

WCCA 2017 Fall Conference

Michelle Staff, CFM

Floodplain Management Policy Coordinator

State National Insurance Floodplain Program Coordinator

Wisconsin Department of Natural Resources





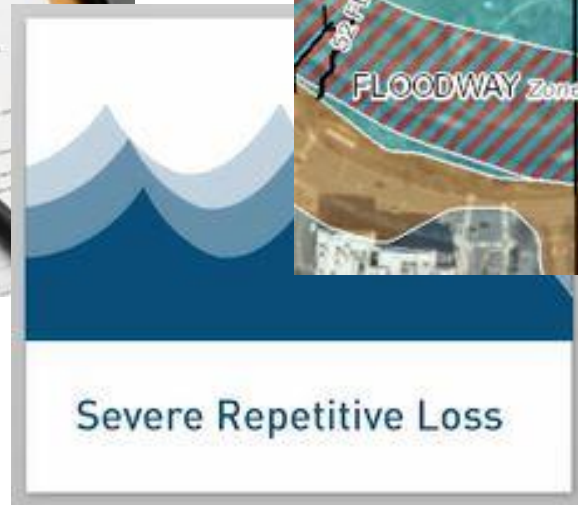
NFIP Authorization

On September 8, 2017, the President signed legislation passed by both houses of Congress that extends the National Flood Insurance Program's (NFIP) authorization for three months. It previously had been set to expire September 30, 2017.

Congress must now reauthorize the NFIP by no later than **December 8, 2017.**

NFIP Redform

The seven bills combined would touch on almost every facet of the flood insurance program including financing, privatization, mitigation and mapping.





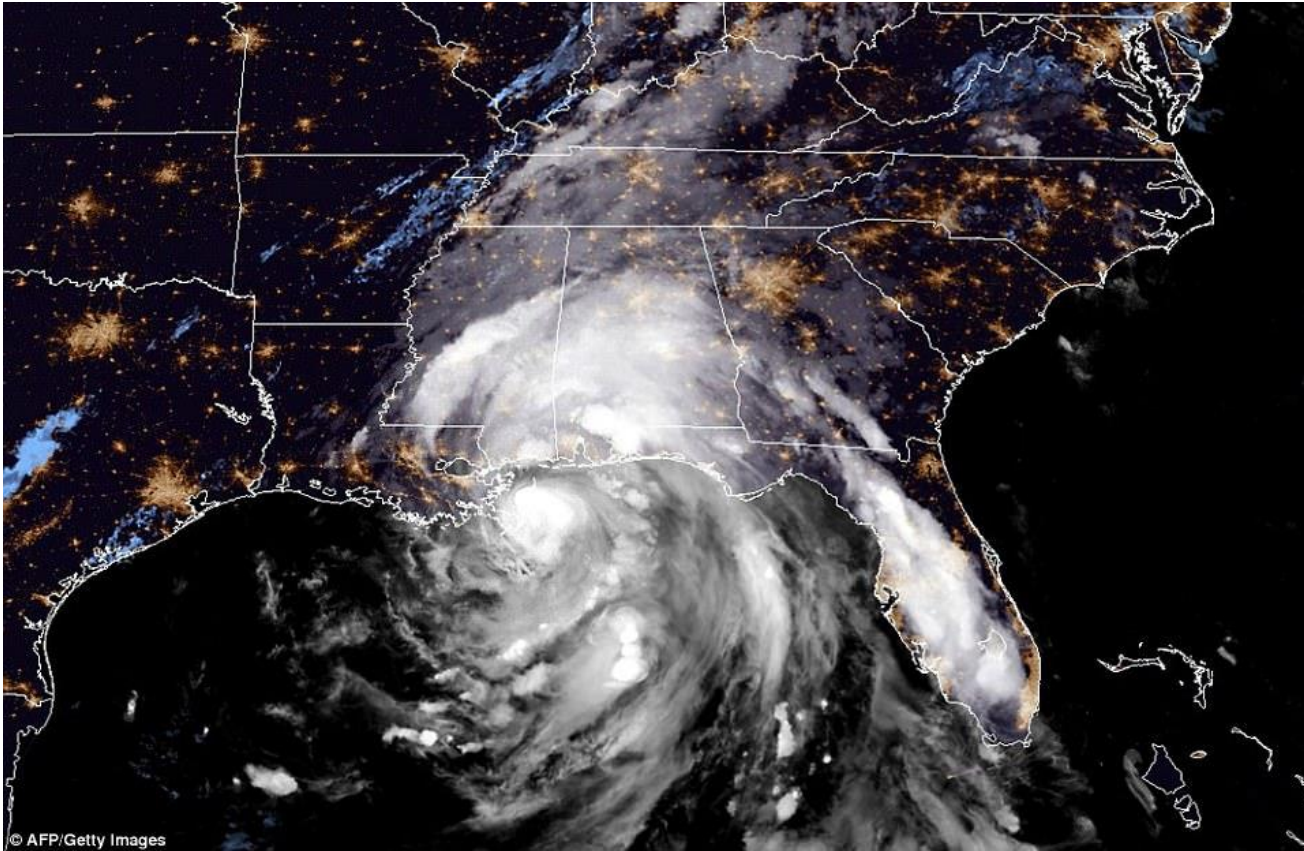
Hurricane Harvey Damages Could Cost up to \$180 Billion



**Hurricane Irma could cost
close to \$100 billion.**

Hurricane Maria \$95 billion storm





October 2017
Florida, Alabama, Mississippi, Louisiana



SCOTT WALKER
OFFICE OF THE GOVERNOR

FOR IMMEDIATE RELEASE

October 9, 2017

Contact: Tom Evenson, (608) 266-2839

Governor Walker Announces Federal Disaster Declaration for July Flooding in Western Wisconsin

MADISON – Governor Scott Walker today announced a Federal Emergency Management Agency (FEMA) major disaster declaration for 11 counties impacted by flooding in western Wisconsin in July. The counties included in the declaration are Buffalo, Crawford, Grant, Iowa, Jackson, La Crosse, Lafayette, Monroe, Richland, Trempealeau and Vernon Counties.

“We are pleased these communities will receive this disaster assistance from FEMA,” said Governor Walker. “I would like to thank President Trump and FEMA for providing this assistance. It will help many communities as they continue to repair roads and bridges left damaged by the flash floods.”

Severe storms moved across western Wisconsin from July 19-22, 2017. The heavy rains caused flash flooding and several rivers to rise to major flood stage. FEMA damage assessments showed more than \$10 million in damage to public infrastructure in the region.

The major disaster declaration is for Public Assistance, which covers eligible projects submitted by counties, cities, townships and certain private, not-for-profit organizations. The program is not for businesses or homeowners.

Communities in the affected counties are now eligible for federal disaster assistance. They should contact their county emergency management director for further information. Under the program, FEMA provides 75 percent of eligible costs, while state and local agencies share the remaining 25 percent.

