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INSIGHT

The Federal Flood Risk Management Standard (FFRMS)

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Flooding is the most frequent and costly natural disaster facing the nation, and floodplain policy has particular relevance for infrastructure and the federal government's exposure to flood losses and demand for disaster assistance. The Federal Flood Risk Management Standard (FFRMS) is a mechanism for federal agencies to consider and manage current and future flood risk by requiring federally funded projects to be located out of flood risk areas or constructed to reduce the effects of current and future flood hazards (including less-frequent larger events). Five executive orders are directly relevant to the FFRMS.

E.O. 11988

President Carter signed E.O. 11988, *Floodplain Management*, in May 1977 to require federal actions to avoid supporting development in the floodplain:

- Federal actions are to avoid, if alternatives are available, supporting development in the 1% annual-chance floodplain (also referred to as the Special Flood Hazard Area (SFHA), the 100-year floodplain, or the Base Flood Elevation (BFE) floodplain).
- Under implementation guidance for E.O. 11988, critical actions are to avoid the 0.2% annual-chance (500-year) floodplain if alternatives are available.

E.O. 13690

President Obama signed E.O. 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*, in January 2015. It established for federally funded projects an FFRMS requiring a higher level of flood resilience than E.O. 11988. Federally funded projects are defined as actions where federal funds are used for new construction, substantial improvement, or to address substantial damage to structures and facilities. E.O. 13690 modified the E.O. 11988 requirements, largely by redefining the floodplain used for federal floodplain management policy.

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E.O. 13807

In August 2017, President Trump signed E.O. 13807, *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects,* in an effort to streamline federal infrastructure approval. Among other actions, E.O. 13807 revoked E.O. 13690.

E.O. 13990 and E.O. 14030

In January 2021, President Biden revoked E.O. 13807 as part of E.O. 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, which effectively reinstated E.O. 13690, including the FFRMS. In May 2021, President Biden's E.O. 14030, *Climate-Related Financial Risk*, confirmed that guidelines for implementing E.O. 13690 remain in effect.

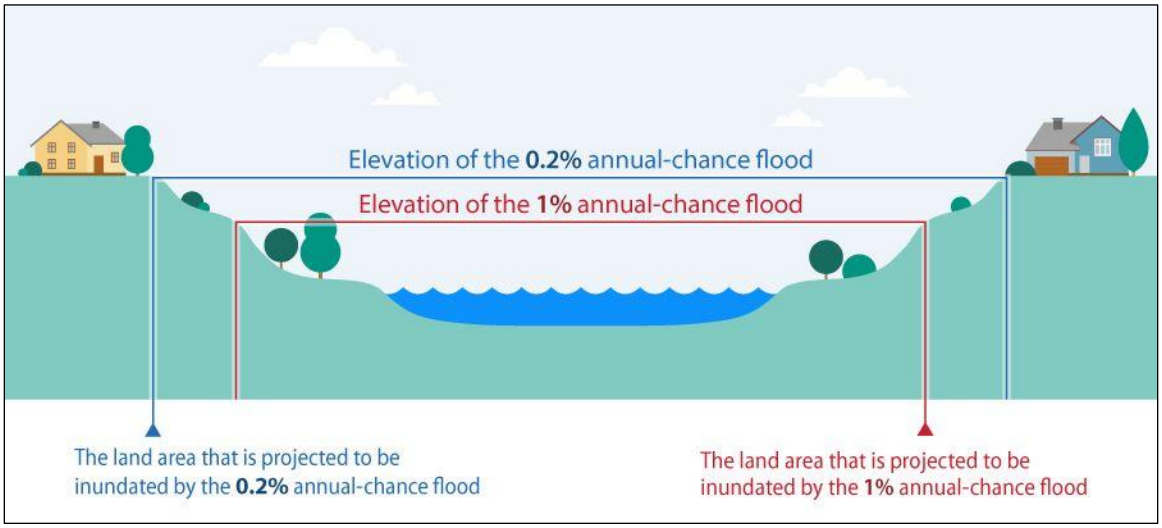
The FFRMS Floodplain

The FFRMS floodplain can be determined by one of three methods:

1. the freeboard value approach (FVA);
2. the 0.2% annual-chance (500-year) flood approach (see **Figure 1**); or
3. the climate-informed science approach (CISA), which incorporates current and future changes in flooding based on best-available, actionable climate science and other factors or changes affecting flood risk.

