

DEPARTMENT OF HOMELAND SECURITY**Federal Emergency Management Agency****44 CFR Part 9**

[Docket ID FEMA–2023–0026]

RIN 1660–AB12

Updates to Floodplain Management and Protection of Wetlands Regulations To Implement the Federal Flood Risk Management Standard

AGENCY: Federal Emergency Management Agency, Department of Homeland Security.

ACTION: Final rule.

SUMMARY: On October 2, 2023, the Federal Emergency Management Agency (FEMA) published a notice of proposed rulemaking (NPRM) and supplementary policy that proposed to implement the Federal Flood Risk Management Standard (FFRMS) and update the agency's 8-step decision-making process for floodplain reviews by changing how FEMA defines a floodplain with respect to certain actions and how FEMA uses natural systems, ecosystem processes, and nature-based approaches when developing alternatives to locating a proposed action in the floodplain. After a careful review of the public comments received, FEMA is now issuing a final rule that implements the proposed rule, with some minor amendments.

DATES: This rule is effective September 9, 2024.

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I. Executive Summary*A. Purpose of the Regulatory Action*

The purpose of this regulatory action is to finalize a rulemaking that will improve the preparedness and resilience of communities and Federal assets against the increasing impacts of flooding. All Federal agencies, including FEMA, have long taken action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains when carrying out certain agency functions. Federal agencies accomplish this by applying the longstanding 8-step decision-making process to any action they take in floodplains to ensure they avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

This framework was originally established in 1977 by Executive Order 11988, “Floodplain Management,” (42 FR 26951) which was issued in furtherance of the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*), the National Flood Insurance Act of 1968 as amended (NFIA) (42 U.S.C. 4001 *et seq.*), and the Flood Disaster Protection Act of 1973, as amended (Flood Disaster Protection Act) (Pub. L. 93–234, 87 Stat. 975). Executive Order 11988 was supplemented by guidance called “Floodplain Management Guidelines” issued in 1978 by the U.S. Water Resources Council (“1978

Guidelines”).¹ FEMA implemented Executive Order 11988 in 1980 through the promulgation of regulations at 44 CFR part 9, “Floodplain Management and Protection of Wetlands,”² which applies the 8-step decision-making process to all actions FEMA directly takes and to all actions that it funds through grants to eligible State, local, Tribal, and territorial (SLTT) governments, certain private non-profits, and individuals and households for pre- and post-emergency or disaster-related projects.

The first step in the 8-step process is to determine whether the action FEMA proposes to take or fund will occur in a floodplain or wetland.³ Section (6)(c) of Executive Order 11988 defined the term “floodplain” to mean, at a minimum, “that area subject to a one percent or greater chance of flooding in any given year,” which is recognized as the “base floodplain.” Executive Order 11988 and the base floodplain definition remained unchanged from 1977 until 2015. In 2015, President Barack Obama amended Executive Order 11988 by adding a new flood risk reduction standard to the existing 8-step decision-making process to improve the Nation's resilience against the increasing impacts of flooding.⁴ The flood risk reduction standard, called the Federal Flood Risk Management Standard (FFRMS), is a flexible framework to define the floodplain that allows agencies to choose among several approaches to expand the base floodplain to a higher vertical elevation and corresponding horizontal extent for all Federally

¹ 42 FR 6030, Feb. 10, 1978. A PDF copy of the 1978 Guidelines can be found at this link: <https://www.federalregister.gov/documents/1978-02-10/42-fr-6030> (last accessed Jan. 24, 2024).

² FEMA published an interim final rule on December 27, 1979 (44 FR 76510) and a final rule on September 9, 1980 (45 FR 59520). Note that this part also implements a related Executive Order 11990, “Protection of Wetlands.” See 42 FR 26961, May 25, 1977.

³ Any action FEMA takes in a floodplain or wetland, including its provision of grants for disaster assistance, undergoes an analysis pursuant to Executive Orders 11988 and 11990 (unless the action is specifically exempted from the requirements of the Orders). The grant recipient, therefore, generally provides information to FEMA about the practicability of alternatives outside the floodplain and wetland and other information to assist in the analysis.

