jurisdiction become sub-applicants. This saves the local entity the time and effort required to each individually develop their applications and enter them into FEMA eGrants or NEMIS systems. Overall, this approach has allowed local entities to reduce the overall amount of steps and effort in order to obtain funding.

Local Participation

Participation from local jurisdictions is a mandatory requirement for their coverage under a multi-jurisdictional hazard mitigation plan. While most plan updates in the state are countywide planning processes, participation by local jurisdictions greatly vary by the resources available to the jurisdiction. For example, a village with a population of 36 (the lowest amongst all jurisdictions in the 2010 census) will likely have less overall capability in participating and contributing to the planning process than larger communities with greater social, technical, and financial resources.

Factors that make it more convenient for larger jurisdictions with dedicated roles and resources (timing, etc.) makes it easier for these jurisdictions to participate and contribute than smaller communities. In many cases, representatives from these smaller communities work other jobs making it harder to attend

daytime countywide meetings. These limitations due resources are not limited to just cities and villages. Counties with more resources may have greater ability in outreach and accommodation.

In addition to the plan update process, the implementation of mitigation actions and objectives are directly limited by the capability of the community. The prioritization of local mitigation actions is largely determined by the capabilities of that jurisdiction. For example, a mitigation action may have more benefit to a jurisdiction but can be ranked lower due that jurisdiction's capabilities- such as their ability to meet the local match of a grant, or to implement that action in general.

While participation is still a mandatory requirement per jurisdiction basis, technologies have allowed for different levels of participation to happen. Where physical presence is not possible, it is encouraged that local jurisdictions participate by various other means that contribute toward a meaningful and collaborative Whole Community Approach. The planning team is always encouraged to pursue the next best option if a jurisdiction is unable to attend a countywide meeting. Such methods include telephone and web conferencing of countywide meetings, bi-lateral communications over email, telephone, survey, and follow-up meetings at different locations. In addition to community representatives, stakeholders such as businesses and institutions are invited. As required by federal regulation, the general public are also invited to participate in the planning process.

Technical Data.

The availability of technical data for local planning may vary from county to county. For example, one of the more common local methods of finding flood-prone properties is by utilizing GIS to intersect local parcel and building footprint layers with FEMA's National Flood Hazard Layer (NFHL). The availability of GIS data can certainly be a limitation depending on what is available in a county. There are currently ten counties out of 88 in Ohio that do not have modernized maps of the NFHL. In addition, there are a handful of counties in the state that do not have local parcel or building footprint data. This lack of local GIS data is a limitation to more hazards than flooding alone. It creates technical barriers in developing modern risk assessments and vulnerability analyses.

There are various approaches taken to address this barrier. The first is by obtaining grant funding to hire a contractor to do the Hazard Mitigation Plan update. Subject-matter experts bring expertise and understanding of the field, as well as tools to make use of the best available data. State and federal agencies are also a great source to obtain data. Grant funding can be used to obtain data that is vital to developing effective risk assessments and vulnerability analyses.

Another way to plan around this limitation is to make the best use of the available data. For example, there are various methods for analyzing risk but two common methods are exposure analyses and historical analyses. Each of these two methods have their strengths and weaknesses, and require a different set of data. While exposure analyses provide a detailed look at risks for site-specific scenarios, they also generally require a great deal of quantitative data and GIS data. Historical analyses, on the other hand, estimate losses based on past events. This is then limited to the availability of documented events and how accurately they were documented. If the data for the ideal analysis method is not available, developers will consider other methods to make the best use of the available data.

Policies and Capabilities in Addressing Repetitive Loss and Severe Repetitive Loss Properties

The State of Ohio strives to promote sustainable communities and development (Goal #2, Objective 4). The ODNR Floodplain Management Program's effort to promote sound floodplain management statewide is one example of the state's commitment. Ohio EMA's promotion of mitigation planning through SHARPP also demonstrates the state's commitment to promoting community sustainability principles. The mitigation priorities identified in the State of Ohio Hazard Mitigation Plan align well with the identified risk in the state. In partnership with the Federal government and local communities, the State of Ohio will continue to develop, implement and administer mitigation grant programs that reduce risk to repetitive loss properties. These mitigation planning and project activities will continue to decrease the burden of repetitively flood damaged structures on the Disaster Relief Fund and the National Flood Insurance Fund.

Recent legislation is focused on reducing the number of repetitive loss structures by offering mitigation options to the owners. FEMA mitigation grant programs have also prioritized the mitigation of repetitive loss structures including: HMGP, FMA, and the PDM-C. The repetitive loss data should be used to identify areas that are repetitively flooded in a community. Given the current prioritization of repetitive loss structures, these structures should be considered when developing mitigation projects that utilize FEMA funding.