Contact information for county emergency management directors can be found here:
http://www.emergencymanagement.wi.gov/counties/county_directors.asp

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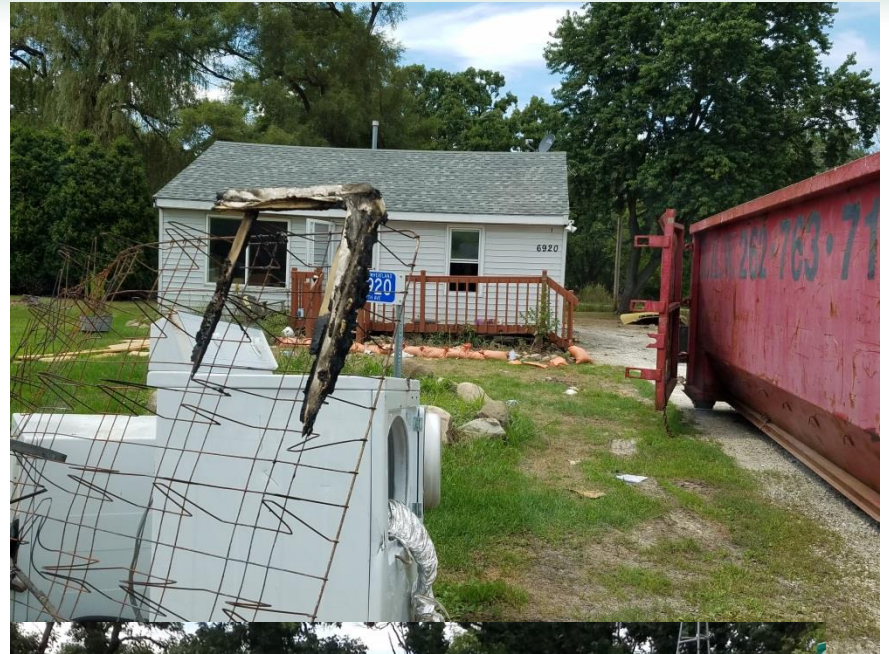
Public Assistance (PA) July 19-22, 2017

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FEMA damage assessments showed more than \$10 million in damage to public infrastructure in the region.

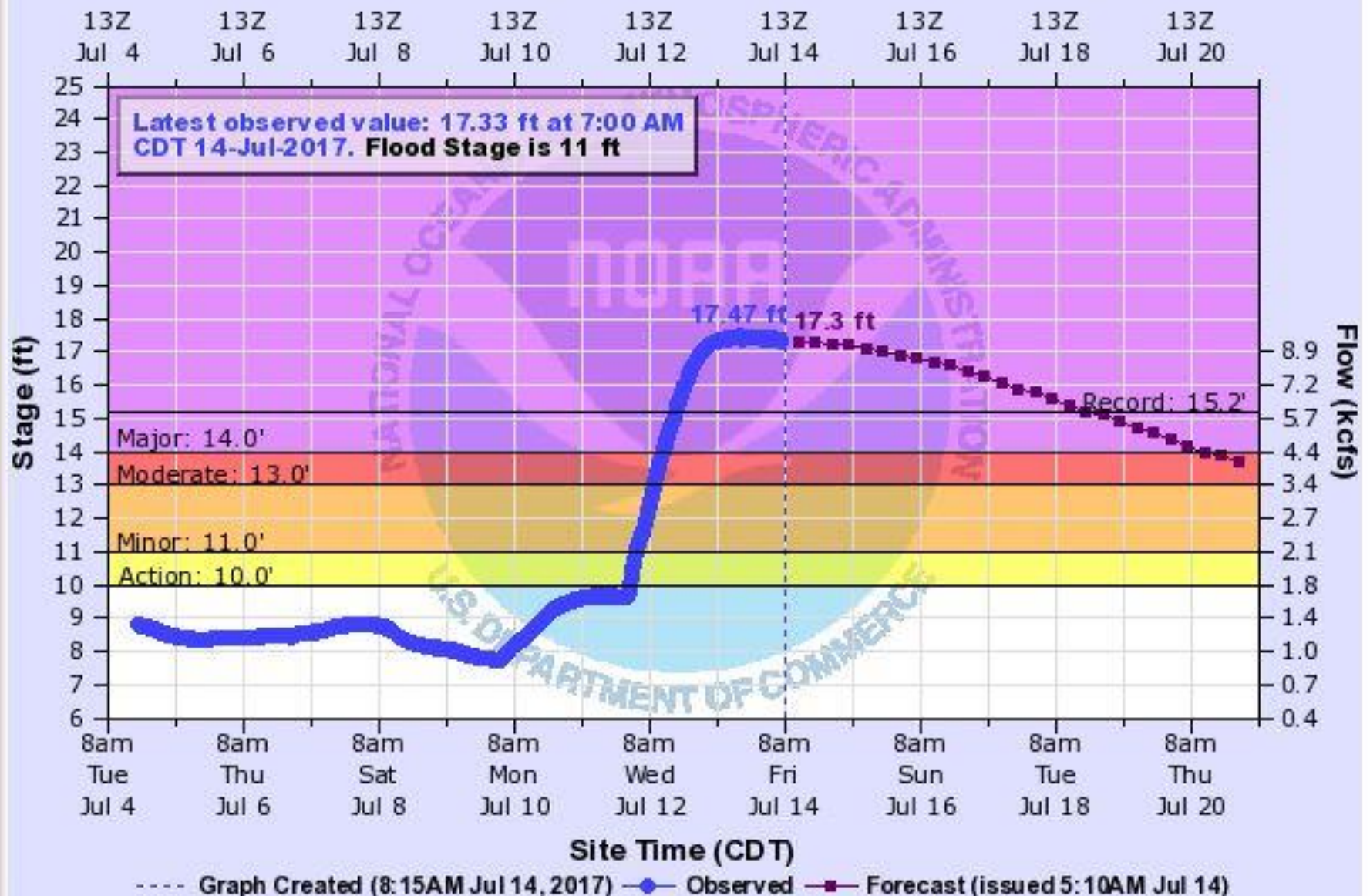


July 12, 2017 – Walworth, Kenosha and Racine



FOX RIVER NEAR NEW MUNSTER

Universal Time (UTC)





Preliminary Damage Assessment for Individual Assistance (IA)



