DRAFT Discovery Report

Menominee County

Menominee County

Menominee Indian Tribe of Wisconsin

August 2025

FEMA

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I. Study Information

The Federal Emergency Management Agency's (FEMA's) Risk Mapping, Assessment, and Planning (Risk MAP) program helps communities identify and asses their flood risk. Through Risk MAP, FEMA provides information to enhance local Hazard Mitigation Plans (HMPs), improve community outreach, and increase local resilience to floods. Discovery is the process of gathering local knowledge and data for analysis with the goal of initiating a hazard risk assessment and promoting risk discussions within the watershed.

The Discovery process for the Menominee County began with a kickoff meeting on *INSERT DATE* . The Discovery meetings occurred on Month Day, Year. Details on meetings and stakeholder involvement can be found in the *Discovery Outreach and Engagement Strategy,* community input can be found in the *Summary of Community Risks Identified*, and outcomes can be found in the *Recommendations for Future Risk MAP Project Scope*.

II. Project Area Community List

The Discovery project for the Menominee County includes 1 tribal community in Menominee County. While all communities may be under consideration for a revised FEMA Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM), not all communities will receive them. In this report, current conditions and flood concerns are summarized geographically by county. Community specific concerns and information will be added to the report after the Discovery meeting if desired and applicable.

Project Area Community List

Menominee County

Unincorporated Areas of Menominee County
Menominee Indian Tribe of Wisconsin

III. Terms and Acronyms

CAC: Community Assistance Contact
CAV: Community Assistance Visit
CFR: Code of Federal Regulations
CID: Community Identification Number
CIS: Community Information System
CLOMA: Conditional Letter of Map Amendment
CLOMR: Conditional Letter of Map Revision
CNMS: Coordinated Needs Management Strategy
CRS: Community Rating System
DNR: Department of Natural Resources
DR: Disaster Declaration Number (alphabetic designation or precursor for)
EM: Emergency Disaster Declaration
FEMA: Federal Emergency Management Agency
FIRM: Flood Insurance Rate Map
FIS: Flood Insurance Study
FMA: Flood Mitigation Assistance
GIS: Geographic Information System
HMA: Hazard Mitigation Assistance
HMGP: Hazard Mitigation Grant Program
HMP: Hazard Mitigation Plan
HUC: Hydrologic Unit Code
LiDAR: Light Detection and Ranging
LOMA: Letter of Map Amendment
LOMR: Letter of Map Revision
LOMR-F: Letter of Map Revision Based on Fill
LOMR-VZ: Letter of Map Revision V Zone
MIP: Mapping Information Platform
NRCS: Natural Resources Conservation Service
NCDC: National Climatic Data Center
OHWM: Ordinary High-Water Mark
NOAA: National Oceanic and Atmospheric Administration
NWS: National Weather Service
PDM: Pre-Disaster Mitigation
PMR: Physical Map Revision
Risk MAP: Risk Mapping, Assessment, and Planning
RL: Repetitive Loss
SHFA: Special Flood Hazard Area
SRL: Severe Repetitive Loss
SWCD: Soil and Water Conservation District
USACE: United States Army Corps of Engineers
USDA: United States Department of Agriculture
USGS: United States Geological Survey

IV. Glossary of Terms

Please note: The Federal Emergency Management Agency (FEMA) is the source for the following terms and definitions, unless cited otherwise.

1-Percent-Annual-Chance Flood: The flood that has a 1-percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the "100-year flood" or "base flood." The base flood is the national standard used by the National Flood Insurance Program (NFIP) and all Federal agencies for the purposes of requiring the purchase of flood insurance and regulating new development.

0.2-Percent-Annual-Chance Flood: A flood that has a 0.2-percent chance of being equaled or exceeded in any given year (also known as a 500-year flood).

Approximate Study: Areas subject to inundation by the 1-percent-annual-chance flood event, generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. An approximate study is represented on a FIRM as a Zone A.

Community Assistance Contacts (CACs): A telephone call or brief visit to an NFIP community for the purpose of establishing or reestablishing contact to determine if any program-related problems exist and to offer assistance.

Community Assistance Visits (CAVs): A visit to a community by a FEMA staff member or staff of a State agency on behalf of FEMA that serves the dual purpose of providing technical assistance to the community and ensuring that the community is adequately enforcing its floodplain management regulations.

Community Rating System (CRS): A voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Flood insurance premium rates in participating communities are discounted to reflect the reduced flood risk resulting from the community actions.

Conditional Letter of Map Revision (CLOMR): A CLOMR is a letter from FEMA that comments on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map; it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review.

Conditional Letter of Map Revision Based on Fill (CLOMR-F): A CLOMR-F is FEMA's comment on a proposed project that will be elevated by fill. This process is not for

submitting proposed development that would affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective BFEs, or the SFHA. The letter does not revise an effective NFIP map, but indicates whether the project, if built as proposed, would be recognized by FEMA.

Coordinated Needs Management Strategy (CNMS): The CNMS application is FEMA's inventory of flood hazard studies and flood hazard mapping needs for areas where a flood hazard study is needed. CNMS is beneficial for community officials and FEMA staff in analyzing and depicting flood hazards to enhance understanding of flood risk and make informed decisions on community planning and flood mitigation.