As part of the State mitigation strategy, Goal #4 includes the elimination of repetitive loss flood-prone structures. One of the three objectives under this Goal is to prioritize repetitive loss properties for available funds from FEMA mitigation programs. As opportunities for mitigation funding have developed, Ohio has worked with local jurisdictions, counties and FEMA to address repetitive loss and other issues to reduce loss or disaster impact. The table below shows the top 12 counties in the state by the number of mitigated properties funded by FEMA grants.

County	RL/SRL Properties	Flood Mitigation Projects	Mitigation Type				Mitigated Properties	Project Funding Total*
			Acquisition	Elevation	Floodproofing	Relocation		
HANCOCK	266	5	49	-	-	-	49	\$ 4,161,905.11
WASHINGTON	202	2	10	-	-	-	10	\$ 312,291.00
CUYAHOGA	148	7	7	19	4	-	30	\$ 4,329,054.74
HAMILTON	141	15	232	-	16	-	248	\$ 12,517,282.16
OTTAWA	130	3	-	12	-	-	12	\$ 702,213.77
ERIE	99	-	-	-	-	-	-	
SUMMIT	89	6	14	-	-	-	14	\$ 1,646,427.00
LUCAS	80	3	24	-	-	-	24	\$ 745,694.85
LAKE	78	3	79	-	-	-	79	\$ 6,372,783.00
FRANKLIN	70	4	28	-	-	-	28	\$ 3,802,125.53
BELMONT	61	2	37	-	-	-	37	\$ 1,275,083.00
ATHENS	60	5	56	1	4	-	61	\$ 3,060,510.01
Grand Total	1,424	55	536	32	24	-	592	\$ 38,925,370.17

Assumptions:

- Chart reflects structures that have been mitigated as of April 16, 2019.
- Project Funding Total column for completed projects = Final Project Cost.

Records from closed mitigation projects in Ohio indicate that there have been 1,546 structures mitigated in the state, with a project-funding total of about \$99,022,173 and an average of \$64,051 invested in mitigation actions per structure. The grant-funded mitigated properties in the top 12 counties with RL/SRL properties account for about 38 percent of the total mitigated properties in the state. This aligns with the state mitigation strategy of prioritizing acquisitions and concentrating efforts on mitigating repetitive loss structures. Ohio's record of successfully mitigating these structures helps the state reach the goal of minimizing societal disruption and damage to property from hazard events (Goal 2, Objective 3).

Ohio continues to be very active in accomplishing the objectives set forth in the mitigation strategy regarding repetitive loss structures. Still, there are counties where there have been few or no mitigated repetitive loss structures. Ultimately, mitigation occurs at the local level. There are many valid reasons why a particular community has not yet addressed identified repetitive loss structures including: lack of property owner interest, the targeted structure cannot meet benefit-cost analysis requirements, lack of grant match dollars, etc. As demonstrated by the number of successful mitigation projects, the Ohio EMA Mitigation Branch is committed to working with Ohio communities to overcome these obstacles and support local mitigation efforts.

4.4 PRIORITIZING LOCAL MITIGATION FUNDING ASSISTANCE

44 CFR 201.4 (c) (4) (iii) requires states to include criteria in their mitigation plans for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs. The criteria should include consideration for communities with the highest risks, repetitive loss properties, and most intense development pressures. The plan also needs to include a principal criterion for non-planning grants based on the extent to which benefits are maximized according to a benefit-cost review.

Demand for hazard mitigation funds usually exceeds fund availability. In the last four flood-related Presidential Declarations, available Federal mitigation funds have only met 20% of the demand on average. (DR-1805 was not listed due to the hazard was a windstorm event and also, pre-applications were not required.)

Table 4.4.a

EVENT	HMGP FUNDS REQUESTED	HMGP FUNDS AVAILABLE (FED)	DIFFERENCE
DR-1651	\$15,191,356	\$1,798,019	(\$13,393,337) (-88%)
DR-1656	\$18,166,108	\$3,411,736	(\$14,754,372) (-81%)
DR-1720	\$44,888,432	\$6,630,799	(\$38,251,633) (-85%)
DR-4002	\$15,287,118	\$5,046,137	(\$10,240,981) (-67%)
DR-4077	\$16,723,428	\$3,353,199	(\$13,370,229) (-79%)
DR-4098	\$14,077,947	\$3,704,581	(\$10,373,366) (-73%)
DR-4360	\$48,072,625	\$6,939,178 (30-day estimate)	(\$41,133,447) (-85%)

Therefore, it is important that the State of Ohio prioritize local mitigation funding assistance. Section 3.4 explains how Ohio has established both eligibility and prioritization criteria. Appendix G includes the worksheets the SHMT uses to rank project applications for funding. The final project ranking by the SHMT is also the prioritization of eligible projects for funding. The exceptions to this are under HMGP where 5% and 7% projects are funded outside of the SHMT ranking process. Projects submitted under these categories are funded in accordance with the specific priority outlined in the Administrative Plan and Mitigation Strategy for that particular event.

