CTP Information Exchange: Future Conditions Flood Mapping

COOPERATING TECHNICAL PARTNERS INFORMATION EXCHANGE WEBINAR

Webinar Participation

All lines will be automatically be muted.



Use the "Q & A" window in the Zoom control panel to submit any questions or comments to the moderator.

Selected questions will be read to the presenters and answered on the live webinar.

Submitted questions not asked during the webinar will be answered by the presenters and posted as a document on the webinar event page at floodsciencecenter.org.

Continuing Education Credits

Certified Floodplain Managers and Certified Planners are eligible for 1 CEC for participating in this webinar.

You must have registered individually and indicated you are a CFM and/or AICP at time of registration.

Eligibility for CEC is dependent on your time spent viewing the webinar, as determined by the webinar software.



Attending this webinar in a group setting or only viewing the recording is NOT eligible for CEC.

Additional Logistics

To suggest future CTP webinar topics, please contact AlanLulloff at alan@floods.org or type a suggested topic into the Questions panel.

ASFPM CFM CECs will be automatically applied.



Certificates of Attendance will be emailed. Processing will take a few weeks. Please contact cfm@floods.org with any certificate issues only after a few weeks have elapsed.

A follow-up email with a link to the slides and the webinar recording will be sent in about a week or so.

Thank you for joining us!

ASFPM Mapping & Engineering Standards Cmte
Cooperating Technical Partners Subcommittee

Co-chairs: Joanna Rohlf, - Joanna.rohlf @ks.gov
Kansas Department of Agriculture

Dave Guignet - dave.guignet@maryland.gov
Maryland Department of the Environment

Goals: **Identify common concerns**

Provide opportunities for information exchange

Identify training needs

Promote and document the value of CTPs

Agenda

1. **Introduction**
2. **TMAC recommendations—future conditions**
3. **NOAA Atlas 15 pilot**
4. **Probably Maximum Precipitation**
5. **Questions/discussion**

Presenters

1. Alan Lulloff, PE, CFM - ASFPM Flood Science Center
2. Doug Bellomo, P.E, AECOM
3. Jeff Sparrow, P.E., CFM, Moffat & Nichol
4. Sandra Pavlovic, P.E., MBA, MS, NOAA
5. Kelly Mahoney, PhD, NOAA

CTP Webinar: Future Conditions Flood Mapping

Doug Bellomo P.E.

AECOM





Jeff Sparrow P.E., CFM

moffatt & nichol

TMAC

January 7, 2025

TMAC Background

Membership

Federal Agencies (6)

- FEMA
- NOAA
- Department of Agriculture
- US Geological Survey
- Department of Interior
- US Army Corps of Engineers

State/Local (7)

- GIS
- National Flood Insurance Program Coordinators
- Cooperating Technical Partners (CTPs) - 2 state/2 local
- Hazard Mitigation Officer

Associations/Organizations (7)

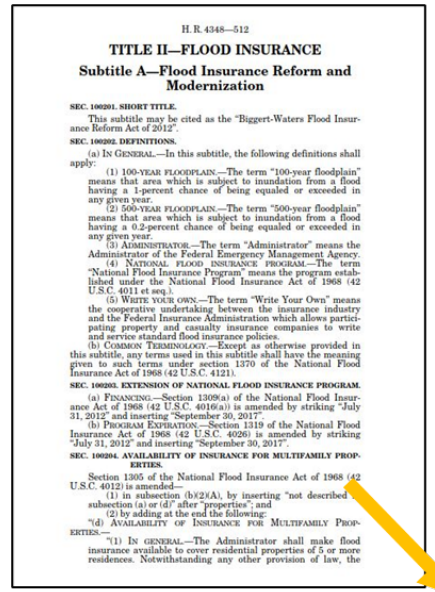
- Surveying
- Flood and Stormwater Management
- Mapping
- Engineering
- Map Determination Industry
- Floodplain Management
- Risk Management

Founding/Focus

- In law: Biggert-Waters Flood Insurance Reform Act of 2012
- Mapping improvements
- Performance metrics
- Standards and Guidelines
- Delegation Procedures
- Interagency Coordination
- Funding Strategies
- Providing Annual Reports

Future Conditions Report

- Issued 2015
- Recommendations Updated 2021
- All reports to be found here https://www.fema.gov/flood-maps/guidance-reports/technical-mapping-advisory-council/reports



H. R. 4348—512

TITLE II—FLOOD INSURANCE

Subtitle A—Flood Insurance Reform and Modernization

SEC. 100201. SHORT TITLE.