Dam: An artificial barrier that has the ability to impound water, wastewater, or any liquid-borne material, for the purpose of storage or control of water (Federal Energy Regulatory Commission). The New York State Department of Environmental Conservation (NYSDEC) uses a classification scale of A to D to assign hazard potential to each of the dam structures contained within the inventory, while dams without a hazard code assignment are considered Class 0 or unclassified hazard potential. The hazard classifications for dams are assigned based on the particular physical characteristics of a dam and its location, may be assigned irrespective of the size of the dam, as appropriate, and are as follows:

- Class A or low hazard dam. A dam failure is unlikely to result in damage to anything more than isolated or unoccupied buildings, undeveloped lands, minor roads such as town or county roads; is unlikely to result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable, or telephone infrastructure; and/or is otherwise unlikely to pose the threat of personal injury, substantial economic loss, or substantial environmental damage.

- Class B or intermediate hazard dam. A dam failure may result in damage to isolated homes, main highways, and minor railroads; may result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable, or telephone infrastructure; and/or is otherwise likely to pose the threat of personal injury and/or substantial economic loss or substantial environmental damage. Loss of human life is not expected.

- Class C or high hazard dam. A dam failure may result in widespread or serious damage to home(s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable, or telephone infrastructure; or substantial environmental damage; such that the loss of human life or widespread substantial economic loss is likely.

- Class D or negligible or no hazard dam. A dam that has been breached or removed, or has failed or otherwise no longer materially impounds waters, or a dam that was planned but never constructed. Class D dams are considered to be defunct dams posing negligible or no hazard. The department may retain pertinent records regarding such dams.

Disaster Declaration: The President can declare a major disaster for any natural event that is determined to have caused damage of such severity that it is beyond the combined capabilities of State and local governments to respond. A Major Disaster Declaration provides a wide range of Federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work.

Detailed Study: A flood hazard mapping study done using hydrologic and hydraulic methods that produce BFEs, floodways, and other pertinent flood data. Detailed study areas are shown on the FIRM as Zones AE, AH, AO, AR, A99, A1-A30, and in coastal areas as Zones V, VE, and V1-30.

Flood Insurance Rate Map (FIRM): The official map of a community on which FEMA has delineated both the SFHAs and the risk premium zones applicable to the community.

Flood Insurance Study (FIS): A compilation and presentation of flood risk data for specific watercourses, lakes, and coastal flood hazard areas within a community. When a flood study is completed for the NFIP, the information and maps are assembled into an FIS report. The FIS report contains detailed flood elevation data in flood profiles and data tables.

Flood Mitigation Assistance (FMA): The FMA program provides funds for projects to reduce or eliminate risk of flood damage to buildings that are insured under the NFIP on an annual basis. There are three types of FMA grants available, which include (1) planning grants, (2) project grants, and (3) management cost grants.

Hazard Mitigation Assistance (HMA): FEMA's HMA grant programs, which include the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and FMA, provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages.

Hazard Mitigation Grant Program (HMGP): The HMGP provides grants to States or Tribes and local governments (as sub-grantees) to implement long-term hazard mitigation measures after a Major Disaster Declaration.

Hydrologic Unit Code (HUC): The U.S. Geological Survey (USGS) divides and subdivides the area of the United States into successively smaller hydrologic units that are classified into four levels: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged or nested within each other, from the largest geographic

area (regions) to the smallest geographic area (cataloging units). Each hydrologic unit is identified by a unique HUC consisting of two to eight digits based on the four levels of classification in the hydrologic unit system. (USGS)

Ice Jams: An ice jam may be defined as an accumulation of ice in a river, stream, or other flooding source that reduces the cross-sectional area available to carry the flow and increases the water-surface elevation. Ice usually accumulates at a natural or manmade obstruction or a relatively sudden change in slope, alignment, or cross-section shape or depth. Ice jams are common in locations where the channel slope changes from relatively steep to mild and where a tributary stream enters a large river.

Light Detection and Ranging (LiDAR): LiDAR is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses—combined with other data recorded by the airborne system—generate precise, three-dimensional information about the shape of the Earth and its surface characteristics. LiDAR systems allow scientists and mapping professionals to examine both natural and manmade environments with accuracy, precision, and flexibility. (NOAA)

Letter of Map Amendment (LOMA): A LOMA is an official amendment, by letter, to an effective NFIP map. A LOMA establishes a property's location in relation to the SFHA. LOMAs are usually issued because a property has been inadvertently identified as being in the floodplain but is actually on natural high ground above the BFE or out as shown on the FIRM. Because a LOMA officially amends the effective NFIP map, it is a public record that the community must maintain. Any LOMA should be noted on the community's master flood map and filed by panel number in an accessible location.

Letter of Map Change (LOMC): LOMC is a general term used to refer to the several types of revisions and amendments to FEMA maps that can be accomplished by letter. They include LOMAs, Letters of Map Revision (LOMRs), and Letters of Map Revision Based on Fill (LOMR-Fs).

Letter of Map Revision (LOMR): A LOMR is FEMA's modification to an effective FIRM or portion of the FIRM. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and, thus, result in the modification of the existing regulatory floodway, the effective BFEs, or the SFHA. The LOMR officially revises the FIRM and sometimes the FIS report.
Letter of Map Revision Based on Fill (LOMR-F): A LOMR-F is a FEMA letter amending the effective FIRM for an existing structure or parcel of land that has been elevated by fill.

Levee/Floodwall: A manmade structure designed to contain or control the flow of water. Levees and floodwalls are constructed from earth, compacted soil, or artificial materials, such as concrete or steel. To protect against erosion and scouring, earthen levees can be covered with grass and gravel or hard surfaces like stone, asphalt, or concrete.