The FVA method determines the extent and elevation subject to flooding by adding an additional two feet to the elevation of the BFE (water level from a flood with a 1% chance of equaling or exceeding that level in any given year) for noncritical actions or an additional three feet to the BFE for critical actions. Critical actions are defined as any activity for which even the chance of flooding would be too great. CISA tools are under development by the Flood Resilience Interagency Working Group (FRIWG).

Figure 1. Vertical Elevation and Horizontal Extent of the Federal Flood Risk Management Standard Floodplain Using the 0.2% Annual-Chance Approach



Source: CRS, adapted from Pew Charitable Trusts, *North Carolina City Adopts Stringent Standard for Building in a Flood Plain*, Issue Brief, November 19, 2019.

Note: The current floodplain (the Special Flood Hazard Area) is the area inundated by the 1% annual-chance flood (shown in red). The FFRMS floodplain is the area inundated by the 0.2% annual-chance flood (shown in blue). In this illustration, the 0.2% annual-chance floodplain expands both the horizontal extent and the elevation of the inundated area.

Agency FFRMS Implementation

While broad federal FFRMS implementing guidelines were finalized in October 2015, various federal agencies are currently developing or updating procedures and regulations tailored to their programs to account for the reinstated FFRMS.

- The Federal Emergency Management Agency (FEMA) has produced policy guidance for partial implementation of the FFRMS. It requires the use of the FFRMS FVA for noncritical actions involving structures in the SFHA that receive funding from any FEMA program (Individual Assistance, Public Assistance, Hazard Mitigation Assistance). This policy does not address the horizontal expansion of the floodplain (see **Figure 1**), or the application of the FFRMS to critical actions. FEMA intends to fully implement the FFRMS by rulemaking (i.e., amending 44 C.F.R. Part 9).
- The U.S. Army Corps of Engineers uses CISA methods set out in agency guidance to evaluate climate change impacts on coastal and inland flood hazard for its civil works projects.
- The Department of Housing and Urban Development (HUD) has a 2023 proposed rule that would affect projects receiving HUD assistance, financing, or insurance. It would establish that, when possible, the CISA approach should determine the FFRMS floodplain and would require that newly constructed and substantially improved structures be elevated or floodproofed to the FFRMS floodplain elevation. The proposed rule would also revise HUD's minimum property standards under the FHA mortgage insurance program, and require that the lowest floor be built at least two feet above the 1% annual-chance floodplain for low-rent public housing programs.
- The U.S. Environmental Protection Agency determined that the FFRMS would go into effect starting FY2022, applying to certain projects funded by State Revolving Fund capitalization grants.
- The General Services Administration submitted a draft floodplain management policy that would support the FRIWG approach to implementation of the FFRMS.

Many other agencies do not have publicly available information on their implementation of the FFRMS.

Considerations for Congress

Congress may assess FFRMS's effect on implementation of federally funded projects and disaster-related programs. For example, buildings and infrastructure funded by the Infrastructure Investment and Jobs Act and P.L. 117-169 (referred to as the Inflation Reduction Act) may not be built to the FFRMS, as the standard has not been fully implemented by most agencies, leaving these assets potentially vulnerable to flooding. Congress may consider codifying, modifying implementation, or blocking implementation of the FFRMS. Congress may also consider how to evaluate the net benefits of the FFRMS, including its impact on low-income and vulnerable populations.

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