This subtitle may be cited as the "Biggert-Waters Flood Insurance Reform Act of 2012".

SEC. 100202. DEFINITIONS.

(a) IN GENERAL.—In this subtitle, the following definitions shall apply:

(1) 100-YEAR FLOODPLAIN.—The term "100-year floodplain" means that area which is subject to inundation from a flood having a 1-percent chance of being equaled or exceeded in any given year.

(2) 500-YEAR FLOODPLAIN.—The term "500-year floodplain" means that area which is subject to inundation from a flood having a 0.2-percent chance of being equaled or exceeded in any given year.

(3) ADMINISTRATOR.—The term "Administrator" means the Administrator of the Federal Emergency Management Agency.

(4) NATIONAL FLOOD INSURANCE PROGRAM.—The term "National Flood Insurance Program" means the program established under the National Flood Insurance Act of 1968 (42 U.S.C. 4011 et seq.).

(5) WRITE YOUR OWN.—The term "Write Your Own" means the cooperative undertaking between the insurance industry and the Federal Insurance Administration which allows participating property and casualty insurance companies to write and service standard flood insurance policies.

(b) COMMON TERMINOLOGY.—Except as otherwise provided in this subtitle, any terms used in this subtitle shall have the meaning given to such terms under section 1370 of the National Flood Insurance Act of 1968 (42 U.S.C. 4121).

SEC. 100203. EXTENSION OF NATIONAL FLOOD INSURANCE PROGRAM.

(a) FINANCING.—Section 1309(a) of the National Flood Insurance Act of 1968 (42 U.S.C. 4016(a)) is amended by striking "July 31, 2012" and inserting "September 30, 2017".

(b) PROGRAM EXPIRATION.—Section 1319 of the National Flood Insurance Act of 1968 (42 U.S.C. 4026) is amended by striking "July 31, 2012" and inserting "September 30, 2017".

SEC. 100204. AVAILABILITY OF INSURANCE FOR MULTIFAMILY PROPERTIES.

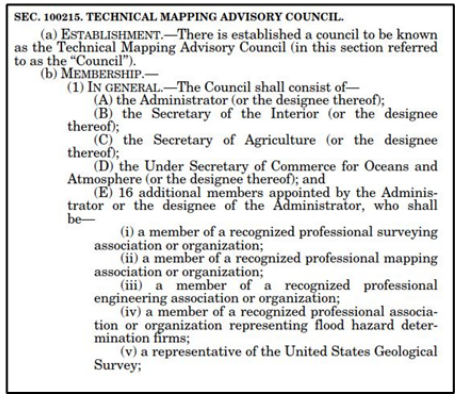
Section 1305 of the National Flood Insurance Act of 1968 (42 U.S.C. 4012) is amended—

(1) in subsection (b)(2)(A), by inserting "not described in subsection (a) or (d)" after "properties"; and

(2) by adding at the end the following:

"(d) AVAILABILITY OF INSURANCE FOR MULTIFAMILY PROPERTIES.—

"(1) IN GENERAL.—The Administrator shall make flood insurance available to cover residential properties of 5 or more residences. Notwithstanding any other provision of law, the



SEC. 100215. TECHNICAL MAPPING ADVISORY COUNCIL.

(a) ESTABLISHMENT.—There is established a council to be known as the Technical Mapping Advisory Council (in this section referred to as the "Council").