Mitigation: Any action taken to eliminate or reduce the long-term risk to life and property from natural and technological hazards, including, but not limited to, flooding. Flood mitigation measures include elevation, floodproofing, relocation, demolition, or any combination thereof.

Multi-Frequency Depth Grids: This Flood Risk Product helps communities better understand their flood hazard risk beyond the 1-percent-annual-chance floodplain and provides information useful for developing a Benefit-Cost Analysis by producing grids for the 10-percent (10-year depth), 4-percent (25-year depth), 2-percent (50-year depth), 1-percent (100-year depth), and 0.2-percent-annual-chance (500-year depth) flood events. These grids will be used to create additional analyses that depict the percent-annual chance of flooding and the percent chance of flooding over a 30-year span in the floodplain.

Pre-Disaster Mitigation (PDM): The PDM grant program provides funds for hazard mitigation planning and projects on an annual basis. The PDM program was enacted to reduce overall risk to people and structures, while simultaneously reducing reliance on Federal funding in the event of a disaster.

Repetitive Loss (RL) property: An RL property is any insurable building for which two or more claims of more than $1,000 were paid by the NFIP within any rolling 10-year period since 1978. An RL property may or may not be currently insured by the NFIP.

Risk Mapping, Assessment, and Planning (Risk MAP) program: The FEMA Risk MAP program provides communities with flood risk information and tools to support mitigation planning and risk reduction actions.

Severe Repetitive Loss (SRL) property: An SRL property is a single family property (consisting of one to four residences) covered by flood insurance underwritten by the NFIP and has incurred flood-related damage for which four or more separate claim payments have been paid with the amount of each claim payment exceeding $5,000 and with a cumulative amount of such claim payments exceeding $20,000; or for which at least two separate claim payments have been made with the cumulative amount of such claims exceeding the market value of the property.

Special Flood Hazard Area (SFHA): SFHAs are high-risk areas subject to inundation by the base (1-percent-annual-chance) flood; they are also referred to as 1-percent-annual-chance floodplains, base floodplains, or 100-year floodplains.

Water-Surface Elevation Grids: When appropriated, this non-regulatory Flood Risk Product is produced during the Flood Risk Review phase to complement the 1-percent-annual-chance floodplains designated on the FIRMs making the calculated WSEL results more readily available. The WSEL Grid is prepared for the 1-percent-annual-chance storm event and may be produced for a range of other flood events. Using a Geographic

Information System (GIS), community officials can easily generate an estimated BFE for interested residents and land developers, and to make critical floodplain management and mitigation decisions.

V. Executive Summary

In 2024, FEMA funded a Risk MAP Discovery project for the Menominee County, which consists of 1 tribal community. Through the Discovery process, FEMA will be able to obtain key insights and data that will lead to greater community resiliency. Stakeholders in the watershed will help FEMA to identify and review existing natural hazard information to prioritize natural hazard information needs for making mitigation decisions. Communities will help to identify critical infrastructure and resources that could be impacted during a natural hazard event.

Comprising significant input from local stakeholders, the Menominee County Discovery Report describes historical flood risk, existing flood-related data, and local needs concerning FEMA FIS reports and FIRMs. During the outreach process—which involved a kickoff meeting and discussion-based Discovery Meetings—emphasis was placed on opportunities for stakeholders to provide comments, concerns, input for future mapping projects, and ideas for mitigation activities.

The Discovery project was informed by data and resources available at the watershed and county level, as well as local insights from stakeholders at the community level. Using community mapping needs and data collected through the engagement process, as well as additional detailed analysis, a recommended scope of work for the Menominee County was developed. Data collected from community stakeholders can be found in the County Overview sections and the Summary of Community Risks Identified section.

Upon completion of the Risk MAP Discovery phase, FEMA will initiate further data development, prioritize areas for restudy, and begin the process to update maps within the watershed, pending available funding.

VI. Discovery Overview

The Discovery process is the second phase in FEMA's Risk MAP Project lifecycle (Figure 1). It kicks off with an investigation of existing terrain, flood hazard data, and flood risk data for development of an initial Discovery map (Figure 1). Further data is gathered through stakeholder coordination and is used to refine the map and scope of the Risk MAP project. As a Cooperating Technical Partner, the Wisconsin Department of Natural Resources (WDNR) led the Discovery process for the Menominee County. In coordination with FEMA and Wisconsin Emergency Management (WEM), the WDNR gathered data and identified stakeholders. Community officials, Land Information Officers, Emergency Managers, Tribal Officers, State Agencies, and Federal Agencies were identified as stakeholders and invited to participate in the Discovery process.

