SECTION 4:
LOCAL MITIGATION PROGRAM COORDINATION

4.1 LOCAL PLANNING 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 was 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. This was enhanced in 2011 with the State Hazard Analysis, Resource and Planning Portal (SHARPP) where local planners can populate the system with local plan information. 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 grant approval pending adoption for a quota of plans. This decreases the amount of time that LHMPs are in review and provides local planners a more seamless approval process.

Currently, Ohio has a very high LHMP participation rate. A local planning status report is included in Appendix D. Since 2010, every county in the state of Ohio have had at least one iteration of their local hazard mitigation plan. Based on a January 2024 report from FEMA Region V, 96.7% of the population of Ohio was situated in a community with an approved or approved pending adoption plan. This is an improvement over the previous two decades when this figure fluctuated around 87%. As of February 2024, there are eighty-two county plans that are current and federally approved or are approved pending adoption. Three of the six expired plans are currently in state/federal review process. Every one of the six expired counties are either working on their plan update or have applied for grant funding to do so.

The Mitigation Branch has engaged in multiple outreach efforts to counties with expiring LHMPs to emphasize the importance of plan updates, 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. Most recently, the State of Ohio applied under BRIC-2023 to fund the plan updates for 31 counties. The Ohio EMA Mitigation Branch will continue local mitigation plan outreach and technical assistance efforts during the next SOHMP update cycle. For an up-to-date summary of Local Hazard Mitigation Planning Grants applied for in the State of Ohio since 2002, refer to table 4.1.b.

In 2020, the State of Ohio Mitigation Information Portal (MIP) was released which succeeded the aging SHARPP system. The MIP is an online repository of all hazard mitigation plans and projects in the state and provides users with the ability to access local and state hazard mitigation plans, and generate reports of plan actions, statuses, and HIRA datasets.

QUALITATIVE ANALYSIS OF LHMPs: CHALLENGES AND SOLUTIONS

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 both state and local jurisdictions need to have an approved Hazard Mitigation Plans 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.

FEMA approved LHMPs are 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.

Ohio EMA recommends that jurisdictions use FEMA's planning how-to publications including the Local Mitigation Planning Policy 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.

The state reviews each and every local hazard mitigation plan before eventual approval by FEMA. Each plan is reviewed to assure compliance amongst a standard set of requirements- particularly those set by 44 CFR 201.6, and the interpretations of those rules in the current iterations of the FEMA Local Mitigation Planning Policy Guide.

The six most limiting challenges to local hazard mitigation planning are:

1. The availability and quality of data across the different planning processes and their participants to meet increasing requirements.
2. The varying range of capabilities of participating jurisdictions during the planning process, as well as their abilities to create, enforce, and maintain mitigation-enabling capabilities.
3. The financial capabilities of local entities to pay for hazard mitigation planning.
4. The challenges in developing implementable and impactful mitigation actions.
5. The challenges in adopting the hazard mitigation plans.
6. The challenges to balancing federal requirements with state regulations regarding dam inundation data and Emergency Action Plans (EAPs) in implementation of the Rehabilitation of High Hazard Potential Dam (HHPD) Grant Program.

CHALLENGES IN OBTAINING TECHNICAL DATA

Data is one of the most consistent issues across most, if not all, LHMP updates. The availability of data can vary greatly- where larger communities and counties may have access to advanced GIS tools and have entire departments available to provide the necessary expertise for a successful planning project, while smaller counties could often struggle to maintain or put together necessary data and capabilities to serve their everyday functions. In the bigger picture, this problem is indicative of a bigger issue where smaller communities and counties are facing challenges adopting, and adapting to the latest platforms where data is available. Recent local hazard mitigation planning guidance now require more technical data than before particularly in the areas of risk assessment and changes in development.

To overcome these challenges, the Ohio EMA Mitigation Branch provides technical assistance to Ohio communities which includes:

- Conducting comprehensive reviews of all LHMPs for compliance with current FEMA Local Hazard Mitigation Guidance, and 44 CFR 201.6. In addition to these reviews, state staff can provide technical guidance and data to local planning teams in order to meet or even surpass established planning requirements.
- FEMA HAZUS Flood and Earthquake analyses. HAZUS-MH is a nationally applicable standardized methodology to estimate losses from earthquakes, hurricane high winds, and floods. The Ohio EMA Mitigation Branch maintain competencies in running FEMA's HAZUS-MH program and will assist local planning efforts in obtaining and utilizing HAZUS-MH loss estimates where applicable. In the 2024 SOHMP Action Plan, there is Mitigation Action #1 to "Conduct HAZUS Level 2 flood analyses for all counties in the state using the best available data."
- Mitigation planning assistance including facilitating planning meetings, providing guidance documents for plan creation and updates.
- 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.
- Ohio EMA developed and offered the OH-318 on developing hazard mitigation plans which was intended to be a localized version of FEMA G-318. County EMA directors were also made aware of FEMA IS-318.A which is available online.
- Providing guidance on how to enter hazard data into the MIP to enhance standardization with other entered plans. See section 4.2 on the MIP plan entry process.

In the past, statewide HAZUS scenarios were modeled for flooding and earthquakes, and the results were shared with local plan updates. When FEMA released the National Risk Index in 2020, the data was compiled, assessed, and also disseminated to local planners. In addition, every data source used in the development of the state hazard mitigation plan, particularly the risk assessments, is also encouraged for local hazard mitigation planning use. The Ohio EMA Mitigation Branch will continue to utilize HAZUS and other data sources where applicable, and promote the use of the tools throughout the state hazard mitigation planning program.