(b) MEMBERSHIP.—

(1) IN GENERAL.—The Council shall consist of—

(A) the Administrator (or the designee thereof);

(B) the Secretary of the Interior (or the designee thereof);

(C) the Secretary of Agriculture (or the designee thereof);

(D) the Under Secretary of Commerce for Oceans and Atmosphere (or the designee thereof); and

(E) 16 additional members appointed by the Administrator or the designee of the Administrator, who shall be—

(i) a member of a recognized professional surveying association or organization;

(ii) a member of a recognized professional mapping association or organization;

(iii) a member of a recognized professional engineering association or organization;

(iv) a member of a recognized professional association or organization representing flood hazard determination firms;

(v) a representative of the United States Geological Survey;

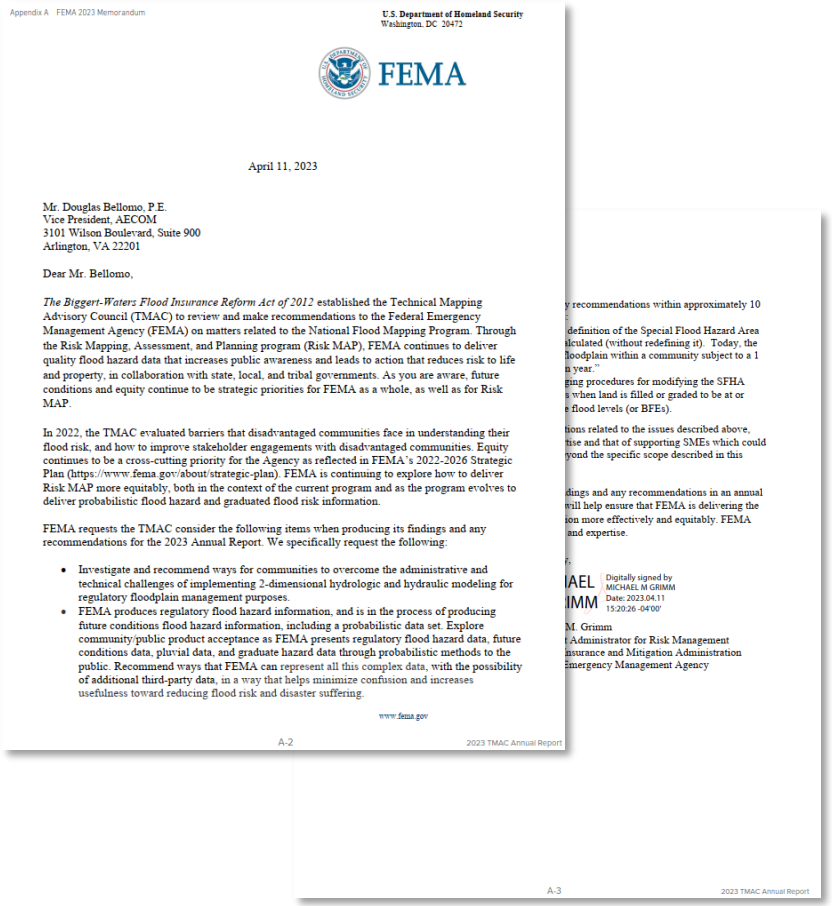
FEMA 2023 Request

1. Recommend if and how FEMA should modify the definition of the Special Flood Hazard Area (SFHA), modify how the SFHA is currently calculated (without redefining it).

2. ~~Recommend how FEMA might consider changing procedures for modifying the SFHA through letters of map change and map updates when land is filled or graded to be at or above estimated 1% annual chance exceedance flood levels (or BFEs).~~

3. ~~Investigate and recommend ways for communities to overcome the administrative and technical challenges of implementing 2-dimensional hydrologic and hydraulic modeling for regulatory floodplain management purposes.~~

4. ~~Explore community and public product acceptance as FEMA presents regulatory flood hazard data, future conditions data, pluvial data, and graduate hazard data through probabilistic methods to the public.~~



Appendix A FEMA 2023 Memorandum

U.S. Department of Homeland Security
Washington, DC 20472

FEMA

April 11, 2023

Mr. Douglas Bellomo, P.E.
Vice President, AECOM
3101 Wilson Boulevard, Suite 900
Arlington, VA 22201