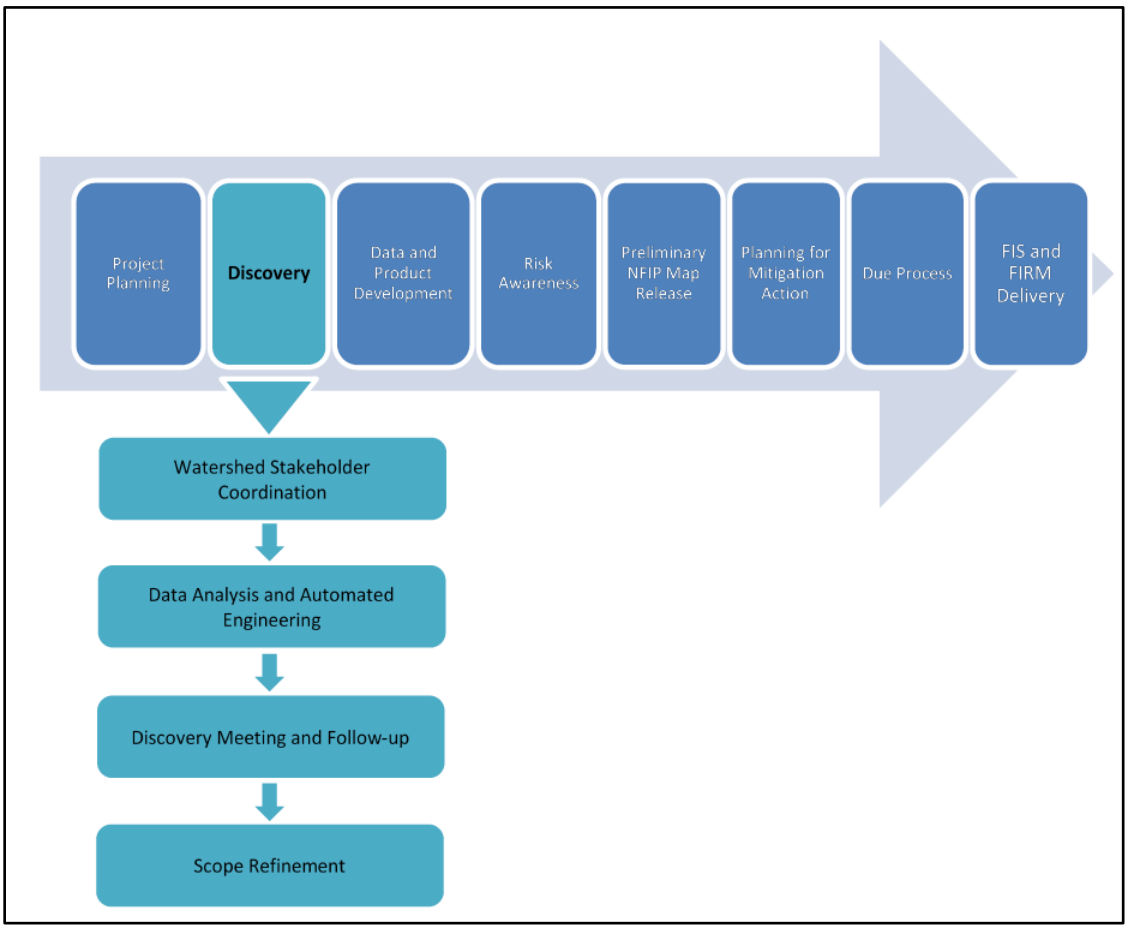


Figure 1. Risk MAP Project Life Cycle

VII. Discovery Outreach and Engagement Strategy

In Menominee County, the Discovery phase of Risk MAP had four major components: (1) Identify stakeholders, (2) gather information from participating communities, (3) support one in-person and virtual Discovery meetings to gather additional information, (4) conduct post-meeting follow-up and engagement.

i. Stakeholder Identification

Initial stakeholders identified were county chairpersons, village presidents, mayors, clerks, and zoning administrators. The invitation sent out to stakeholders informed those persons that the invitation can be forwarded to local officials or relevant staff who may be interested. Others that have joined the Discovery process have been GIS staff, emergency management, planners, & other local officials.

ii. Pre-Meeting Information Exchange

As a Pre-Discovery meeting engagement, Wisconsin DNR held a kick-off meeting on. A formal presentation was given to stakeholders and with questions the meeting lasted. The WDNR presented an overview of the Discovery process including the partnership with FEMA, goals, deliverables, and timeline. The WDNR also gave a brief outline of Menominee County and why it was chosen by FEMA for Discovery. The presentation transitioned into specifics about the upcoming Discovery Meeting. The goal was to let the stakeholders know who will attend, the agenda, and what type of data to bring to the meeting. The call was then open for questions and discussions from stakeholders.

iii. Discovery Meeting

This section will be updated following the Discovery meeting.