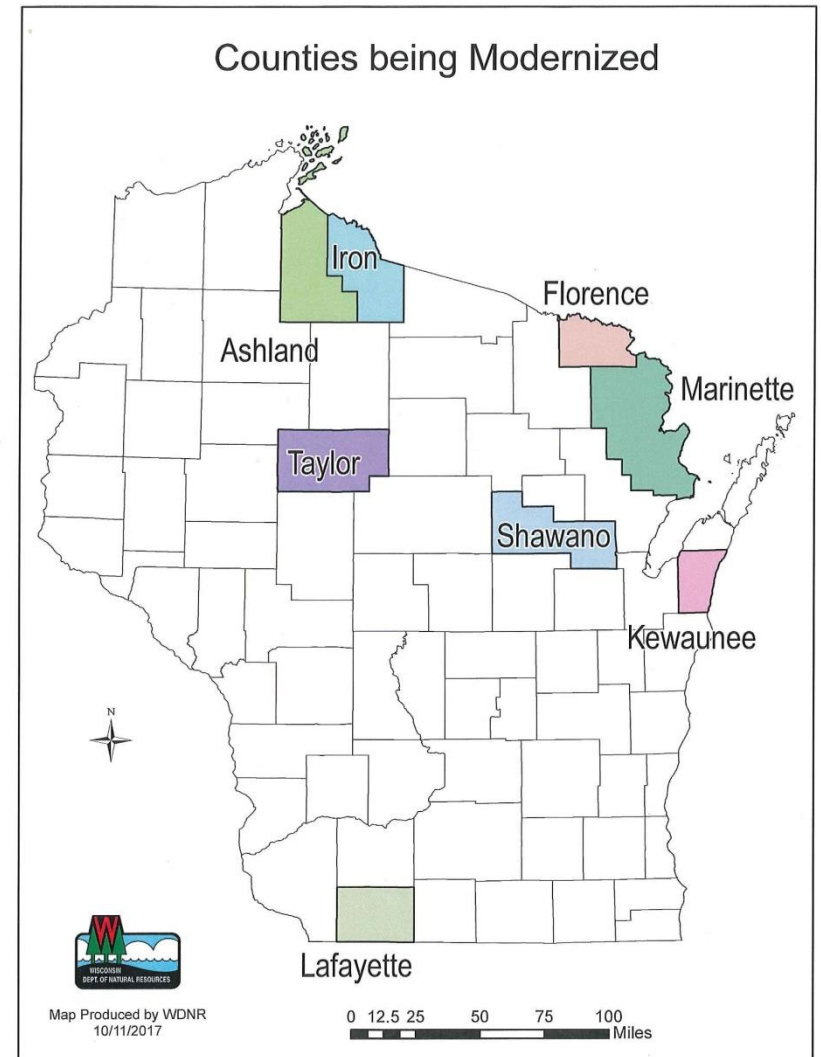
Governor Scott Walker requested the U.S. Small Business Administration (SBA) declare Kenosha, Racine, and Walworth Counties a disaster area due to damage caused by widespread flooding in July 2017. An SBA disaster declaration would provide low-interest loans to eligible individuals and businesses affected by the floods.

The background is a stylized map of a town or city, rendered in shades of blue. The map shows a grid of streets, various building footprints, and several winding, irregular shapes that represent floodplains or water bodies. The overall aesthetic is technical and cartographic.

FEMA FLOODPLAIN MAP UPDATE

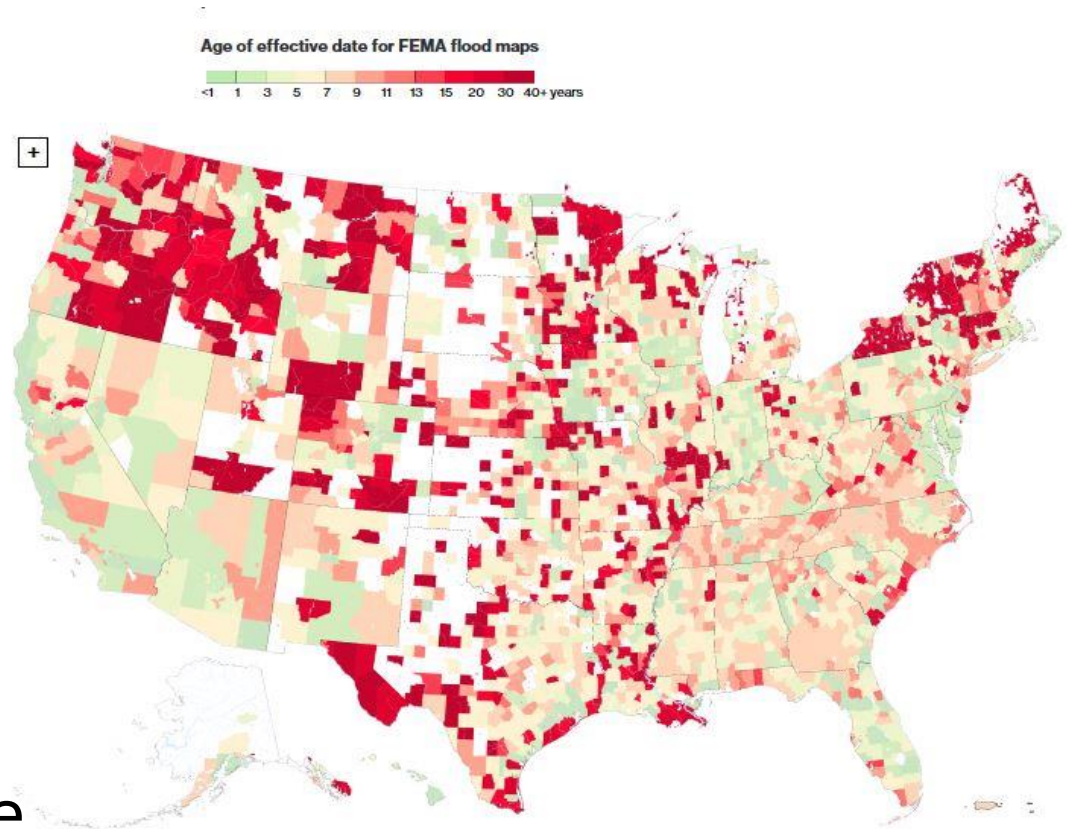
Map Modernization (County-Wide)

- Iron County
- Lafayette County
- Ashland County
- Kewaunee County
- Florence County
- Taylor County
- Shawano County
- Marinette County