Dear Mr. Bellomo,

The Biggert-Waters Flood Insurance Reform Act of 2012 established the Technical Mapping Advisory Council (TMAC) to review and make recommendations to the Federal Emergency Management Agency (FEMA) on matters related to the National Flood Mapping Program. Through the Risk Mapping, Assessment, and Planning program (Risk MAP), FEMA continues to deliver quality flood hazard data that increases public awareness and leads to action that reduces risk to life and property, in collaboration with state, local, and tribal governments. As you are aware, future conditions and equity continue to be strategic priorities for FEMA as a whole, as well as for Risk MAP.

In 2022, the TMAC evaluated barriers that disadvantaged communities face in understanding their flood risk, and how to improve stakeholder engagements with disadvantaged communities. Equity continues to be a cross-cutting priority for the Agency as reflected in FEMA's 2022-2026 Strategic Plan (https://www.fema.gov/about/strategic-plan). FEMA is continuing to explore how to deliver Risk MAP more equitably, both in the context of the current program and as the program evolves to deliver probabilistic flood hazard and graduated flood risk information.

FEMA requests the TMAC consider the following items when producing its findings and any recommendations for the 2023 Annual Report. We specifically request the following:

- Investigate and recommend ways for communities to overcome the administrative and technical challenges of implementing 2-dimensional hydrologic and hydraulic modeling for regulatory floodplain management purposes.
- FEMA produces regulatory flood hazard information, and is in the process of producing future conditions flood hazard information, including a probabilistic data set. Explore community/public product acceptance as FEMA presents regulatory flood hazard data, future conditions data, pluvial data, and graduate hazard data through probabilistic methods to the public. Recommend ways that FEMA can represent all this complex data, with the possibility of additional third-party data, in a way that helps minimize confusion and increases usefulness toward reducing flood risk and disaster suffering.

www.fema.gov

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definition of the Special Flood Hazard Area
alculated (without redefining it). Today, the
loodplain within a community subject to a 1
year."
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when land is filled or graded to be at or
flood levels (or BFEs).

ions related to the issues described above,
tise and that of supporting SMEs which could
yond the specific scope described in this

dings and any recommendations in an annual
will help ensure that FEMA is delivering the
on more effectively and equitably. FEMA
and expertise.

AEL Digitally signed by MICHAEL M GRIMM
IMM Date: 2023.04.11 15:20:26 -04'00'

M. Grimm
Administrator for Risk Management
nsurance and Mitigation Administration
Emergency Management Agency

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SFHA Memo Request

Topic 1

Recommend if and how FEMA should modify the definition of the Special Flood Hazard Area (SFHA), modify how the SFHA is currently calculated (without redefining it).

Special Flood Hazard Area and Flood-Prone Area

New SFHA and “Flood-Prone Area” (AR-45)

- Current SFHA proposed to be split into two pieces:
  - one for mandatory purchase,
  - and another for floodplain management.

Recommendation AR-45

FEMA should develop two new flood hazard areas:

- New Special Flood Hazard Area (SFHA) – to be used for determining mandatory purchase requirements more confidently based on existing land use conditions
- New Flood-Prone Area (FPA) – to be used for floodplain management requirements based on future conditions