In the event that there is not enough funding for an eligible, high-ranking mitigation project, Mitigation Branch staff will work with the sub-applicant to refine and submit the project for consideration under another grant funding cycle or program. The Ohio EMA Mitigation Branch website contains a list of potential funding sources for hazard mitigation projects.

Although Federal planning guidance indicates criteria for local mitigation funding assistance should include consideration for communities with the highest risks, repetitive loss properties, communities with the most intense development pressures, and maximizing benefits based on a benefit-cost analysis; Ohio only considers repetitive loss and benefit-cost. For the nationally competitive grant programs, state criteria match the national ranking and evaluation criteria exactly. Doing otherwise would put Ohio projects at a competitive disadvantage as compared to other projects that used the national criteria. For HMGP and FMA, repetitive loss is considered as is benefit-cost; however, communities with the highest

risks and high development pressures are not. The reason for this is that it is assumed that almost all Ohio communities have high risk from the most serious hazards and mitigation projects are used to remedy the “already built” environment, not the developing environment, which is much better handled through appropriate codes and land use measures.

Grant applications to update LHMPs are evaluated based on the local plan expiration date and the amount of funding available. Counties with expired or soon to expire plans are prioritized higher. Ohio has always set aside up to 7% of available HMGP funds to offset the cost to develop/update local mitigation plans. For the PDM program, Ohio has always provided technical assistance to local officials developing planning grant applications and submitted all eligible and complete applications for funding. Recently, due to FEMA caps on the number of PDM applications that can be submitted, Ohio compiled all of the planning grant applications into a single state application to submit to FEMA for funding.

4.5 ASSESSMENT OF MITIGATION ACTIONS

Mitigation actions identified in both the SHMP and LHMPs are tracked and assessed. For the state plan, tracking and assessment of state goals, objectives, and actions will be done in accordance with the Section 1.4 after each Federal disaster declaration, on an annual basis, and at the next five-year update point.

For mitigation actions in LHMPs, tracking and assessment is done in SHARPP. Local officials enter information into SHARPP that summarizes the local mitigation action items identified in their jurisdictions mitigation plan. SHARPP captures basic information about the proposed mitigation action including: project lead, cost, potential funding sources, estimated start and end dates. SHARPP can generate a report that summarizes the locally proposed mitigation action items in each community. Local officials can update the status of these action items as they are implemented to help track progress. The status of mitigation action items are recorded in SHARPP as: new, unchanged, deferred, deleted, or completed. These data are analyzed to help establish trends, identify needs, and develop success stories.

SHARPP helps the state demonstrate that mitigation projects are investments that improve community sustainability. The SHARPP home page displays the aggregate losses avoided (benefits) by implementing flood mitigation projects in the state since 2004. SHARPP automatically calculates this figure based on the expected annual benefits (i.e. losses avoided) for each mitigated structure as computed by FEMA benefit-cost analysis software at the time of project application. The expected annual benefits are multiplied by the number of years that the project has been closed (up to the “useful life” of the project) and then totaled for all structures to produce a dollar estimate of the losses avoided to date.

SHARPP also helps quantify the “actual” costs avoided by implementing flood mitigation projects in the state. In order to calculate the actual costs avoided, a flood must occur in an area where a mitigation project has been implemented. One methodology for quantifying the actual costs avoided is outlined in the FEMA December 2009 publication titled, Loss Avoidance Study, Riverine Methodology Report. Using this methodology, actual losses avoided are estimated by comparing damage that would likely have been caused by the same flood events without the mitigation project, with damage that actually occurred with the project completed. In order to estimate the actual losses avoided as the result of implementing a particular mitigation project, data are needed on the pre- and post-conditions of the subject property, in addition to other data collected throughout the project. All of the project-specific data required as input for a loss avoidance study are collected through SHARPP.

Loss avoidance studies will be conducted for past mitigation project implemented in Ohio dependent on:

- A large event occurring in a past mitigation project area that justifies the resources required to conduct a loss avoidance study,
- The availability of the data required to conduct a loss avoidance study in the project area, and
- The availability of 5% HMGP funds, HMA State Management Cost funds, or another funding source to pay for the study.

The Ohio EMA Mitigation Branch website contains a page that highlights success stories and best practices. This webpage highlights successful mitigation projects in many different communities around the state. The success stories cover a range of mitigation project types that have been implemented across the state to reduce hazard risk. In 2018, Ohio EMA created five new success stories using interactive story

map software. The success stories created in this format help capture the reader's attention by supplementing text with maps, photos and data graphics.

Mitigation Branch staff document losses avoided as the result of previous mitigation measures by implementing the following process:

- Utilize information in SHARPP to determine if a mitigation project has occurred in an area impacted by a hazard event.
- If yes, contact local officials to request information on the effectiveness of the mitigation project and the impact of the event in the project area.
- Meet with local officials to conduct an interview and gather information (photos, high water marks, and historic damage data).
- Develop and publish a success story based on the information collected. Promote the success story statewide to encourage mitigation measures that will reduce future disaster losses.