CHALLENGES AROUND MITIGATION PARTICIPATION, POLICIES, PROGRAMS & CAPABILITIES

All local hazard mitigation plans are required to have a capability assessment that summarizes the capabilities, programs, regulations, and policies that enable hazard mitigation for each participating jurisdiction. These capabilities are assessed in each plans' respective plan maintenance process to determine their effectiveness. Another point of assessment also includes each participants' mitigation project development.

Local authority to implement a comprehensive hazard mitigation program can vary. 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 *authority* 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 *authority* 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.

While these *authorities* do exist, one point that has to be distinguished is the difference between the *authority* and the *ability* to create, enforce, and maintaining mitigation-enabling capabilities. The majority of larger communities and counties have extensively more administrative, technical, and financial capabilities than their rural counter-parts. These advantages grant them the ability to create and enforce the necessary mechanisms to make mitigation successful. On the other hand, population trends in the state have shown that while a few select counties in the state are fast-growing in population, the majority of counties are losing people nearly as quickly. This creates disadvantages to these declining communities in the sense that as their population and tax base diminish, their administrative/technical capabilities to champion, implement, enforce, and/or maintain their programs, initiatives, and regulations also diminish. This is generally witnessed in local hazard mitigation planning processes. Larger communities in the planning process typically have the ability to send more technical/specialized representatives, often times multiple, while smaller communities can often struggle to participate to the required minimums. In these instances, particularly in multi-jurisdictional plans, obtaining participation from these smaller communities can exhaust available resources of the county and of the planning project.

It can be said that while the required components of local hazard mitigation planning processes can be integrated into other local planning mechanisms to reduce some redundancies in planning and also set forth a path to better regulate development and reduce risks, the local abilities to integrate their hazard mitigation plan into other planning mechanisms are mirrored with their abilities to create, enforce, and maintain their capabilities. For smaller and declining communities, these capability challenges are indicative of a larger problem that hazard mitigation planning, nor the policies behind them, can solve alone. In these instances, local communities face tremendous challenges if they alone are expected to produce the means for plan integration and producing and maintaining capabilities—and likely would not do so without county, state, and federal assistance.

To overcome some of these challenges, the Ohio EMA Mitigation Branch has added an action in the 2024 SOHMP Hazard Mitigation Strategy:

- Mitigation Action #95: Conduct outreach to spread hazard mitigation awareness, promote local hazard mitigation capability improvements, and hazard mitigation planning integration into other local planning and policy mechanisms.

With Mitigation Action # 95, the Ohio EMA Mitigation Branch intends on utilizing local, state, and national emergency management and planning conferences and events to promote hazard mitigation capability improvements and hazard mitigation planning integration into other local planning and policy mechanisms. As previously mentioned, the efforts to make improvements to local mitigation capabilities and integrate hazard mitigation planning into other local mechanisms will face tremendous obstacles if communities are required by Local Hazard Mitigation Planning Policy alone. An outreach strategy to support these tasks are intended to bridge the capability and communication gaps between hazard mitigation, emergency management, and land-use planning, regulation, and development.

CHALLENGES TO FUNDING LOCAL HAZARD MITIGATION PLAN UPDATES AND PROJECTS

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.

The primary source for state and local hazard mitigation plans and projects have been the federally funded cost-share programs, however 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.

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 4.1.a identifies several potential funding sources for hazard mitigation plans and projects.

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 Appendix F of this plan. Table 4.1.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 4.1.a – Potential Hazard Mitigation Funding Sources

Program	Administered By	Federal / State / Local	Purpose / Contact	Utilization
Hazard Mitigation Grant Program (HMGP)	Ohio EMA Mitigation Branch	Federal - FEMA State Match Local Match	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.	Extensively. Largest mitigation program used in Ohio – over $100 million Fed/state/local funds since 1990. Since the last update of the State of Ohio Hazard Mitigation Plan in 2019, there had been two Federally declared disasters that opened up funding under HMGP-4447 and HMGP-4507.
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 has committed over $176,724 dollars towards local hazard mitigation plans.
Building Resilient Infrastructure and Communities (BRIC) Pre-Disaster Mitigation Grant Program (PDM)	Ohio EMA Mitigation Branch	Federal – FEMA Local Match	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.	PDM was consistently utilized from 2002 until 2020, where the federal program was replaced by the Building Resilient Infrastructure and Communities (BRIC) grant. Since its inauguration, BRIC was utilized in FY 2020, 2021, 2022, and 2023 with intention to continue applying under the grant program for the foreseeable future.
Flood Mitigation Assistance Program (FMA)	Ohio EMA Mitigation Branch	Federal – FEMA Local Match	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.	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. Recent guidance now allows for FMA to be used to fund LHMP updates, however stipulations and priorities need to be further assessed.
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 and 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. This data was implemented into the 2019 SOHMP. For the 2024 SOHMP, a similar project under the same program is underway.

USACE 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.
"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.

FEMA HMA GRANTS

FEMA's Hazard Mitigation Assistance (HMA) programs provide the two largest funding sources for local hazard mitigation plans (LHMP) in Ohio. 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 project cost if applied under for HMGP.