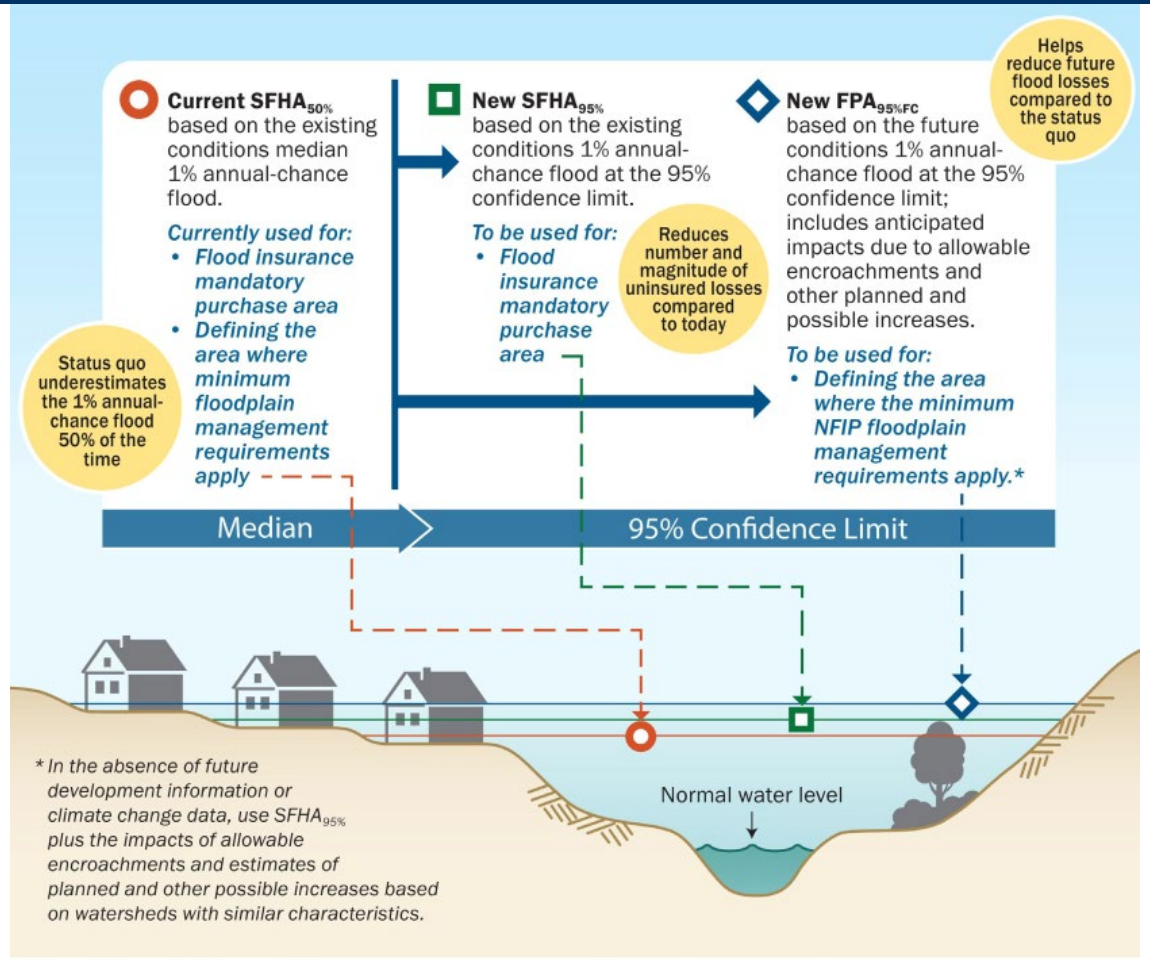


Figure 3-1: Relationship of current SFHA ($SFHA_{50\%}$) to recommended new SFHA ($SFHA_{95\%}$) and new FPA ($FPA_{95\%FC}$)

SFHA for Mandatory Purchase Requirements

New SFHA for Mandatory Purchase (AR-46)

- If the objective is to have those in the 100-year floodplain be covered by insurance, use a more confident value.

Recommendation AR-46

FEMA should develop new Special Flood Hazard Areas (SFHAs) based on the existing 1% annual-chance flood at the 95% confidence limit, not the median (50% confidence limit), as is currently done.