⁴ Executive Order 13690, “Establishing a Federal Flood Risk Management Standard (FFRMS) and a Process for Further Soliciting and Considering Stakeholder Input.” 80 FR 6425, Feb. 4, 2015. In 2017, President Donald Trump revoked the amendments to Executive Order 11988. See Executive Order 13807, “Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Project,” 82 FR 40463, Aug. 24, 2017. In 2021, President Joseph Biden reinstated the amendments. See Executive Order 14030, “Climate Related Financial Risk,” 86 FR 27967, May 25, 2021.

funded projects. Federally funded projects are defined as actions where Federal funds are used for new construction, substantial improvement, or repairs to address substantial damage to structures and facilities.⁵ The amendments also direct agencies to use natural systems, ecosystem processes, and nature-based approaches when developing alternatives to locating the action in the floodplain. The Water Resources Council then updated the 1978 Guidelines and issued the “Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, ‘Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input’” (“Revised Guidelines”)⁶ to provide additional information on the use of the FFRMS.

FEMA first partially implemented the FFRMS in its grant programs through policy using an interim approach that applied higher elevation requirements to eligible projects in existing floodplains.⁷ FEMA then proposed to fully implement the FFRMS in its October 2, 2023 NPRM and supplementary policy.⁸ FEMA proposed to prioritize the use of the Climate-Informed Science Approach (CISA) in its FFRMS implementation. The CISA establishes the required vertical elevation and corresponding horizontal floodplain, through the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science, in accordance with the Revised Guidelines. When such data is

not available, FEMA’s NPRM and supplementary policy proposed the use of other approaches depending on the criticality of the action. FEMA also proposed to require the use of natural systems, ecosystem processes, and nature-based approaches where possible.

FEMA has authority to require application of the FFRMS as a condition of funding in its grant programs based on the grant programs’ authorizing statutes. Congress granted FEMA the authority to provide Federal assistance through multiple grant programs under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act),⁹ the NFIA,¹⁰ the Homeland Security Act of 2002,¹¹ the Federal Fire Prevention and Control Act of 1974,¹² the Earthquake Hazards Reduction Act of 1977,¹³ and various other appropriations acts. Under each of these authorities, FEMA may set grant eligibility criteria consistent with the respective purposes of such programs and FEMA’s mission, including to protect Federal investments from the risks of further damage.¹⁴ Under the Stafford Act and the NFIA, which authorize the programs that fund the

majority of the actions subject to the FFRMS, FEMA has general rulemaking authority.¹⁵ Further, FEMA has explicit authority under the Stafford Act to set the minimum standards for safe land use and construction standards required in the repair or construction of private and public facilities.¹⁶

This rule is an important first step toward mitigating future flood risk that will ultimately benefit communities by allowing them to recover from future disasters more efficiently and effectively. The United States is experiencing increased flooding and flood risk from changing conditions.¹⁷ The full extent of future changes in flood risk has not yet been estimated across the full inventory of Federal, State, local, Tribal, and territorial properties. However, in a survey of Federal properties alone, an assessment identified over 40,000 individual Federal buildings and structures with a combined replacement cost of \$81 billion (in 2020 dollars) located in the current 1 percent floodplain and approximately 160,000 structures with a total replacement cost of \$493 billion (in 2020 dollars) located in the current 0.2 percent floodplain.¹⁸ Approximately 10,250 individual Federal buildings and structures were identified in coastal areas with a combined replacement cost of \$32.3 billion that would be severely impacted by an eight-foot sea-level rise scenario and over 12,195 individual Federal buildings and structures were identified with a combined replacement cost of over \$43.7 billion under a ten-foot “worst case” sea level rise scenario.¹⁹ The Federal fiscal exposure presented above can be reduced by enhancing resilience. This final rule will enhance resilience by ensuring that actions subject to the FFRMS are designed to be resilient to both current and future flood risks to minimize the impact of floods on human health, safety, and welfare and to protect Federal investments by reducing the risk of flood loss.

⁵ See “Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” 80 FR 64008 (Oct. 22, 2015) (providing notice of the availability of the Revised Guidelines in the docket for the rulemaking at <https://www.regulations.gov/document/FEMA-2015-0006-0358> (main content) and <https://www.regulations.gov/document/FEMA-2015-0006-0372> (appendices)) also available at https://www.fema.gov/sites/default/files/documents/fema_10082015.pdf (last accessed Mar. 11, 2024).

⁶ 80 FR 64008, Oct. 22, 2015.

⁷ See FEMA Policy 104–22–003, “Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim),” June 3, 2022, found at https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implemetnaton-ffrms-pa-interim.pdf (last accessed Jan. 24, 2024) and FEMA Policy 206–21–003–0001, “Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Program,” Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024).

⁸ 88 FR 67870, Oct. 2, 2023; 88 FR 67697, Oct. 2, 2023.