The other primary funding source for LHMPs in Ohio was previously the Pre-Disaster Mitigation Grant Program (PDM) that provided 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 was 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. PDM was consistently utilized from 2002 until 2020, where the federal program was replaced by the Building Resilient Infrastructure and Communities (BRIC) grant. Since its inauguration, BRIC was utilized in FY 2020, 2021, 2022, and 2023 with intention to continue applying under the grant program for the foreseeable future where available. 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/grants/mitigation/hazard-mitigation-assistance-guidance.

Table 4.1.b— Local Hazard Mitigation Planning HMA Grant Applications

Grant No.	Award Date [1]	No. of Plans	Federal Share	State Share	Local Share	Total
PDM-02	2002	38	$416,713	$300,955	$238,909	$956,577
PDM-03	Aug-03	18	$218,571	$226,815	$148,462	$593,848
DR-1651	Dec-06	1	$18,750	$0	$6,250	$25,000
DR-1519	Jul-07	3	$38,538	$22,432	$21,469	$82,439
LPDM-08	Aug-08	2	$92,423	$0	$30,808	$123,231
DR-1805	Dec-09	26	$353,530	$0	$119,316	$472,846
PDM-11	Jun-11	1	$18,985	$0	$6,328	$25,314
DR-4002	Jan-12	12	$217,260	$0	$73,515	$290,775
LPDM-09	Sep-12	2	$134,500	$0	$44,850	$179,350
DR-4077	Jun-13	6	$102,084	$16,537	$17,777	$136,398
PDM-13	Jul-13	1	$34,999	$0	$11,666	$46,666
DR-4098	Jan-14	3	$41,700	$7,065	$7,065	$55,830
PDM-14	May-15	5	$110,437	$0	$36,813	$147,250
PDM-15	Jan-16	6	$116,398	$0	$38,801	$155,198
PDM-16	Dec-16	14	$383,496	$0	$127,620	$511,116
PDM-17	Jul-18	18	$395,130	$0	$131,710	$526,840
DR-4360	Apr-19	23	$342,198	$57,033	$57,033	$456,265
DR-4424	Jan-20	5	$224,252	$37,375	$37,375	$299,003
DR-4447	Jan-21	9	$215,721	$35,953	$35,953	$287,628
BRIC-20	Dec-21	5	$245,852	$0	$81,951	$327,802
DR-4507	Jun-22	16	$430,406	$0	$47,823	$478,229
BRIC-22	Sep-23	8	$221,316	$0	$73,772	$295,088
BRIC-23	Applied	31	$980,633	$0	$326,878	$1,307,511
Total [2]		**253**	**$5,353,892**	**$704,166**	**$1,722,145**	**$7,780,203**

1. *Award dates are of the earliest planning project award date within that specific grant.*
2. *Figures were of the initial award amounts of all Local Hazard Mitigation Planning grants. State Hazard Mitigation Plans, management costs, cost over/underruns are not included.*

NEW STATE-WIDE HMA PLANNING GRANT APPLICATION METHOD

In the past, one challenge in utilizing HMA grants to fund Local Hazard Mitigation Plan updates resulted from the expectation for each county to develop LHMP update applications individually. The applicants, usually the county emergency management office, often lacked grant writing experience and/or in most cases are understaffed. At the state level, coordinating the individual applications across multiple counties was also difficult. This presented a need to develop a more streamlined application process to make obtaining LHMP update funds easier.

Since 2017, the Ohio Emergency Management Agency began applying for local hazard mitigation planning grants on behalf of local counties and communities under PDM, BRIC, and HMGP. All sub-applications are compiled and rolled into a single state-wide application and submitted to FEMA. This is done in an effort to ease 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 encouraged to apply for funding two and a half years out from plan expiration. Subsequently, this state-wide application method has allowed the state to conduct more outreach to more communities to undergo meaningful hazard mitigation planning processes. As of May 2024, this method is still being utilized to obtain local hazard mitigation planning grants with 84 awarded planning projects and 31 pending.

CHALLENGES IN DEVELOPING STRONG MITIGATION ACTIONS

All state and local hazard mitigation plans need to have mitigation actions that serve as a blueprint for reducing risk from natural disasters. While mitigation actions in each local hazard mitigation plan can vary depending on the risks of each jurisdiction, there are several actions which occur in most if not all plans. Frequently listed actions include flood mitigation projects (acquisitions/demolitions/elevations, stormwater management), community and residential saferooms, power generators, and warning systems (sirens/gages). One challenge in this process is formulating a strong set of actions that are more implementable and impactful.

While Element C4-b in the Local Planning Policy Guide of April 2023 requires one or more actions for each hazard assessed, an effort was made in recent years to encourage communities to rather develop stronger and more actionable mitigation actions as opposed to more generic or wishful actions that they're not like to do. During grant applications and project development, each mitigation plan is reassessed to ensure that each project is listed as an action in their respective plan. The Ohio EMA mitigation branch provides guidance and support for jurisdictions looking to amend and/or execute their action plans. For a complete compiled list of all mitigation actions listed in current local hazard mitigation plans, utilize the Local Hazard Mitigation Action Report tool on the Ohio Mitigation Information portal. In addition, the Ohio EMA Mitigation Branch provides guidance on project development during the grant application process, as well mitigation action development during the planning process:

- 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.