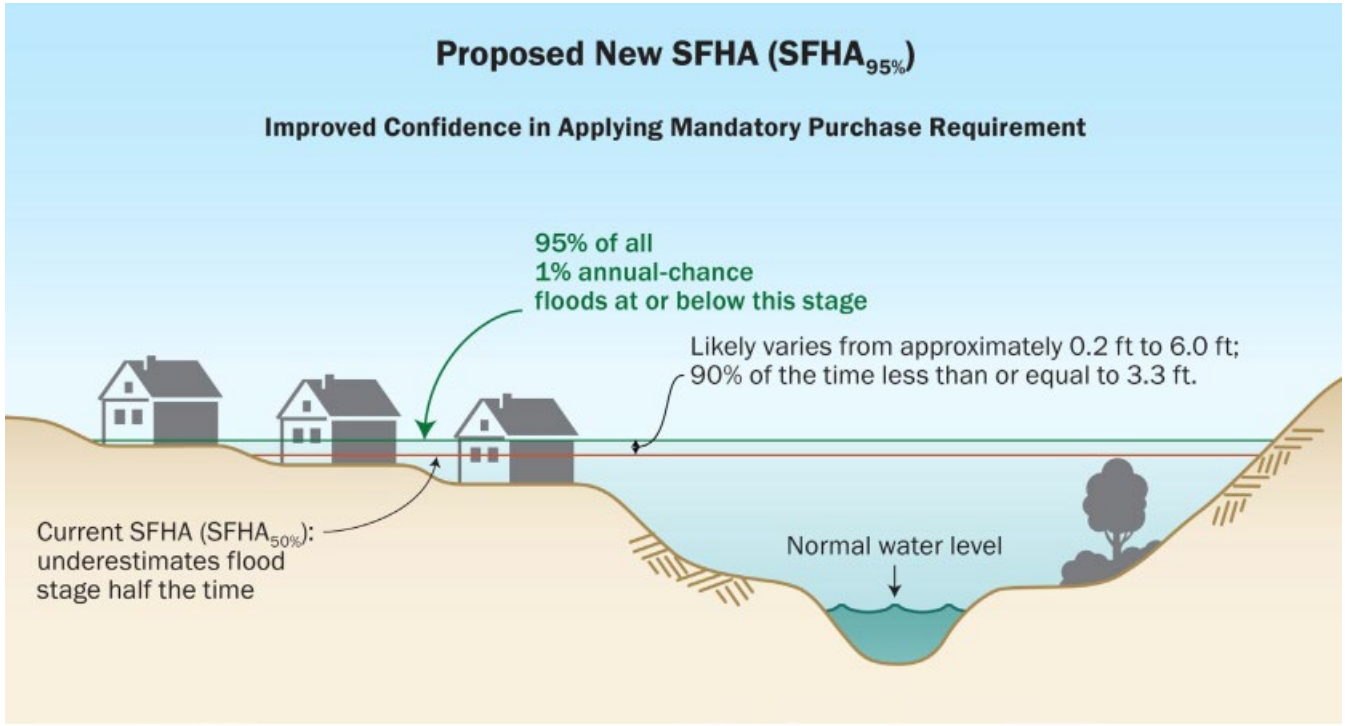


Figure 3-2: Proposed new SFHA ($SFHA_{95\%}$)

Flood Prone Area for Floodplain Management

New Flood-Prone Area (AR-47)

- If the objective is to avoid future losses in the 100-year flood hazard area, use future conditions.

Recommendation AR-47

FEMA should require new FPAs, used for floodplain management, to be based on 1% annual-chance future conditions (including land use and climate change) at the 95% confidence limit.

