

Mid-Michigan Flood Reduction: 2020-21 in Review

January 2022

While setting goals for 2022 and beyond, the **Midland Business Alliance (MBA) Advisory Committee on Infrastructure** noted that significant progress was made toward flood reduction and resiliency projects in 2020 and 2021. Here is an overview of the milestones.

May 2020 – The Flood

The preceding days of rainfall would have caused a 200-year flood, according to the National Weather Service, but then the Edenville Dam and Sanford Dam were breached on May 19. This caused the emptying of two lakes, adding to catastrophic flooding in Sanford, Midland, and properties up and down the river system. Flash flood emergencies were issued, and approximately 11,000 Edenville, Sanford, and Midland residents were evacuated. The flood crested at 35.05 feet in Midland on May 20, at more than 11 feet above flood stage. Officials described this as a 500-year flood event. First responders, the National Guard, the Federal Emergency Management Agency (FEMA), the Red Cross, faith-based and community organizations, businesses, and volunteers from local communities, the state, and across the nation all showed up to help those affected.

July 2020 – Major Disaster Declaration

A federal major disaster declaration (DR-4547-MI) was approved for Midland County and the surrounding region. The declaration made approximately \$43 million in federal funds available.

August 2020 – Sanford-Gladwin Rebuild Investment

The Midland Business Alliance and Three Rivers Corporation announced an investment project of approximately \$1 million to reconstruct three homes and three businesses in Sanford and Gladwin. The rebuild effort was organized by the MBA, with Three Rivers as the construction manager and with construction costs covered by grants from Corteva Agriscience, the Dow Company Foundation, the Rollin M. Gerstacker Foundation, and the Charles J. Strosacker Foundation. The rebuild projects included Sanford Hardware, the Red Oak Lounge, Stryker's Lakeside Marina, two homes in Sanford, and one home in the Beaverton.

October 2020 – Advocacy

The MBA hired Squire Patton Boggs, a law firm with public policy expertise, as team members to advocate for our flood reduction and resiliency goals in Lansing and Washington, D.C. They also have helped research federal and state sources of funding and legislative support, with an eye on rebuilding mid-Michigan, creating ways to reduce flooding, and building resiliency against future flood events.

February 2021 – Task Force and Fundraising

To spearhead efforts, the MBA Board of Directors formed a task force to examine infrastructure issues that affect the quality of life and economic vitality of Midland and the mid-Michigan region. As its first task, the MBA Advisory Committee on Infrastructure was charged with finding the best ways to work with local, state, and federal partners to address longstanding flooding issues that affect the citizens, business community, and economic development in the region. Two areas of concern were the legacy challenges of severe flooding throughout Midland County and surrounding areas, as well as sanitary sewer and stormwater issues in Midland.

The fundraising efforts of the MBA Advisory Committee on Infrastructure raised nearly \$1 million for flood reduction advocacy efforts, community engagement, and an engineering study. The local funders included: the Charles J. Strosacker Foundation, Corteva Agriscience, the Dow Company Foundation, Fisher Companies, Hemlock Semiconductor Corporation, the Midland Area Community Foundation, MyMichigan Health, the Patricia and David Kepler Foundation, the Rollin M. Gerstacker Foundation, and Three Rivers Corporation.

From the start, the committee has been engaging with federal, state, and local leaders, agencies, and offices. This includes working closely with the City of Midland and County of Midland officials, with surrounding counties, and with agencies and organizations, such as FEMA, the U.S. Army Corps of Engineers (USACE), the U.S. Department of Agriculture (USDA), the National Oceanic and Atmospheric Administration (NOAA), the Michigan Department of Environment, Great Lakes, and Energy (EGLE), and the Nature Conservancy.

April 2021 – Community Engagement

The MBA hired AMPM, Inc., a Midland-based communication firm, as team members to create a smooth flow of information to the public, the press, funders, regional partners and stakeholders, and local, state, and federal legislators and agencies. This has included communication planning, press releases, presentations, website content, social media content, reports, and regular informational updates to stakeholders. An important goal is to create broad and wide community engagement and participation from individuals, community groups and leaders, neighborhoods, businesses, and various organizations. As specific projects develop, engagement will include townhall meetings and community workshops.

May/June 2021 – Legislative Action and Testimony

On May 19, the one-year anniversary of the dam breaches and flood event, U.S. Representative John Moolenaar introduced the Rural Disaster Support and Relief Act. The legislation addressed a FEMA cost-share issue and included a provision eliminating a FEMA flood insurance penalty affecting the Midland Center for the Arts.