CHALLENGES IN ADOPTING LOCAL HAZARD MITIGATION PLANS

Once a Local Hazard Mitigation Plan is Approved Pending Adoption (APA) following the update and review process, the plan is then required to be adopted by participating jurisdictions for that jurisdiction to be eligible for FEMA HMA grant funding. Under previous Local Hazard Planning Policy, a challenge to adhering to this requirement would have included the limitations of the planning team to coordinate and push the jurisdictions to adopt the plan and gather adoption resolutions for federal approval within the five-year cycle of the plan. Under the new Local Mitigation Planning Policy Guide, this process is further restricted where all participating jurisdictions are now required to adopt the plan within one year of the APA date, or else they must undergo re-validation to determine that planning requirements are still current. Other challenges to local jurisdictional adoption include:

- In some instances, jurisdictions may find little incentive to participate in, then adopt the hazard mitigation plan due to the declining probability of obtaining FEMA HMA grants.
- In some instances, very small jurisdictions (often times under 300 people) struggled to maintain the most basic functions of government and did not have the necessary people appointed to adopt the local hazard mitigation plan.
- In some instances, participating jurisdictions were unaware of the requirement to adopt the plan, whether because of a lack of communication to the jurisdiction during the planning process, and/or the lack of communication between the participating representatives of that jurisdiction and their legislative bodies.

To alleviate some of these challenges, a stronger emphasis can be communicated to participating jurisdictions to adopt the hazard mitigation plan during the planning process. Under the new Local Mitigation Planning Policy Guide, the plan adoptions can now occur during the planning process prior to submittal of the plan for state review. Not only will doing so save time in the plan review and approval process, but it also provides an opportunity for jurisdictions to adopt the plan while still at the table in the planning process. In addition, as part of Mitigation Action #95, the state will participate in more local, state, and national emergency management and planning conferences and events in order to conduct outreach to spread awareness of hazard mitigation which also includes plan participation and adoption.

CHALLENGES IN REGULATION OF OHIO DAMS AND EMERGENCY ACTION PLANS

Local Hazard Mitigation Plan completion requires the coordination of many entities. One component of the LHMP is dam and levee safety. As local officials update their LHMP, they will often reach out to the Ohio Department of Natural Resources, Division of Water Resources, Dam Safety Program (DSP). The DSP is tasked with administering the Ohio Dam Safety Program to ensure that human life, health, and property are protected from dam and levee failures (see Section 2.6 for more detail). As part of administering the dam safety program, each dam regulated by DSP is required to have an Emergency Action Plan (EAP).

As part of an EAP for a Class I Dam (defined as dams that are greater than 60 feet tall, have a storage of more than 5,000-acre feet, or probable loss of human life in the event of failure), inundation studies are required to document what would be impacted by a potential dam failure. Undoubtedly, this information is invaluable for assisting emergency response efforts. However, developing inundation studies is the burden of the dam owner and can be quite costly. While there are some loan opportunities available to

dam owners to complete inundation mapping, some owners simply do not have the means to complete these studies. In order to address this challenge, the DSP has started to utilize DSS-WISE Lite (see discussion on page 2-110) to develop inundation areas for Class I Dams without EAPs (Action # 16) in this plan. While this analysis is not as robust as having a dam owner's engineer provide detailed inundation analysis and mapping, it does provide a better assessment of downstream hazards including shapefiles for the inundation area. The results of the analysis can then be used to develop Emergency Preparedness Plans (EPPs) until dam owners are able to procure funding to perform full inundation studies and mapping.

Most Class I dams do have an approved EAP, and DSP is working through voluntary compliance and the administrative enforcement program to achieve all Class I dams having approved EAPs with inundation maps (see Action #14). However, this goal will not happen overnight. Unfortunately, the State of Ohio does not have a comprehensive Geographic Information System (GIS) shapefile for all inundation areas for all the Class I dams with approved EAPs. Part of this is because many EAPs were approved prior to DSP requiring the submittal of shapefiles as part of the review and approval process. After completing DSS-WISE Lite for all Class I dams that do not have an EAP, DSP will also use the tool to run analysis for Class I dams that do have approved EAPs, and eventually running analysis for all regulated dams within the State of Ohio (Action #16). Having DSP undertake this task will result in a streamline shapefile instead of stitching together over 1,000 different analyses from dam owner engineers.

It should be noted that, per Ohio Revised Code 149.433(a) many of the documents associated with dams are considered security and infrastructure records and do not constitute a public record, therefore EAPs, especially inundation maps, cannot be distributed to unauthorized personnel due to security concerns. While county Emergency Management Agencies and DSP are part of the official plan holders, they are unable to distribute, or publish, the inundation information. As part of a training effort (see Action #15), DSP will work with dam owners to make them aware of agency limitations so they can develop outreach as part of their internal planning process. As federal policies begin to change, such as the USACE sharing inundation mapping information for the dams which they own and operate, DSP will continue coordination and communication with policy makers and legal counsel to see if current interpretation can change.

Data management is another challenge when it comes to transmitting and updating EAPs. As DSP approves any EAP, these plans are then forwarded to the County Emergency Management Agency for their records. DSP also retains a copy of the EAP. Over the past several years, DSP has also been collecting pdf versions of the EAPs. However, with over 1,500 regulated dams, there is constant maintenance needed as owners' change, classification sometimes changes, dams are breached and abandoned, and new dams are built. As part of the ongoing data management DSP will continue to improve the existing database for tracking project and file storage. This includes migrating from MS Access to MS SQL Server, utilizing secure file transfer protocols to provide digital EAPs to county EMAs, and when possible, sharing the working copy of an EAP in a secure SharePoint or Teams Channel.