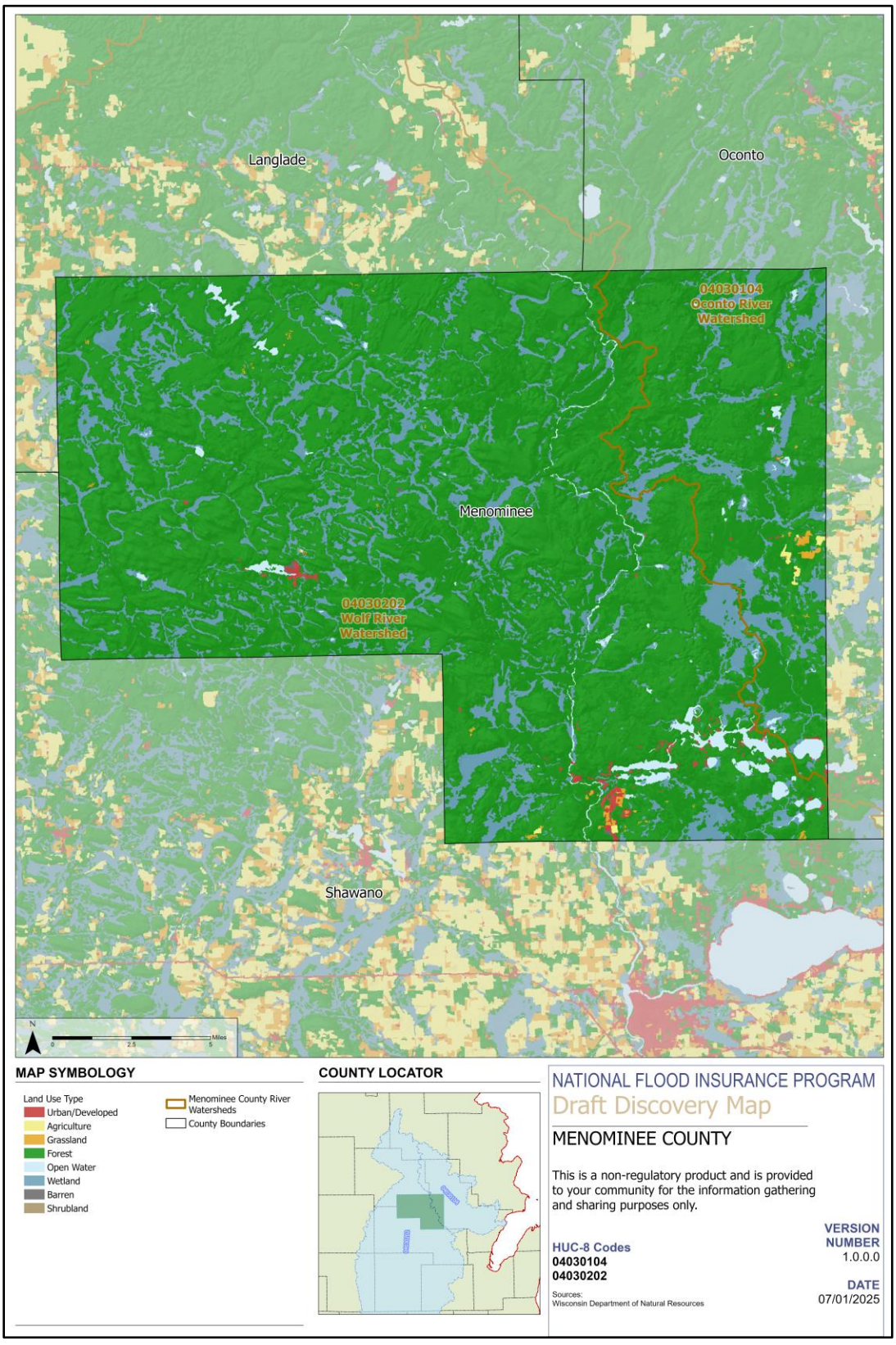
VIII. Menominee Characteristics and Geography

The Menominee County is located in Northeastern Wisconsin and drains 362 square miles. The county is dominated by Forest (82%). Wetland makes up 15% of the land cover, less than 1% is developed.

The Wolf River is the primary watershed in Menominee County flowing from north to south through the entire county. Main tributaries of the Wolf River watershed in Menominee County include the Evergreen River, Little West Branch Creek, and West Branch Wolf River. The other main river in Menominee County is the South Fork Oconto River, part of the Oconto River watershed flowing east.

Menominee county has a history of experiencing flood events. Spring floods from snow melt, heavy precipitation, and ice jams have caused road closures, washouts, and a failure of the Keshena Falls Dam in 1972. Two floods have resulted in Federal Disaster Declarations for Menominee County, in 2019 and 1984.

Figure 2. Watershed Location and Land Use



Dams

According to the Wisconsin Department of Natural Resources Dams database, there are 8 dams standing within Menominee County. There are 4 additional dams in Menominee County that have been removed. A dam is classified by its size and hazard. A *Large* dam has a structural height of over 6 feet and impounds 50 acre-feet or a structural height of 25 feet or more and impounds more than 15-acre-feet. Every *Large* dam is given a hazard rating based on the potential for loss of life or property damage should the dam fail. A dam is assigned a rating of *High* hazard when its failure would probably put lives at risk. There are 4 *Large* dams in the Menominee County, all 4 dams have a *High* or *Significant* hazard rating. Locations of these dams can be seen on the discovery map.

Watershed Boundaries

Watershed boundaries are classified based on hydrologic unit codes (HUC). Menominee County contains two HUC 8 class watersheds, the Wolf River Watershed and the Oconto River Watershed. The respective HUC 8 watershed numbers are 04030202 and 04030104. The numbers are arranged by scale, with the first two numbers representing the region, and the following two numbers each representing the sub-regions, accounting units, and cataloging units, respectively.

- Wolf River Watershed 0403020
- Oconto River Watershed 040030104

IX. Watershed Disaster Declarations

In response to disasters, FEMA can issue disaster declarations for Major Disasters (DRs) and Emergency Declarations (EMs).

The President can declare a disaster in Wisconsin after the Governor submits a request for any natural event, fire, flood, or explosion in which the severity of damage is determined to exceed the combined response capabilities of State and local governments. A wide range of Federal assistance programs for individual and public infrastructure can be provided after such a declaration is made, including funds for both emergency and permanent work. Emergency Declarations can be declared by the President after the Governor submits a request for any occasion or instance when the President determines Federal assistance is needed to supplement State and local government efforts in providing emergency services, up to $5 million dollars.

As of April 2025, there have been a total of 7 FEMA disaster declarations in Menominee County dating back to 1953. The number of declarations informed the need for this Discovery effort. Table 1 summarizes all declarations within the watershed (FEMA 2022, Disaster Declarations Summary).