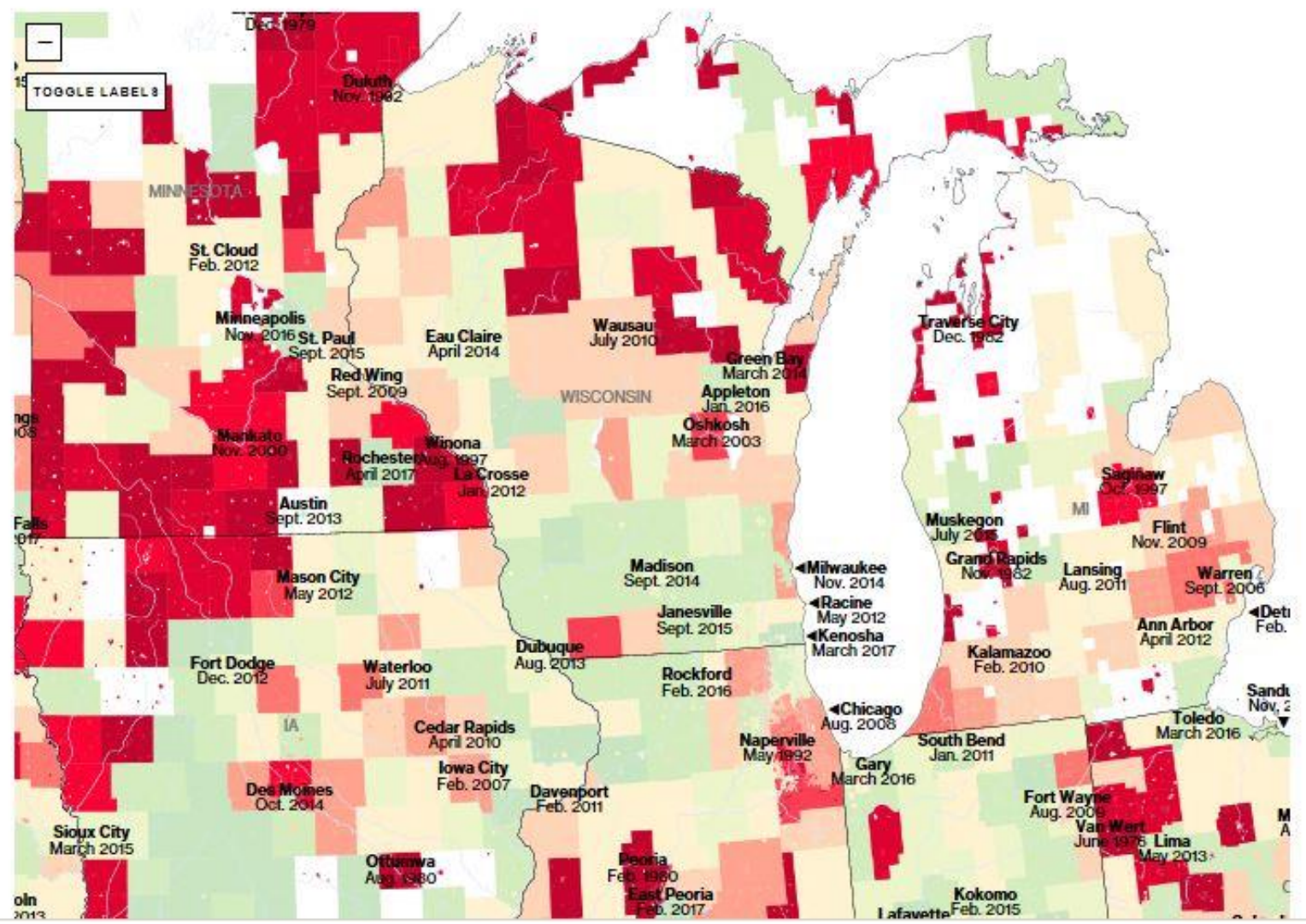
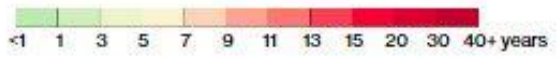


FIRM Maps

FEMA manages flood maps for about 22,000 communities across the U.S. Almost two-thirds of those maps have an “effective date”—the date it was last officially updated—more than five years old; some maps have been in place for more than 40 years.



Age of effective date for FEMA flood maps



Great Lakes Mapping



Work Maps Meetings Completed

Wisconsin

July 26, 2017 – Kenosha, Racine and Milwaukee County

August 8, 2017 – Ozaukee, Sheboygan, Manitowoc and Kewaunee Co

August 21, 2017 – Door County

August 22, 2017 – Oconto, Marinette, and Brown County

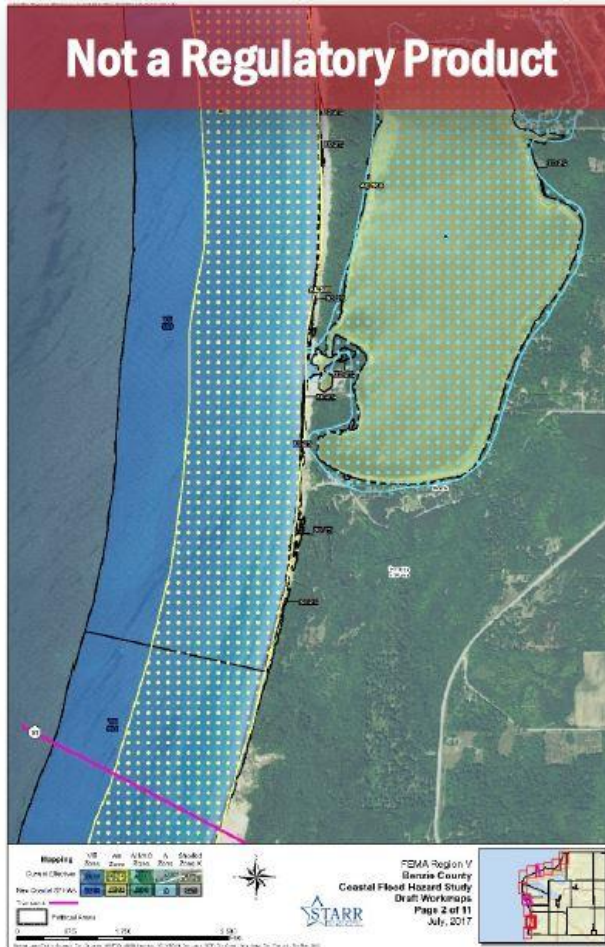


2017 Door County, WI

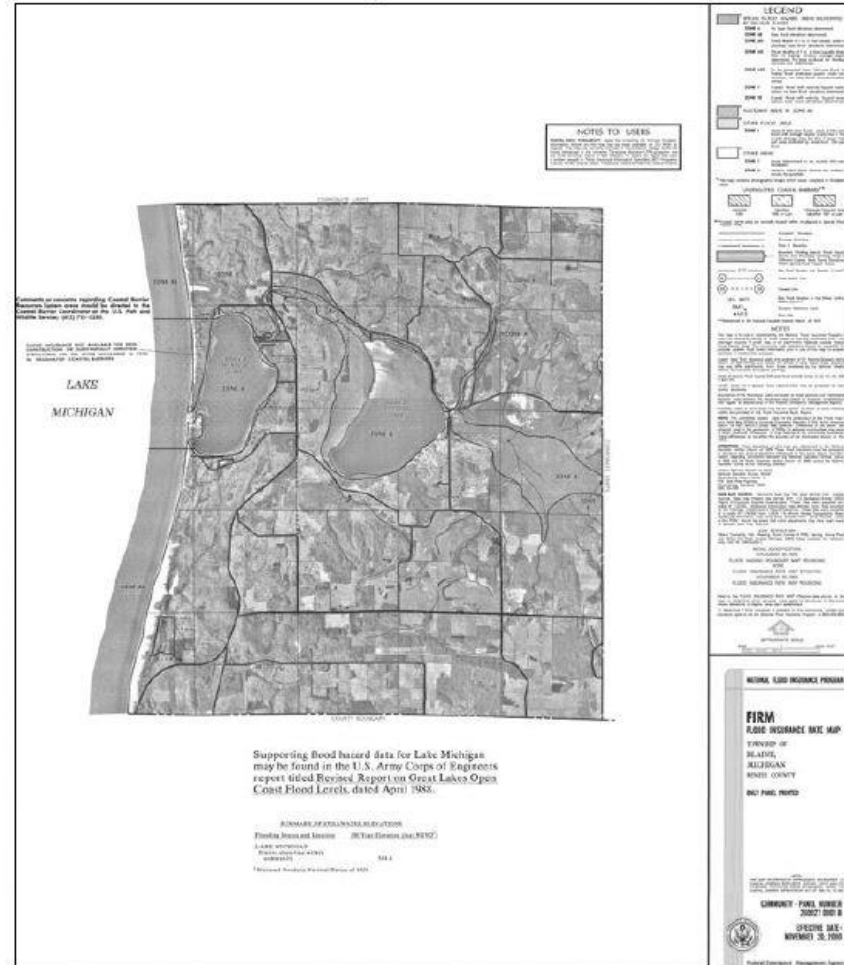
Coastal High Hazard Areas (Zone VE) are areas that are exposed to powerful waves during large flood events. Identifying the areas where wave hazards are expected to be particularly strong is critical for flood risk awareness because waves have the potential for causing significant structural damage to buildings.