On behalf of the MBA and citizens of Midland County and the Great Lakes Bay Region (GLBR), Tony Stamas provided written testimony in May to the U.S. House Committee on Appropriations Subcommittee on Energy and Water Development and Related Agencies. This subcommittee has jurisdiction over the U.S. Army Corps of Engineers-Civil and other federal agencies. Stamas and the MBA asked the subcommittee to support greater funding of the USACE and to urge the Corps to participate and coordinate as an essential federal stakeholder, with other federal partners, on developing and supporting measures to reduce the severity of future flood events to protect Midland and the GLBR.

In June, Stamas also submitted written testimony to the U.S. House Committee on Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, which has jurisdiction over the USDA and other federal agencies. He asked the subcommittee to support Congressman Moolenaar's report language request to urge the USDA to also participate and coordinate as an essential federal stakeholder to reduce the severity of flooding in our region.

June 2021 – Engineering Best Practices and Broad Project Cost Estimates

With the idea of pursuing funding from federal pandemic recovery and infrastructure bills, the committee needed to be able to paint a better picture of what flood reduction projects might look like in mid-Michigan



ADVISORY COMMITTEE ON INFRASTRUCTURE

– even before any flood studies could begin. AECOM, a global infrastructure and engineering consulting firm, was hired to paint in broad strokes, helping to predict the scope and costs of potential flood reduction and resilience projects. The report was delivered to the committee in July and included initial concepts, examples of best practices in nature-based flood mitigation and benchmark projects, and broad “ballpark” estimates of \$300 to 500 million for budgeting purposes. This represents a significant investment of time and money in the mid-Michigan area – an investment that is necessary to reduce the frequency and severity of flooding and to support quality of life, safety, clean water, jobs, and economic growth in the years ahead.

Potential engineering solutions that were identified as successful in other locations and that could meet our needs include:

- **Large-scale detention** – Expansion and rehabilitation of wetlands and swamplands would allow waters at flood stage to be routed to these areas to reduce the volume of downstream water. Community benefits may include recreational aspects and additional wildlife habitat. Wherever feasible, the team will partner with environmental and agricultural groups to reduce soil sediment movement into the Saginaw Bay and the Tittabawassee River Basin.
- **Local drainage improvements** – Community-driven masterplans will need to be developed throughout the mid-Michigan region to define flooding mechanisms and determine possible local solutions to alleviate flooding. Improvements may include storm drains, local channels, and ponds to reduce urban stormwater runoff across impermeable surfaces.
- **River engineering** – River engineering assesses the original, natural function of rivers and streams to identify “soft” engineering solutions (versus “hard” features like concrete-lined channels). This can also enhance the look of water features and the recreational use. These geomorphic solutions work to optimize the sediment transport of streams, stabilize channel banks, reconnect overbank floodplains, and improve natural function of rivers/creeks.
- **Levees** – Levees help limit backwater flooding of creeks when rivers flood. Where space is limited, levees can block flow from entering low-lying areas.
- The watershed is diverse, and different areas of the watershed would demand different solutions.

Summer 2021 – Connections with State/Federal Legislators

The MBA Advisory Committee on Infrastructure continued its efforts to engage with U.S. legislators home during recesses. Committee members met with Senator Debbie Stabenow, Senator Gary Peters, and Congressman Moolenaar and their staff. At the state level, committee members met with representatives of Governor Gretchen Whitmer and Senator Jim Stamas and his staff. Background information, the vision, and the scope of needed flood reduction/resiliency building in mid-Michigan was covered. The committee has continued to communicate regularly with all of these legislative partners.

July 2021 – Corps of Engineers Proposal for Hydrologic/Hydraulic Study

On July 23, the Corps of Engineers presented the County of Midland with a draft proposal to begin the hydrologic/hydraulic study of the Tittabawassee River Watershed. Through the donations of local businesses and foundations, the MBA Advisory Committee on Infrastructure pledged to fund the 50 percent cost-share by hiring services to aid the Corps of Engineers in completing the study and/or by direct contribution. The projected cost of the study is \$861,000, with USACE paying for half.

August 2021 – Committee Reported Legislative Progress

As of August, the MBA and Congressman Moolenaar had successfully requested legislative report language that appeared in five individual fiscal year 2022 appropriations bills of the U.S. House of

Representatives. This language urged the coordination among five separate federal agencies – FEMA, USACE, USDA, EPA, and NOAA – on flood reduction measures.

Three Community Project Funding requests were also in progress:

- **Midland storm and sanitary sewer improvements project** – The City of Midland submitted a request for \$750,000 under the EPA State and Tribal Assistance Grant (STAG) program. The funds would be specifically targeted to the planned sanitary sewer lining and manhole rehabilitation project, which is a key step toward improving the sewer system to build resiliency for future flooding and rain events.
- **Revitalization of the Midland Center for the Arts (MCFTA)** – The MCFTA submitted a request for \$500,000 from the Department of Housing and Urban Development (HUD) Economic Development Initiative to execute on a critical stage of repairs and revitalization following the 2020 flooding.
- **Flood data collection tools** – The County of Midland submitted a request for \$400,000 in NOAA funding for data collection tools needed to improve the understanding of flood risks within the Tittabawassee River Watershed, including improving flood forecasting, assessing the threat of future flood events, informing emergency management personnel, and supporting early warning activities.