Table 1. FEMA Disaster Declarations for MENOMINEE COUNTY

Incident Type	Number of Disaster Declarations	Declaration Date
Menominee County		
Severe Storm	1	1993
Flooding	2	1984, 2019
Hurricane	1	2005
Drought	1	1976
Biological*	2	2020

*Covid-19 Pandemic

Table 2. Most Recent FEMA Flood Disaster Declarations in MENOMINEE COUNTY

2019	DR-4477-WI / Severe Storms and Flooding SEVERE STORMS, STRAIGHT-LINE WINDS, AND FLOODING Menominee County
1984	EM-3091-WI / Flooding SEVERE STORMS AND FLOODING, Menominee County

X. Menominee County Overview

COUNTY POPULATION:	PERSONS PER SQUARE MILE:	LAND USE:
4,286 (U.S. CENSUS BUREAU 2020)	11.9 (U.S. CENSUS BUREAU 2020)	1. Forest 2. Wetland 3. Urban/Develop (WI DNR 2025)
PERCENTAGE OF COUNTY IS FARMLAND: 0.1% (WI DNR 2025)	**TOP INDUSTRIES:** 1. Arts, Entertainment, & Recreation 2. Public Administration 3. Health Care & Social Assistance (U.S. CENSUS BUREAU)	**PRESIDENTIAL DISASTER DECLARATIONS:** 7 (FEMA 2025)

Overview

Menominee County is bordered by Langlade, Oconto, and Shawano Counties in Wisconsin. Menominee County has a total area of 362 square miles. The total population is 4,286. The County seat is the census-designated place, Keshena, with a population of 1,257. The county is largely forested, with forests accounting for 81% of the land use. There are 3,679 acres of water in the county, along with 8 dams including 4 large dams and 1 that have a significant hazard rating.

Presidential disaster declarations for Menominee County occurred most recently following severe storms, straight-line winds, flooding in 2019. The flooding event in 2019 was caused by severe thunderstorms and flash flooding.

Planning

Menominee County has the following resources for land use planning and flood resiliency:

- Menominee County Comprehensive Land Use Plan (2010-2030)
- Menominee County Hazardous Materials Plan (revised 2025)

Common Flooding Concerns

Section will be updated after the Discovery meeting

Flooding Concerns Shared During Discovery Meeting

Section will be updated after the Discovery meeting

Common Mitigation Concerns

Section will be updated after the Discovery meeting

Mitigation Concerns Shared During Discovery Meeting

Section will be updated after the Discovery meeting

XI. Available Watershed Data Collection

For Discovery, data is collected to get a better understanding of risk in a community and inform recommendations for potential Risk MAP projects. Existing tabular and spatial data was collected for Menominee County from multiple sources and displayed on the Discovery Map, Discovery Report, and/or in the Geodatabase. A list of the data collected, sources, and deliverable is listed in Table 3.

Table 3. Discovery Data for Menominee County

DATA	SOURCE	DELIVERABLE
Community Boundaries	Wisconsin Legislative Technology Services Bureau	Discovery Map Geodatabase
County Boundaries	Wisconsin Legislative Technology Services Bureau	Discovery Map Geodatabase
DAM Information	Wisconsin DNR Dams Inventory	Discovery Map Geodatabase
Flood Insurance Claims	FEMA Community Information System (CIS)	Discovery Report
Hazard Mitigation Plan Status	Wisconsin Emergency Management	Discovery Report
Ice Jams	U.S. Army Corp of Engineers - Ice Jam Database	Discovery Map Geodatabase
Last CAC Date	FEMA CIS	Discovery Report
Last CAV Date	FEMA CIS	Discovery Report
Major Roads	Wisconsin DNR	Discovery Map Geodatabase
NFIP Participation	FEMA CIS	Discovery Report
Population	U.S. Census (2020)	Discovery Report
Repetitive Loss	FEMA CIS	Discovery Report
Stream Gages	USGS National Hydrography Dataset	Discovery Map Discovery Report Geodatabase
Streams and Rivers	WI DNR	Discovery Map Geodatabase
Watershed Boundaries	USGS National Hydrography Dataset	Discovery Map Geodatabase

Note: Please see spatial metadata for more information about data set contribution and source.

XII. Data for Flood Risk MAP Products

i. LiDAR Data

Menominee County LiDAR all meet FEMA's vertical accuracy threshold (FEMA SID #43) for high specification level and are suitable to be used for detailed studies.

Table 4. LiDAR Acquisition Dates

Community	Date Acquired
Menominee County	2020

ii. USGS Gages

The project team identified USGS stream gages within the watershed. The locations are shown on the Discovery Map and a summary is listed in Table 5.