Draft Work Map vs FIS/FIRM

Benzie County, MI Workmap



Benzie County, MI Effective FIRM



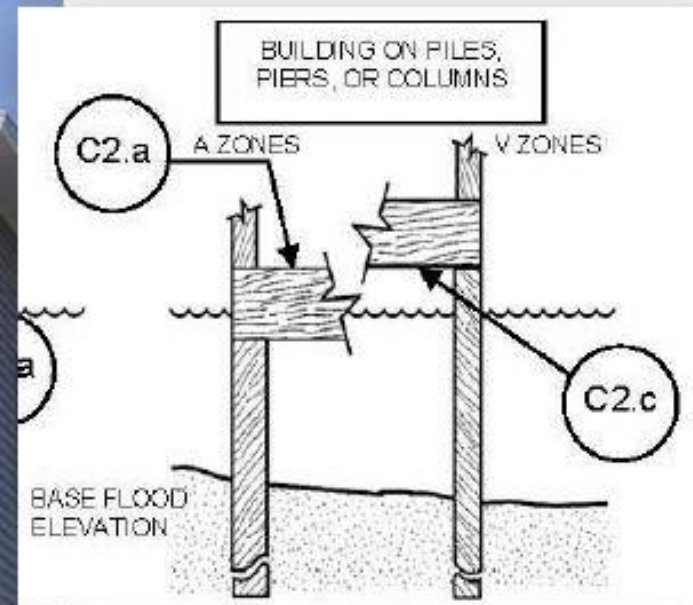


V-zone Floodplain management

The community must require that all new construction and substantial improvements have the lowest horizontal structural member of the lowest floor elevated to or above the Flood Protection Elevation,

... with the space below the lowest floor either free of obstruction or constructed with non supporting breakaway walls ...

Lowest horizontal structural member



Other key standards in Zone VE:

- ▶ Fill for structural support is prohibited
- ▶ Elevated portion of the building and piling/column foundation must be designed to withstand water and wind loads acting simultaneously under base flood conditions
- ▶ Structural design, specifications and plans for construction must be developed or reviewed and certified by a registered professional engineer or architect

Note: The V Zone design certificate is not a substitute for the NFP Elevation Certificate (see Fact Sheet No. 1.4, Lowest Floor Elevation), which is required to certify as-built elevations needed for flood insurance rating.

V ZONE DESIGN CERTIFICATE

Name: _____ Policy Number/Business Co./Use: _____
 Building Address or Other Description: _____ City: _____ State: _____ Zip Code: _____
 Parcel No.: _____

SECTION I: Flood Insurance Rate Map (FIRM) Information
 Community No.: _____ Parcel No.: _____ Sub: _____ FIRM Date: _____ FIRM Zone(s): _____

SECTION II: Elevation Information Used for Design
[NOTE: This section documents the elevations/depths used or specified in the design - it does not document surveyed elevation and is not equivalent to the as-built elevations required to be submitted during or after construction.]

1. FIRM Base Flood Elevation (BFE) _____ feet*
2. Community's Design Flood Elevation (DFE) _____ feet*
3. Elevation at the Bottom of Lowest Horizontal Structural Member _____ feet*
4. Elevation at Lowest Adjacent Grade _____ feet*
5. Depth of Anticipated Securing/Anchorage used for Foundation Design _____ feet*
6. Embedment Depth of Piling or Foundation Below Lowest Adjacent Grade _____ feet*

* Indicate elevation datum used in 1-6: NGVD03 NAVD03 Other _____

SECTION III: V Zone Design Certification Statement
 I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:
 • The bottom of the lowest horizontal structural member of the lowest floor (excluding piling and columns) is elevated to or above the BFE.
 • The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components. Water loading values used are those associated with the base flood**. Wind loading values used are those required by the applicable state or local building code. The potential for scour and erosion of the foundation has been anticipated for conditions associated with the base flood, including wave action.

SECTION IV: Breakaway Wall Design Certification Statement
[NOTE: This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (0.90 kN/sq) determined using allowable stress design.]
 I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice** for meeting the following provisions:
 • Breakaway wall collapse shall result from a water load less than that which would occur during the base flood**.
 • The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section II).

SECTION V: Certification and Seal
 This certification is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and _____ the Breakaway Wall Design Certification Statement (Section IV, check if applicable).

Certifier's Name: _____ License Number: _____
 Title: _____ Company Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Signature: _____ Date: _____ Telephone: _____

Place Seal Here

1.5: V ZONE DESIGN AND CONSTRUCTION CERTIFICATION

2 of 2

10/26





Coastal Resources

Great Lakes Coastal Flood Study

<http://www.greatlakescoast.org/>

Great Lakes Coastal Resilience Planning Guide:

<http://www.greatlakesresilience.org/>

USACE High Resolution Oblique Aerial Images:

<https://greatlakes.erdc.dren.mil/>



Municipal Flood Control Grant

- Total Available Grant Funding: The recently adopted 2017-2019 Biennial Budget increased available funding for Municipal Flood Control (MFC) grants to \$1.85 million. We will also be able to use some grant funds from the prior grant cycle that were not fully utilized by those grantees. As a result, total available funding for the next MFC grant cycle will be at least \$2.13M.
- Eligible applicants Cities, villages, towns, tribes and metropolitan sewerage districts are eligible to apply for these grants.

JANESVILLE



Downtown parking plaza



Tony DiNicola/tdinicola@gazettextra.com



Floodplain Model Ordinance

- Flooded Agricultural – Cranberries



Oroville brings flood of insurance interest

Rebecca Byrom, owner of the San Diego-based California Flood Insurance agency, said that she received 30 phone calls Tuesday morning from California homeowners scrambling to acquire flood insurance.