Dam failure is a low probability, high consequence event. When ranking items for a local hazard mitigation plan or for the DSP, it is a complex method that requires some basic dam safety engineering understanding. Please see section 4.3 for a detailed approach for prioritizing funding for dams within the State of Ohio and Section 2.6 for more details about dam safety risk assessment. As the High Hazard Potential Dam Grant (HHPD) develops, more education and outreach will be required for local EMA directors regarding prioritization and safety of dams.

4.2 LOCAL MITIGATION PLAN INTEGRATION INTO THE 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 (LHMPs); however, FEMA is the final approval authority. In the traditional plan review process, each LHMP submitted will undergo both a State and Federal review to ensure compliance with the requirements established in the current Local Hazard Mitigation Planning Guidance and 44 CFR 201.6. Once the plan has been found to pass both state and federal reviews, an "Approval Pending Adoption" (APA) letter will be issued and the communities will be notified to adopt the hazard mitigation plan and submit documentation of their plan adoption. These plan adoption documents will be forwarded to FEMA who will issue out a "Final Federal Approval" (FFA) for communities that have participated in the planning process and adopted the plan.

Following Presidential Disaster Declaration DR-4360, a Program Administered by States (PAS) agreement between FEMA and Ohio EMA was signed which delegated to the State the ability to review and issue "Approval Pending Adoption" (APA) status for four out of every five local hazard mitigation plans. This was later extended out in consequent Disaster Declarations and, as of June 2023, the State can now review and issue APA for nine out of every ten LHMPs submitted. Under the conditions of this PAS agreement, the State will review LHMPs to ensure compliance with the planning requirements within 45 days of submittal and notify the community when a plan is Approved Pending Adoption. The state will also notify FEMA the status of plan reviews, and will submit the APA letters, files, and other supporting documents. For quality assurance of the PAS agreement, every tenth plan that the state receives will have to undergo both state and Federal reviews. The plan will then follow the same review, revision, and approval process as it would have outside of the PAS agreement.

LHMP TRACKING

The MIP serves as a repository for previous, current, and future versions of all LHMPs and mitigation projects in Ohio. As local mitigation plans are updated, they are uploaded onto the MIP. These documents are stored and statuses are then tracked. A report can be generated in the MIP that summarizes the status of all LHMPs in the state. All of this can be viewed and accessed by the general public. Providing easier public access to these documents will help inform citizens about local risks and the actions that communities have planned to undertake that will reduce risk.

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.

The MIP has simplified the task of reviewing mitigation action items in LHMPs. Local officials enter information into the MIP that summarizes the local mitigation action items identified in their jurisdiction's mitigation plan. The MIP captures basic information about the proposed mitigation action including: project lead, cost, potential funding sources, estimated start and end dates. The MIP 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 determine the most serious hazards facing the state. In Section 2, it was found that floods, tornadoes, severe summer storms and winter storms were 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. Certain hazards are identified in the State of Ohio 2024 Hazard Mitigation Plan, such as coastal erosion, landslides, and invasive species; however, are not present in all LHMPs. This is likely due to the more limited geographical extent of these hazards. Narrative descriptions and summaries of LHMP data are included throughout Section 2.

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.

Vulnerability analysis information can be entered into the MIP as part of the local mitigation plan upload process. When local officials upload a mitigation plan into the MIP, they are asked to input data that summarizes their local hazard identification and risk assessments. In order to standardize the local data collected, the MIP utilizes the common factors and inputs to allow for a more comprehensive assessment of local data. Local officials use information collected in their mitigation plans to complete the hazard identification and risk assessment screens on the MIP. Collecting the information in a standardized format allows the state to analyze risk statewide based on local vulnerabilities. Each approved hazard mitigation plan is highly encouraged and, where possible, are required to be uploaded onto the MIP. The Mitigation Branch provides training to local officials and contractors on how to use the MIP.

Standardizing the local HIRA information in the MIP was an effort to allow for statewide assessment of local risk data for vulnerability and potential losses. However, as there is no requirement for local plans to use a single methodology, it remains difficult to compare each of the counties' potential dollar losses because there is no requirement for a standardized plan template in local hazard mitigation plans. Therefore, each county could use their own methodology for determining potential dollar losses.

METHODOLOGY

Ohio EMA has incorporated and analyzed data from local mitigation plans with the assistance of the MIP. Hazard Analysis Data from local counties were assessed and a total of 79 local hazard mitigation plans was reviewed as part of this analysis. These 79 plans were the plans that were approved, or were the last approved plans of a county, as of June 2023. The remaining 9 county plans are either currently in development, or were not contractually obligated to enter the plan onto the MIP.

When entering a plan onto the MIP, there are 13 default hazards that the LHMP can assess. 12 are which the hazards assessed in Section 2 the SHMP, with the addition of Windstorm. If a hazard does not affect a local planning area, it could be entered as "N/A" during upload. If there are additional hazards assessed in the LHMP, the county or community can enter them into boxes below the default hazards.

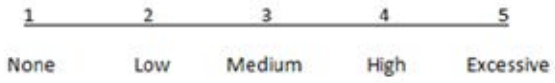
Figure 4.2.a – User Overlay when Entering Hazard Analysis Data onto the MIP.