Table 5. USGS Stream Gages

GAGE NUMBER	DESCRIPTION
04070645	SOUTH BRANCH OCONTO RIVER NEAR LANGLADE, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004070645
04070720	SOUTH BRANCH OCONTO RIVER NEAR BREED, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004070720
04070771	PECORE CREEK NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004070771
04070945	LINZY CREEK NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004070945
04075156	WOLF R BLW SHOTGUN EDDY RAPIDS @HY 55 WHITE LK, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075156
04075300	ELTON CREEK NEAR LANGLADE, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075300
04075346	EVERGREEN RIVER AT CAMP 29 ROAD NR WHITE LAKE, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075346
04075350	EVERGREEN RIVER AT CTH WW NEAR LANGLADE, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075350
04075365	EVERGREEN RIVER BLW EVERGREEN FALLS NR LANGLADE,WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075365
04075500	WOLF R ABOVE WEST BR WOLF R NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075500
04075650	WAYKA CREEK AT HWY 55 NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075650
04075757	W. BRANCH WOLF RIVER 6.5 MI. NORTH OF NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075757
040757587	WEST BR WOLF RIVER BELW MENOMINEE CR NEAR ZOAR, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=0040757587

04075770	WEST BRANCH WOLF RIVER 3 MI. NORTH OF NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075770
04075803	WEST BRANCH WOLF RIVER 2 MI. NORTH OF NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075803
04075804	W BR WOLF R 1/2 MI N. OF MILL POND AT NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075804
04075807	SIPES CREEK NEAR ZOAR, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075807
04075817	LITTLE WEST BRANCH WOLF RIVER NEAR PHLOX, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075817
04075850	LITTLE WEST BRANCH WOLF RIVER NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075850
04075855	LITTLE WEST BR WOLF RIVER @ MATOON RD NR NEOPIT,WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075855
04075860	LITTLE W. BR. WOLF R. AT MILL POND AT NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004075860
04076000	WEST BRANCH WOLF RIVER AT NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076000
04076080	WEST BRANCH WOLF RIVER-QW SITE-AT NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076080
04076090	WEST BRANCH WOLF RIVER NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076090
04076200	WEST BRANCH WOLF RIVER 6 MI. EAST OF NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076200
04076400	LITTLE WEST BRANCH CREEK AT CTH M NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076400
04076500	WEST BRANCH WOLF RIVER NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004076500
04077000	WOLF RIVER AT KESHENA FALLS NEAR KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004077000
04077100	WOLF RIVER AT KESHENA, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004077100
04077580	RED RIVER AT RED RIVER ROAD NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004077580
04077590	RED RIVER NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004077590
04077670	MILLER CREEK NEAR NEOPIT, WI https://nwis.waterdata.usgs.gov/nwis/inventory/?site_no=004077670

XIII. Other Available Data and Information

i. Community Rating System (CRS)

The Community Rating System is a voluntary incentive program that recognize and encourages community floodplain management activities that exceed the minimum NFIP requirements. Currently, none of the communities within Menominee County participate in CRS.

ii. FEMA Coordinated Needs Management Strategy (CNMS)

FEMA's Coordinated Needs Management System (CNMS) database (https://msc.fema.gov/cnms/Default.aspx) categorizes flood studies by validation status. CNMS also defines an approach for the identification and management of flood hazard mapping needs. The designations reflect an evaluation of the study since the date the FIRM took effect. The evaluation considers land use changes, new/removed bridges or culverts, and account for recent flood events captured by gage data. A Valid status indicates the study meets FEMA's current FIRM mapping standards including using up-to–date engineering methodology and no significant changes since the effective date. When a study does not meet the standards, it is given an Unverified status. Since Menominee has not been previously mapped there is no information in the CNMS database yet

iii. Levees

There are no levees in Menominee County.