"I had somebody call and tell me that they had 4 feet of water in their house and they wanted to get an insurance policy," Byrom said. "It's like being in an automobile accident and then calling your insurance company to get insurance. It just doesn't work like that; you have to have foresight."

Oroville brings flood of insurance interest

Tyler Hersko, Tyler.Hersko@vcstar.com, 805-437-0312 Published 2:00 p.m. ET Feb. 15, 2017 | Updated 10:42 p.m.



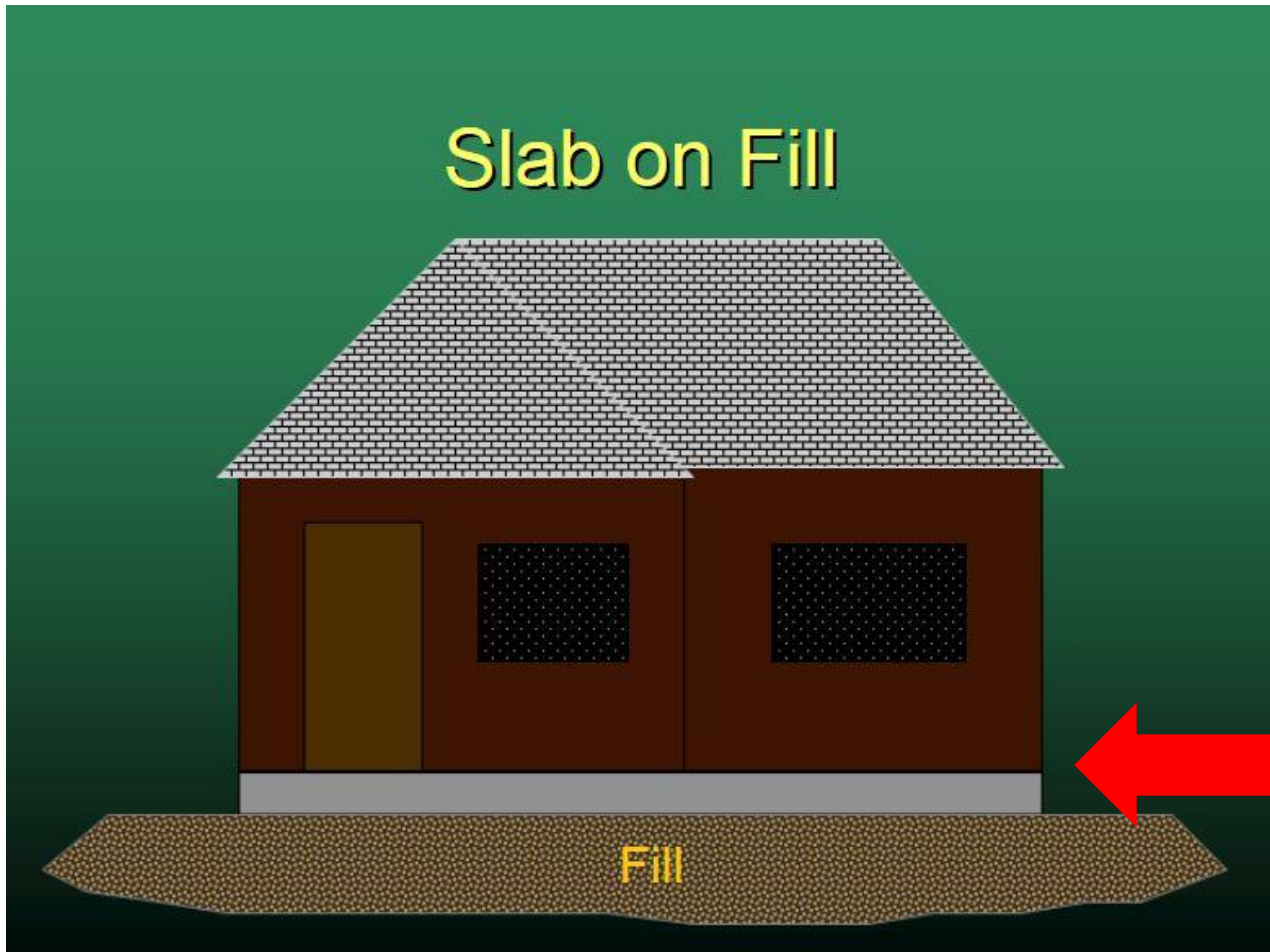
(Photo: THE ASSOCIATED PRESS)

f 64 **64** **in 83** **COMMENT** **EMAIL** **MORE**
CONNECT TWEET LINKEDIN COMMENT EMAIL MORE

Although mandatory evacuations have ceased for Butte County residents near a damaged spillway at the Oroville Dam, questions are being raised about flood insurance in preparation for a storm that could unleash a torrent on nearby communities later this week.

The problem is that for Oroville residents, it may be too late to acquire flood insurance that would cover the immediate threat, said Edith Lohmann, a national flood insurance specialist with the Federal Emergency Management Agency. With few exceptions, flood insurance plans take a month to go into effect, Lohmann said.