Hazards	Frequency	Response	Onset	Magnitude	Impact on Business	Impact on Humans	Impact on Property
Coastal Erosion	NA						
Dam/Levee Failure	2	4	4	3	3	3	3
Drought	2	4	4	4	3	3	3
Earthquake	1	2	4	2	3	2	2
Flooding	5	4	3	2	3	3	3
Invasive Species	NA						
Land Subsidence	2	3	4	4	4	2	3
Mud/Landslide	5	4	4	4	4	4	4
Severe Summer Storm	5	2	1	2	2	2	2
Tornado	2	4	4	2	2	2	2
Wildfire	2	2	2	4	2	2	2
Windstorm	NA						
Winter Storms	5	4	1	2	2	2	2

There are seven factors for each hazard: Frequency, Response, Onset, Impact (magnitude), Impact on business, Impact on people, and Impact on Property. Each have scores from four to five that the county can enter. For frequency, all hazard scores were derived from inputs of every one of the 79 plans assessed—even if a majority of the plans did not assess or entered a "N/A" input for some hazards. For example, only a few counties within the state considers coastal erosion as a hazard, but the "Frequency" scores entered was weighed amongst all 79 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.

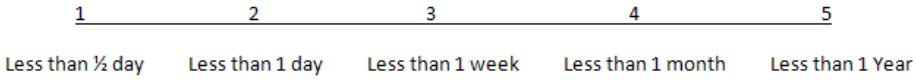
FREQUENCY

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 dispatch 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.

1	2	3	4
Negligible	Limited	Critical	Catastrophic
(Less than 10)	(10 to 25)	(25 to 50)	(More than 50)

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 compare 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.

1 2 3 4

1- (Shutdown of critical facilities for less than 24 hours)
2- (Complete shutdown of critical facilities for one week)
3- (Complete shutdown of critical facilities for at least two weeks)
4- (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.

1	2	3	4
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.

1 2 3 4

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

Hazard	Frequency (1.5)	Response (1.5)	Onset (1.25)	Magnitude (1)	Impact on Business (1)	Impact on Humans (1)	Impact on Property (1)	Cumulative Score	Hazard Rank
Flooding	5.41	4.80	3.18	2.35	2.12	1.97	2.30	22.13	1
Tornado	3.82	4.09	4.52	1.85	2.00	2.32	1.82	20.41	2
Winter Storms	4.65	3.84	2.43	3.17	1.53	1.70	1.83	19.14	3
Severe Summer Storm	4.41	3.54	3.34	2.73	1.33	1.56	1.88	18.78	4
Earthquake	1.99	3.25	4.22	1.79	1.58	1.72	1.57	16.13	5
Dam/Levee Failure	1.77	4.08	2.85	1.76	1.84	1.75	1.87	15.92	6
Drought	2.68	4.31	1.51	2.52	1.55	1.21	1.52	15.30	7
Wildfire	1.41	3.41	4.00	1.40	1.35	1.45	1.30	14.32	8
Mud/Landslide	1.33	3.33	3.79	1.28	1.47	1.31	1.34	13.85	9
Invasive Species	1.35	4.65	1.49	2.19	1.23	1.03	1.77	13.71	10
Land Subsidence	1.18	3.04	3.32	1.23	1.43	1.14	1.37	12.71	11
Coastal Erosion	0.32	2.10	1.25	1.00	1.00	1.00	1.20	7.87	12

CHANGES SINCE THE STATE OF OHIO 2019 HAZARD MITIGATION PLAN

While the methodology did not change from the previous SOHMP, the plans assessed and incidents occurred did. The top four hazards did not change; however, the order of them did. Flooding maintained the top rank, while tornado moved from fourth place to second place. This could be due to various reasons, but most likely from recent events that have occurred. From May 27th to May 29th 2019, Ohio was initially impacted by severe storms where five confirmed tornadoes moved through the State. These storms have resulted in one fatality and approximately 175 injuries. On June 19, 2019, a Presidential Disaster Declaration was officially declared under DR-4447 and opened up federal funding for Individual and Public Assistance. Hazard Mitigation Grant Program funding under HMA was also made available in which nine local hazard mitigation planning projects were funded. Since May 29th 2019, 73 of the 79 assessed plans were approved.

Hazard	Hazard Rank (2019)	Hazard Rank (2024)
Flooding	1	1
Tornado	4	2
Winter Storms	2	3
Severe Summer Storm	3	4
Earthquake	6	5
Dam/Levee Failure	7	6
Drought	5	7
Wildfire	11	8
Landslide	9	9
Invasive Species	8	10
Land Subsidence	10	11
Coastal Erosion	12	12

The 2024 SOHMP also assessed a new hazard that wasn't assessed in the 2019 plan: Extreme Heat. Due to this hazard being a newly added and current limitations in the MIP, extreme heat does not yet have a ranking.

Coastal flooding is an existing profiled hazard that doesn't have a rank, due to the limitation in the MIP to add default hazards and that most counties that border Lake Erie typically combined their coastal flooding assessments into a general "Flooding" section.

STATE OF OHIO HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA)

As a separate document from the State of Ohio 2024 Hazard Mitigation Plan, the 2023 State of Ohio HIRA was conducted by the OEMA *Planning, Training & Exercise* Branch also provides research and local input on hazards that the state is vulnerable to. While the MIP 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. Of the 41 hazards assessed in the State of Ohio HIRA, there are 14 corresponding hazards assessed in the SOHMP. Because of how certain hazards are called and categorized, it may be difficult to directly compare the ranking of hazards between the two separate assessments. However, it is worth noting that top four natural hazards in both documents are the same four hazards in the corresponding assessment with flooding maintaining as the top natural hazard.