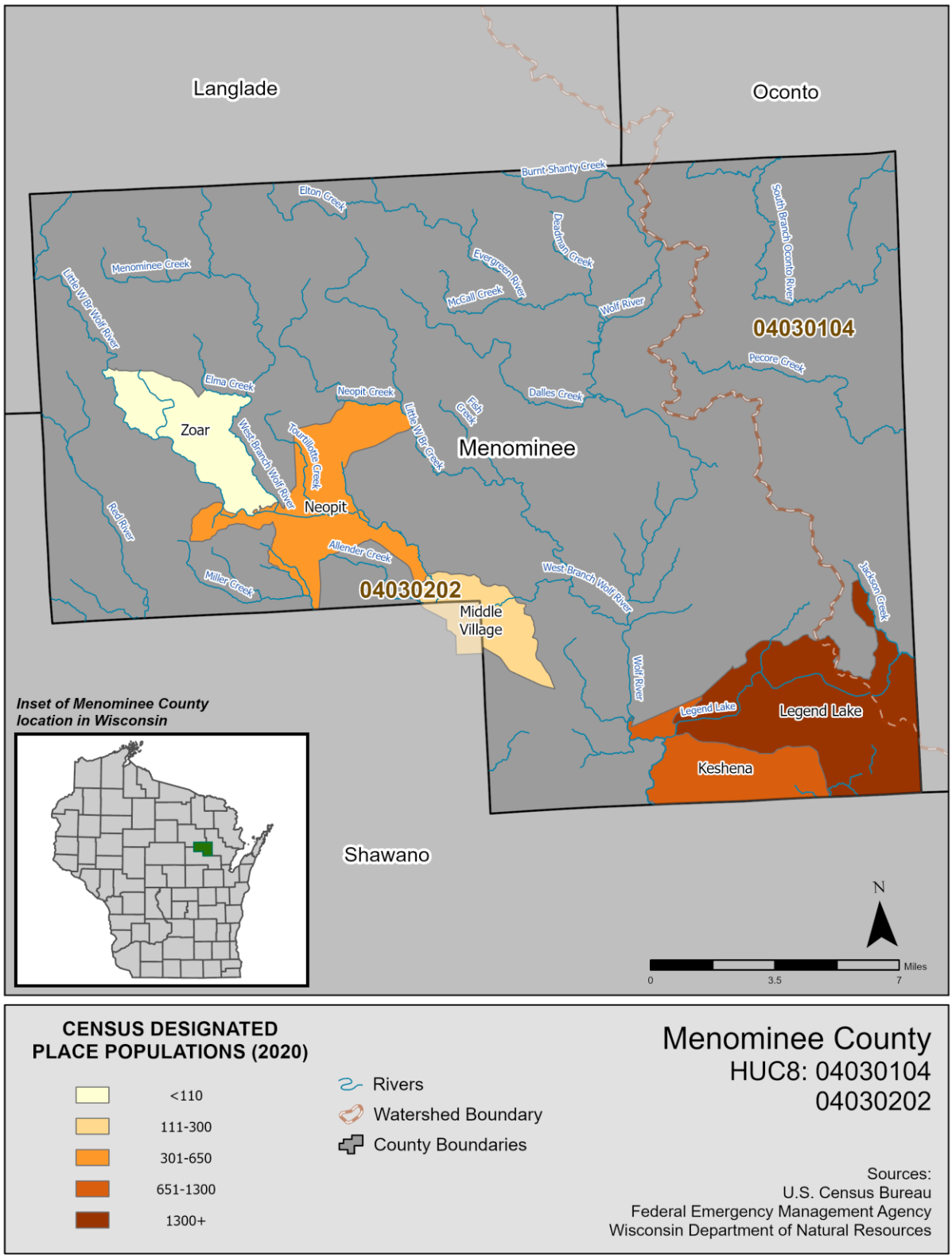
iv. Demographics

Populations are listed by community in Table 6. The below map illustrates the population of incorporated communities across the study area.

Table 6. NFIP Participation Status and Population

COUNTY	CID	COMMUNITY	POPULATION (2020)	NFIP Status
Menominee	550604	Menominee County	4,286	PARTICIPATING
Menominee	550619	Menominee Indian Tribe of Wisconsin	3,524	PARTICIPATING

Figure 3. Menominee County Population Map



v. Floodplain Management/Community Assistance Visits

The WDNR State NFIP Coordinator initiates and conducts Community Assistance Visits (CAVs) and Community Assistants Contacts (CACs) as part of the floodplain management program. A CAV consists of reviewing local permitting, evaluation a community's floodplain ordinance, and field tour to assess recent activity within the regulatory floodplain. The NFIP coordinator meets with local officials to discuss the program, potential violations, training opportunities, and recent flood events. A CAC is a less extensive contact between the community and the State NFIP Coordinator. The CAC can be a phone call or brief visit intended to establish or re-establish contact with the community. The purpose is to identify any existing problems and offer assistance if necessary. There are no recorded CAVs and CACs for NFIP participating communities within Menominee County.

vi. Regulatory Mapping

Menominee County communities doesn't have countywide maps developed as part of FEMA's Map Modernization program or Risk MAP.

Table 8. Digital Flood Insurance Rate Maps Status

County	Status	Effective Date	LiDAR Acquired
Menominee	Never Mapped	N/A	2020

vii. Flood Insurance Policies and Payouts

FEMA's Community Information System (CIS) keeps track of current flood insurance policies for each NFIP participating community. For Menominee County communities, there are no current policies in force and no claims have been made.

XIV. Risk MAP Needs and Recommendations

(Section will be updated in the Final Discovery Report)

i. Floodplain Studies

Using stakeholder input, the Wisconsin DNR has identified areas where a revised or new study is recommended. The goal is to identify those streams where the communities' flood risk management efforts will most benefit from updated engineering analyses. We have categorized the recommendations by priority level. The final scope of the RiskMAP project moving forward will depend on available funding and resources. High priority recommendations have been added to the Post-Meeting Discovery Map (Appendix D).

High Priority

It is recommended that all Unverified detailed studies (Zone AE) in the watershed be revised. These studies and the applicable study lengths are list in Table 9.

Table 10. Mapping Needs, Revised AE Zones

Flooding Source	Study Length (Miles)	CNMS Status	Study Type

Total: ____ miles

Table 11. Mapping Needs, Revised A Zones

Flooding Source	Study Length (Miles)	CNMS Status	Study Type
Unnamed Zone As			

Total: ____ miles

Table 12. Mapping Needs, New A Zone

Flooding Source	Study Length (Miles)	Study Type

Total: miles

Table 13. Mapping Needs, Redelineated AE Zones

Flooding Source	Study Length (Miles)	CNMS Status	Study Type

Total: miles

Low Priority

Table 14. Mapping Needs, Low Priority

Flooding Source	Study Length (Miles)	CNMS Status	Effective Study Type	New Study Type

ii. Mitigation Projects

Table 15. Stakeholder Identified Mitigation Needs

Location	Discovery Map ID	Subject(s)	Mitigation Interest Comment

iii. Non-Regulatory Products

Non-regulatory flood risk products provide information to communicate a more complete flood risk in their community. The datasets are meant to go beyond the simple identification of the flood hazards and inform actions that can be taken to reduce flood risk. Depth grids are a non-regulatory product which will not only show where flooding can happen, but also how deep the water will get and how that depth will affect economic losses. The project team recommends creating flood depth grids in Menominee County for all Revised and New AE Zones at multi-frequency intervals. The grids can be used by stakeholders to assess impacts of the flooding for different flood types and plan for mitigation.

XV. Appendix

(Section will be updated in the Final Discovery Report)

Appendix A: Discovery Meeting Stakeholder Sign in Sheets

Appendix B: Stakeholder Comment Forms

Appendix C: Post Meeting Discovery Map