Insurance



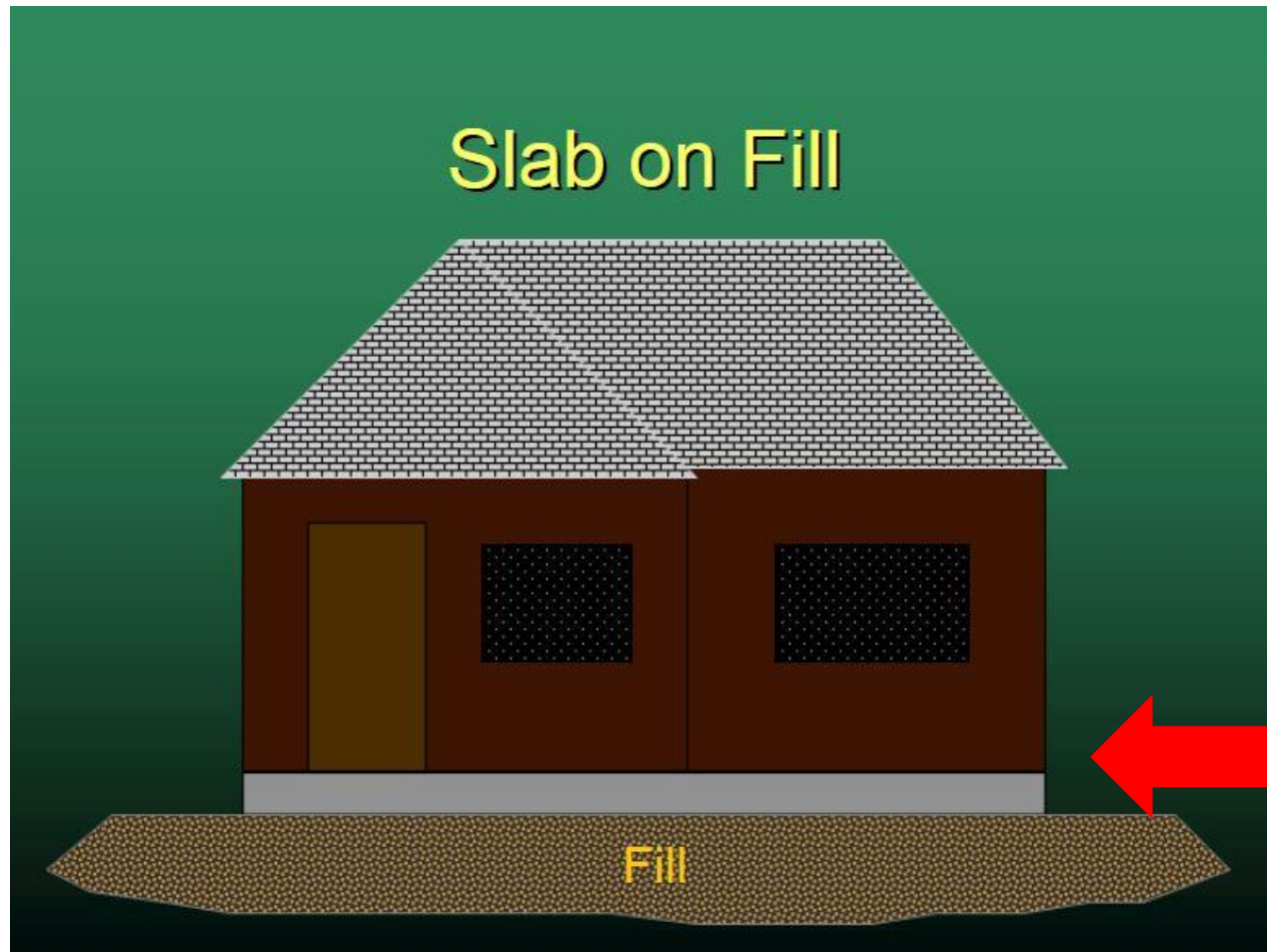
Slab on Fill

Fill

At FPE (2 feet)

\$3,000/Yr

Insurance



At 3 feet

\$675/Yr



FEMA Letter of Map Change (LOMC)

- Letters of Map Amendment (LOMAs) –
Typically, a LOMA is issued when the scale of the FIRM does not allow for small areas of natural high ground to be shown outside the SFHA
- Conditional Letter of Map Amendment (CLOMA)
– A letter from FEMA stating a proposed structure that is not to be elevated by fill (natural grade) would not be inundated by the base flood if built as proposed



LOMC (cont)

- Letters of Map Revision based on Fill (LOMR-F) – A LOMR-F is similar to a LOMA, but instead of being based on natural ground elevations, the property or structure has been elevated by fill in order to elevate it above the flood elevation
- Conditional Letter of Map Revision-Fill (CLOMR-F) – A letter from FEMA stating a parcel of land or proposed structure that will be elevated by fill would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed



LOMC (cont)

- Letters of Map Revision (LOMRs) – A LOMR is an official revision to an effective FIRM map that may change flood insurance risk zones, floodplain and/or floodway boundary delineations, plain metric features, and/or BFE. Unlike LOMAs and LOMR-Fs, a LOMR usually results in reprinting a portion of a FIRM
- Conditional Letter of Map Revision (CLOMR) – A CLOMR is a letter from FEMA's stating 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 BFE or SFHA

Map Change Request Forms

MT-EZ: Single lot/existing structure, no fill, no change to BFE or floodway (LOMA)

MT-1: Single or multiple lots/structures, proposed structures or fill, no change to BFE (LOMA, CLOMA, LOMR-F, CLOMR-F)

MT-2: Series of 12 forms to request a LOMR





Letter of Map Amendment - LOMA

Items to be Removed from the SFHA

- Structure
- Entire Lot
- Part of the Lot

For any map change letter other than a LOMA, a local official must sign the request.



44 CFR 60.3(b)

- Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;
- (4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;



Zone A - NFIP

Simplified methods

- Contour interpolation
- Data Extrapolation (rarely applicable)