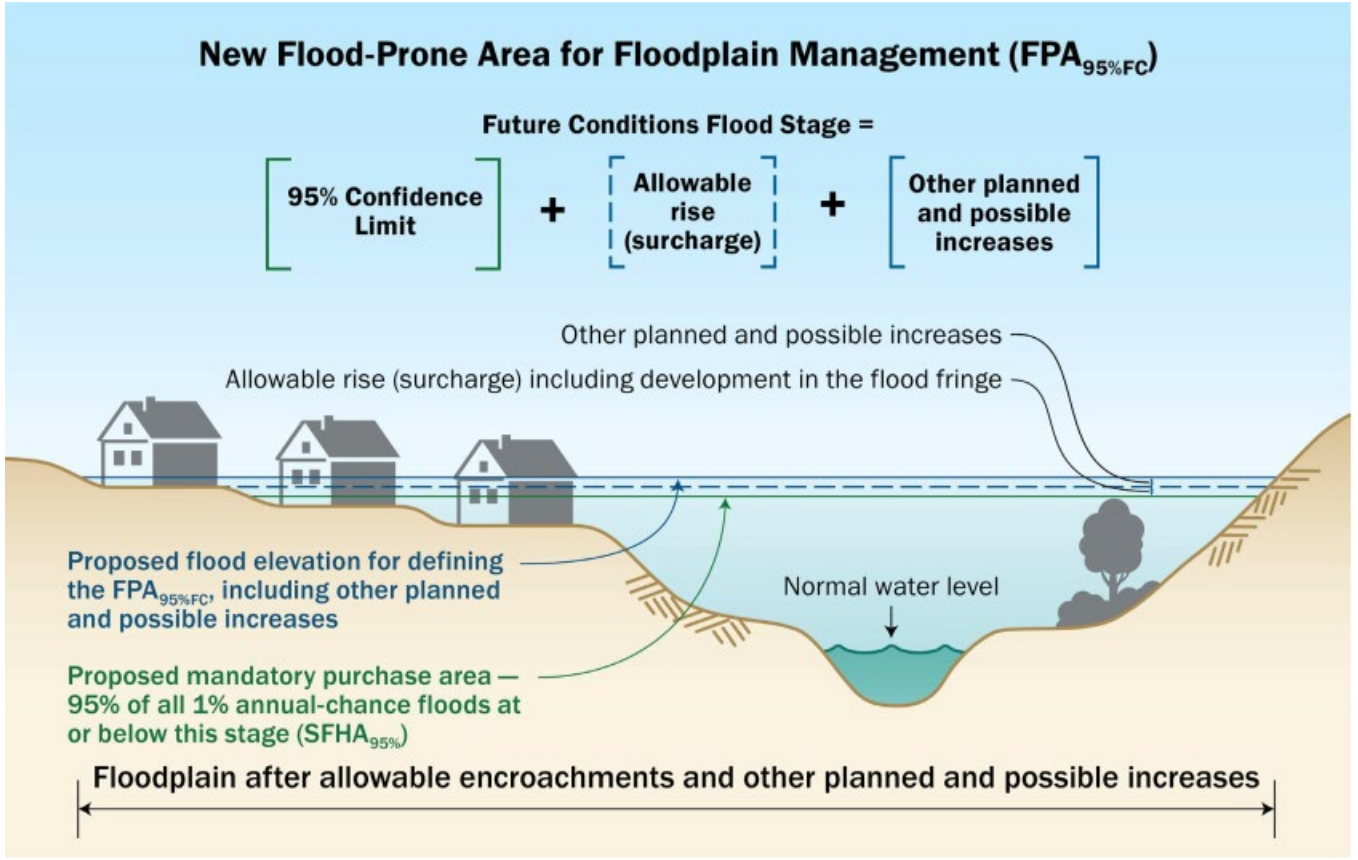


Figure 3-4: Defining a new FPA ($FPA_{95\%FC}$)

500-Year and When to Update

500-Year (AR-48)

- Develop 500-year for existing conditions at 95% confidence limit and evaluate the need for a future condition equivalent.

Recommendation AR-48

FEMA should develop 0.2% annual-chance flood estimates for existing conditions at the 95% confidence limit and evaluate the need for a future condition equivalent.

Standardize Changes (AR-52)

- Be clear about when changes to the new SFHA and Flood-Prone Area are warranted.

Recommendation AR-52

FEMA should establish a standard regarding when changes to the new Special Flood Hazard Area ($SFHA_{95\%}$) or new Flood-Prone Area ($FPA_{95\%FC}$) are warranted.

Conclusion

- Once-in-a-lifetime opportunity to put the nation on a better path toward resilience
- These are recommendations – FEMA will decide if/when/how to implement any of them
- TMAC recognizes change takes time and significant effort to develop and implement
- The report goes into more detail and includes implementation ideas