State of Ohio HIRA	MIP Local Hazard Mitigation Plan Assessment
1. Nuclear Facility Incident	1. Flooding
2. Terrorism, Radiological/Nuclear	2. Tornado
3. Terrorism, Chemical	3. Winter Storms
4. Agricultural Incident	4. Severe Summer Storms
5. Animal Disease	5. Earthquake
6. Terrorism, Biological	6. Dam/Levee Failure
7. Electro-Magnetic Pulse (EMP)	7. Drought
8. Hazardous Material Incident	8. Wildfire
9. Public Health Emergency	9. Landslide
10. Structure Collapse	10. Invasive Species
11. Flooding	11. Land subsidence
12. Severe Winter Storms	12. Coastal Erosion
13. Long Term Power Outage	NR. Seiche/Coastal Flooding [b]
14. Severe Summer Storms	NR. Extreme Heat [b]
15. Urban Fire	
16. Cyber Incident	
17. Tornado	
18. Electrical Grid Failure	
19. Drought	
20. Earthquake	
21. Solar Flare	
22. Water Supply Failure	
23. Mass Casualty - Medical Incident	
24. Fuel Shortage	
25. Dam / Levee Failure	
26. Temperature Extremes	
27. Natural Gas Failure	
28. Mass Communications Failure	
29. High Winds [a]	
30. Invasive Species	
31. Radiological Incident (non-terrorism; non-nuclear)	
32. Landslide	
33. Land Subsidence	
34. Mass Casualty - Trauma Incident	
35. Wildfire	
36. Civil Disturbance	
37. Criminal Activity	
38. Transportation Incident / Accident	
39. Transportation Infrastructure System Failure	
40. Coastal Erosion	
41. Seiche/Coastal Flooding	

a. In the SOHMP, high winds were assessed as part of the Severe Summer Storms section
b. NR stands = No Ranking. These hazards do not have default entry fields in the MIP and/or does not have enough data to provide a ranking.

4.3 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 4.3.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.

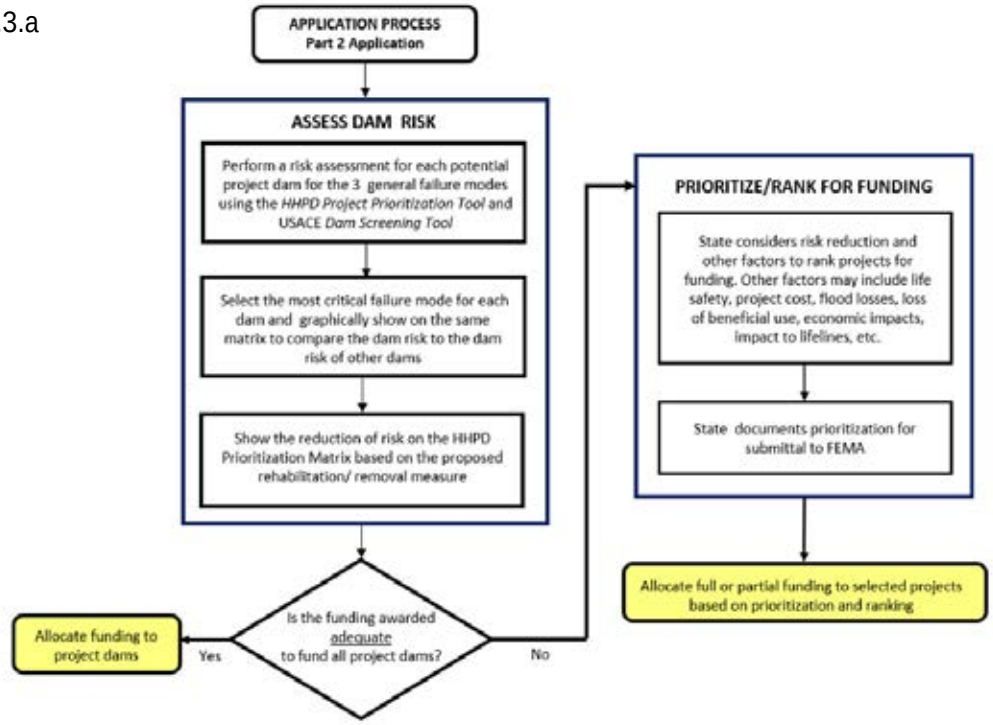
Grant applications to update LHMPs are evaluated based on the local plan expiration date and the amount of funding available. Counties with expired or soon to expire plans are prioritized higher. Ohio has always set aside up 7% of available HMGP funds to offset the cost to develop/update local mitigation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

PRIORITIZATION OF HIGH HAZARD POTENTIAL DAM (HHPD) GRANT PROGRAM FUNDS

In Fiscal Year 2019, FEMA announced the Rehabilitation of High Hazard Potential Dam (HHPD) Grant Program, authorized under the "Water Infrastructure Improvements for the Nation Act," or the "WIIN Act," on December 16, 2016, which amends the National Dam Safety Program Act (Pub. L. 92-367). It is the intention of this grant program to offer funding for dams that are "high hazard dams that pose an unacceptable risk to the public." Ohio Department of Natural Resources, Division of Water Resources, Dams Safety Program has taken the lead on administrating this grant for the State of Ohio.