MANAGING FLOODPLAIN DEVELOPMENT

IN

APPROXIMATE ZONE A AREAS

A GUIDE FOR OBTAINING AND DEVELOPING
BASE (100-YEAR) FLOOD ELEVATIONS

APRIL 1995

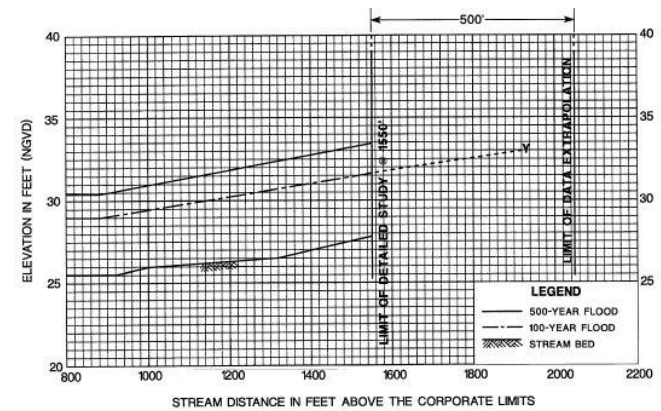
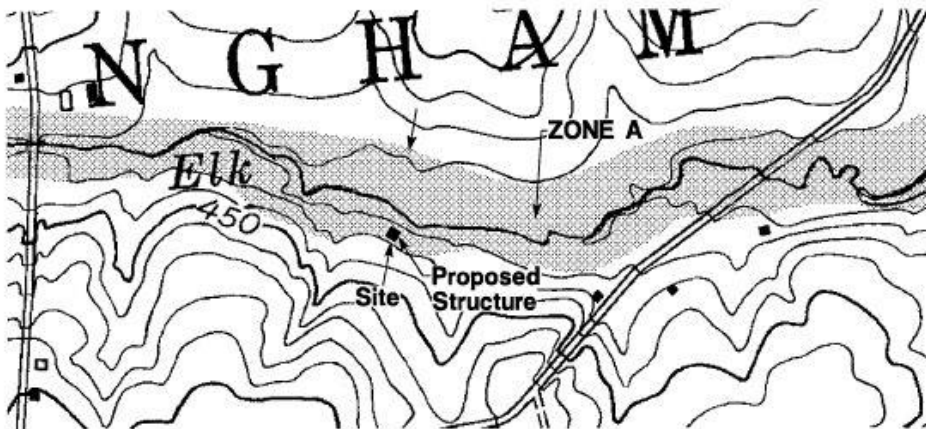
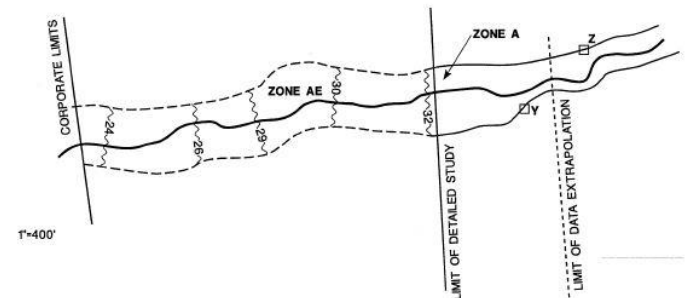
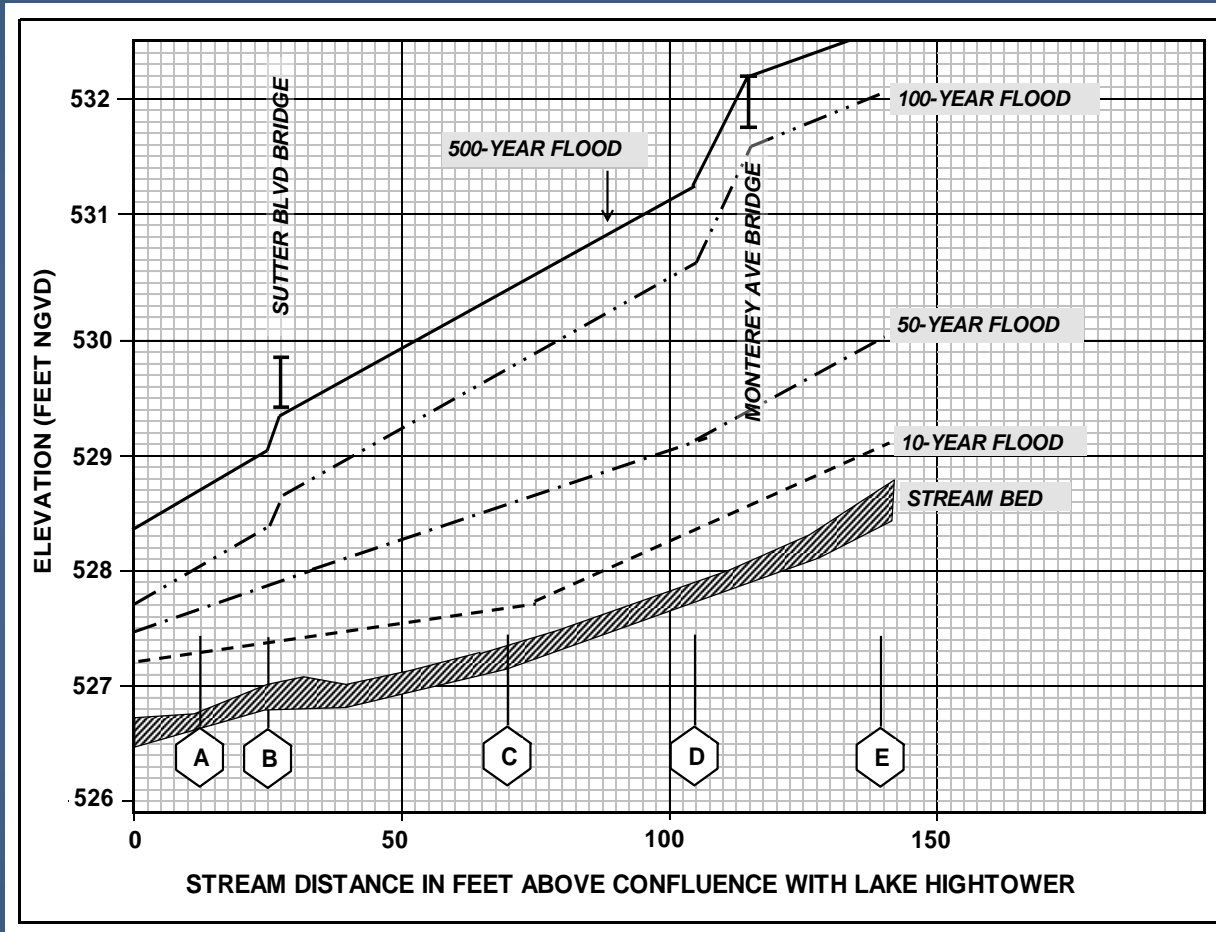


Figure 11 - Data Extrapolation Method - Profile



Data Extrapolation: Extend Profile



FEMA



Flood Data Sources

Local	State	Federal	Other
Solid waste management	Agencies responsible for bridge and road projects	<i>U.S. Army Corps of Engineers:</i> <ul style="list-style-type: none"> Floodplain Information Reports (prior to mid-70's) Floodplain Management Services Office Urban area and watershed studies 	<i>Natural Resources Conservation Service Soil Survey Reports*</i>
Transportation	Agency responsible for floodplain management (e.g., Department of Transportation, Department of Natural Resources, Emergency Management)	<i>Natural Resources Conservation Service (NRCS):</i> (Small watershed areas less than 250,000 acres) <ul style="list-style-type: none"> Constructs small flood-control dams; acquires land. Facilitates/conducts watershed planning studies for communities. 	<i>High-Water Marks—Height of past floods:</i> <ul style="list-style-type: none"> Newspaper articles Recorded high-water marks Residents
Park development	State universities may have simplified methods that would be useful.	<i>Federal Highway Administration Department of Transportation</i>	Note: It can be difficult to relate frequency of occurrence to specific flood events.
Sewage treatment		<i>Tennessee Valley Authority:</i> Conducts flood relations programs to assist State and local governments to develop non-structural measures for floodplain management.	
Water supply		<i>U.S. Geological Survey (USGS):</i> <ul style="list-style-type: none"> Helps States maintain stream gauge stations. Analyzes and records stream flow data; publishes annual report with flow data for gauged streams. Prepares inundation maps of previous floods for specific communities. Prepares Flood-Prone Quadrangle Maps, standard topographic maps (1:24,000 scale) that show approximate delineation of the 1-percent ("100-year") flood. (FEMA often uses flood-prone quads to delineate the approximate floodplain on FIRMs.) 	
Drainage			<i>Wetland maps</i>
Navigation			Fish and Wildlife Service National Wetlands Inventory Project
Special Districts:			<ul style="list-style-type: none"> Wetlands are identified on small-scale (1:100,000 or 1:125,000) and large-scale topographic maps. Some States are inventorying wetlands for regulatory purposes.
<ul style="list-style-type: none"> Flood Control Levee Improvement Watershed Soil and Water Conservation 			

*Reports include description of soil classifications, and aerial photos showing the location of each soil type. Alluvial soils derived from material deposited by running water include types of soils prone to flooding. When found adjacent to rivers and streams, the boundary of alluvial soils used in conjunction with the USGS Flood-Prone Quadrangle Map or FHBM can be used to obtain a reasonable estimate of the base ("100-year") flood elevation.





Workshops

- Iron County November 9, 2017
- Lafayette County November 15, 2017
- Shoreland/Floodplain (TBA)
- Green Bay, WI (March 2018)