The first two funding requests were included in appropriations bills that passed in the full House of Representatives on July 29. While NOAA funding could not be earmarked for this specific purpose, the House Appropriations Committee included additional funding under the National Weather Service (NWS) account to address this critical need for data collection. Senator Stabenow submitted the three funding requests to the Senate Appropriations Committee for consideration in 2022.

The House Homeland Security Appropriations Subcommittee adopted an amendment in full committee to adjust the cost-share for major disaster declarations in the calendar year 2020 to no less than 90 percent federal and 10 percent local. The House Homeland Security Appropriations bill was approved by the committee but has not yet been considered by the full House of Representatives.

September 2021 – Hydrologic/Hydraulic Study Approved

At the Midland County Board of Commissioners meeting on September 7, both the Administration & Operations Committee and the Finance Committee recommended the approval of the agreement between USACE, the MBA Foundation, and the County of Midland to begin this study. The data collection, analysis, and resulting recommendations are likely to take two years to complete, according to the USACE. Through the donations of local businesses and foundations, the MBA Advisory Committee on Infrastructure pledged to cover this study's 50 percent cost-share.

October 2021 – Corps of Engineers Visits

On October 1, representatives from the MBA Advisory Committee on Infrastructure visited the Detroit offices of the U.S. Army Corps of Engineers to meet on the hydrologic/hydraulic study and mid-Michigan's flood reduction needs. On October 25, the committee hosted the Corps in Midland County for presentations, the surveying kickoff for the study, and a tour of Midland, Bullock Creek, Sanford, and Edenville. The members of the Corps appreciated the tour and said they gained a greater understanding of the enormity and the widespread area that was impacted by the 2020 flood event.

Fall 2021 – Legislative Progress

The committee continued to engage with federal and state legislators regarding funding for mid-Michigan flood reduction efforts, including appropriations bills and capturing funds from the federal infrastructure bill and the Water Resources Development Act of 2020.

At the state level, an earmark for \$3 million for Flood Reduction Planning passed the Michigan Senate. The Michigan House will consider this in early 2022. This funding could enable the committee's efforts to hire an engineering firm to pursue a cost-benefit study, to collaborate with the Corps of Engineers, and to begin to conceptualize and develop flood reduction projects – especially “phase 1” projects that might be easier and faster to implement, gaining positive impacts on flood reduction and resilience building in the region.

October/November 2021 – Surveying Begins for Hydrologic/Hydraulic Study

On November 2, crews from the Spicer Group started river surveying to collect the necessary data for the USACE hydrologic/hydraulic study. Spicer Group was selected in October after a competitive bid process. They are currently conducting the surveying and geographic information system (GIS) mapping of approximately 60 miles of the Tittabawassee River, Sturgeon Creek, Snake Creek, Bullock Creek, Salt River, Chippewa River, and Pine River in Midland County. This data is expected to be delivered to the USACE in March 2022 so the Corps can complete the hydrologic/hydraulic study. The multi-year study is expected to provide critical data for flood prediction and emergency preparedness. Using the new hydrologic/hydraulic information, specific projects can be identified to reduce the frequency and severity of flooding in Midland and the mid-Michigan region. Residents were notified to expect to see surveying crews along the rivers.

December 2021 – Community Support and Collaboration

After members of the MBA Advisory Committee on Infrastructure presented the latest information and plans to MyMichigan Health System administrators, the health system sent a letter of support and endorsement for the MBA's legislative requests for short- and long-term funding for mid-Michigan's flood reduction projects. The committee continues to reach out to the area's major employers and organizations – to provide information and gain their support. This support – from organizations, businesses, and individuals – is important for legislators to hear from their constituents as they decide the importance of projects.

Another organization the committee has been communicating with is the Nature Conservancy. Wherever possible, we are focused on developing environment-based flood mitigation solutions, which could include the creation of wetlands, natural floodplains, and eco-sensitive approaches to slow the flow rate of rivers, creeks, and streams during significant rain events. Related to these efforts, the Rollin M. Gerstacker Foundation made a commitment in December to engage with the Nature Conservancy on flood/water/sediment issues on the Tobacco, Tittabawassee, Pine, and Chippewa Rivers.

Throughout 2021

Members of the committee have made various presentations to community organizations, funders, and stakeholders throughout 2021, including to MBA members, the MBA Board of Directors, the Midland County Board of Commissioners, Midland Area Community Foundation, and MyMichigan Health.

More Information

Visit www.MBAmi.org/floodstudy for additional background information on flood reduction efforts.

*We want the highest flood levels to be in our past ...
and our highest levels of progress ahead of us.*