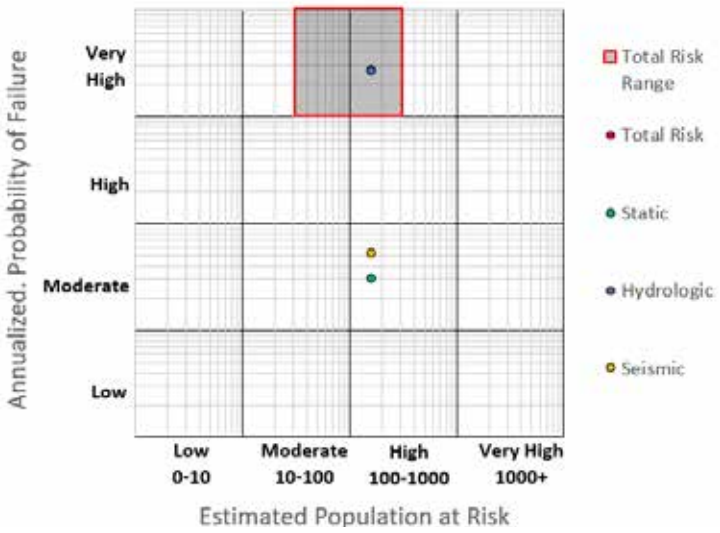
For the 2024 Fall HHPD Grant, and moving forward, FEMA has introduced the HHPD Project Prioritization Tool used in conjunction with USACE Dam Screening Tool (DST) to address the limitation that each state was using a slightly different method to award the grant monies. Moving forward, Ohio will utilize the HHPD Project Prioritization Tool and DST to evaluate all HHPD Projects. See Figure 4.3.a for a brief description of the HHPD Project Prioritization Tool and DST process.

Figure 4.3.a



While these tools are effective to ensure that all states use the same tools for their project reviews, there are some initial limitations. One of limitations is that the HHPD Project Prioritization Tool summary includes an output that is a point on the HHPD Prioritization Matrix (Figure 4.3.b) which is difficult to compare across multiple projects current condition and after project completion. In order to help address this limitation, DSP will also be utilizing the Safety Level Evaluation System for Dams (SLESD), which provides a numerical value to assist in cross project comparison.

Figure 4.3.b — Project Prioritization Matrix



SLESD is a process developed by the Dam Safety Program (DSP) Staff. SLESD uses aspects of risk assessment, risk indexing, knowledge-based expert system, and database application for measuring the safety of dams. The SLESD uses data gathered in the DSP database and a system of rules embedded in the SLESD database to guide the user through analyzing a series of calculations and comparisons. These calculations and comparisons are based on the safety of the dam regarding failure due to overtopping, seepage, and structural collapse of the spillway at different flood loading conditions. Once the series of analyses are done, the system compiles matrixes that results in a score for overall safety that can be used to compare with other dams. SLESD is designed for evaluating the safety levels of high-hazard dams in Ohio and is intended to be used by an experienced engineer. A more detailed description of the HHPD Project Prioritization Tool and SLESD can be found in Appendix I of this plan.

Appendix I includes the methods that the Dam Safety Review Team (DSRT) uses to rank project applications for funding. The final project ranking by the DSRT is also the prioritization of eligible projects for funding. When there is limited funding for projects, DSRT prioritized construction projects such as dam removal or decommissioning which allows dams to be rendered non-hazardous thereby eliminating the hazard of dam failure. Moving forward, construction projects to remediate the deficiencies will be considered more highly than planning or design project as implementing a construction project will address dam deficiencies reducing the risk of dam failure. It should be noted that planning and design projects are also important to understand previously unknown deficiencies at the dam, improving preparedness planning, and to design well thought out solutions for addressing the deficiencies at the dam. If there is not enough funding for an eligible, high-ranking HHPD projects, DSP staff will work with the sub-applicant to refine and submit the project for consideration under another grant funding cycle or coordinate with Ohio EMA to see if the project would be appropriate for another grant program.

4.4 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 the Mitigation Information Portal (MIP). Local officials enter information into the MIP that summarizes the local mitigation action items identified in their jurisdiction's mitigation plan. MIP captures basic information about the proposed mitigation action including: project lead, cost, potential funding sources, estimated start and end dates. The MIP 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 is recorded in the MIP as: new, unchanged, deferred, deleted, or completed. These data are analyzed to help establish trends, identify needs, and develop success stories.

While mitigation actions in each local hazard mitigation plan can vary depending on the needs of each jurisdiction, there are several actions which occur in most if not all plans. Frequently listed actions include flood mitigation projects (acquisitions/elevation, storm water), community and residential safe rooms, power generators, and warning systems (sirens/gages). In recent years, an effort was made to encourage communities to develop a stronger, more actionable set of mitigation actions as opposed to more generic or wishful actions they're not like to do. During project development, each mitigation plan is reassessed to also ensure that each project is listed as an action in their respective plan. The Ohio EMA mitigation branch provides guidance and support for jurisdictions looking to amend and/or execute their action plans. For a complete compiled list of all mitigation actions listed in current local hazard mitigation plans, utilize the Local Hazard Mitigation Action Report tool on the Ohio Mitigation Information portal.

The MIP helps the state demonstrate that mitigation projects are investments that improve community sustainability. The MIP home page displays the aggregate losses avoided (benefits) by implementing flood mitigation projects in the state since 2004. The MIP 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.

The MIP 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 the MIP.

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 the MIP 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.