⁹ 42 U.S.C. 5121 *et seq.*

¹⁰ 42 U.S.C. 4001 *et seq.*

¹¹ 6 U.S.C. 101 *et seq.*; see also 6 U.S.C. 314(a)(12), which specifically charges the Administrator with supervising various grant programs authorized under the HSA. Such grant programs have long been governed by floodplain management regulations at 44 CFR part 9, see, e.g., 44 FR 76510 (Dec. 27, 1979), 45 FR 59520 (Sept. 9, 1980). See also, e.g., 2 CFR 200.300(a) (directing Federal awarding agencies to manage and administer Federal awards in a manner so as to ensure that Federal funding is expended and associated programs are implemented in full accordance with the U.S. Constitution, Federal Law, and public policy requirements including, but not limited to, those protecting public welfare and the environment; and requiring the Federal awarding agency to communicate to the non-Federal entity all relevant public policy requirements, and incorporate them either directly or by reference in the terms and conditions of the Federal award.).

¹² 15 U.S.C. 2229 and 2229a.

¹³ 42 U.S.C. 7701 *et seq.*

¹⁴ See, e.g., 6 U.S.C. 609 (granting FEMA approval authority over grant funds for construction awards under its Homeland Security Grant Program, State Homeland Security Grant Program, Urban Area Security Initiative, Operation Stonegarden, Tribal Homeland Security Grant Program, and Nonprofit Security Grant Program); 6 U.S.C. 1182(d)(1) (granting DHS the authority to determine the grant requirements for the Intercity Bus Security Grant Program); 6 U.S.C. 1163(c)(1) (granting FEMA the authority to determine the grant requirements for the Intercity Passenger Rail grant program); 46 U.S.C. 70101 (granting DHS approval authority over grant funds for construction awards under the Port Security Grant Program); 6 U.S.C. 1135(c)(1) (granting DHS the authority to determine the grant requirements for the Transit Security Grant Program); 33 U.S.C. 467f–2(c)(2)(A) (granting FEMA the authority to set the minimum eligibility requirements for the Rehabilitation of High Hazard Dam Program).

¹⁵ See 42 U.S.C. 5164; 42 U.S.C. 4128(a) and (b).

¹⁶ 42 U.S.C. 5165a(a)(1)–(2).

¹⁷ As a result of climate change, flood events are on the rise. Climate change is increasing flood risk through (1) more “extreme” rainfall events,” caused by a warmer atmosphere holding more water vapor and changes in regional precipitation patterns; and (2) sea-level rise. See Rob Bailey, Claudio Saffioti, and Sumer Drall, *Sunk Costs: The Socioeconomic Impacts of Flooding 3 and 8*, Marsh McLennan (2021).

¹⁸ Federal Budget Exposure to Climate Risk. OMB Assessment found https://www.whitehouse.gov/wp-content/uploads/2022/04/ap_21_climate_risk_fy2023.pdf (last accessed Jan. 24, 2024).

¹⁹ *Id.*

B. Summary of the Notice of Proposed Rulemaking (NPRM)

On October 2, 2023, FEMA published the NPRM “Updates to Floodplain Management and Protection of Wetlands Regulations to Implement the Federal Flood Risk Management Standard.”²⁰ FEMA also published “FEMA Proposed Policy: Federal Flood Risk Management Standard (FFRMS)” with the proposed rule.²¹ The proposed rule sought to change how FEMA defines a floodplain with respect to certain actions taken by the agency and require that FEMA use natural systems, ecosystem process, and nature-based approaches, where possible, when developing alternatives to locating a proposed agency action in the floodplain.

The FFRMS is a flood resilience standard that is required for Federally funded projects and provides a flexible framework to increase resilience against flooding and help preserve the natural values of floodplains and wetlands. For actions subject to the FFRMS, the NPRM proposed to update the definition of “floodplain” to the definition used in the Revised Guidelines, which allows the agency to establish the floodplain using any of the following three approaches or a fourth approach resulting from any other method in an update to the FFRMS:

- *Approach 1: Climate-Informed Science Approach (CISA):* Utilizing the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science;
- *Approach 2: Freeboard Value Approach (FVA):* The elevation and corresponding horizontal floodplain that result from using the freeboard²²

value, reached by adding 2 feet to the base flood elevation (BFE) for non-critical actions (+2' FVA) and from adding 3 feet to the BFE for critical actions (+3' FVA).

- *Approach 3: 0.2-percent-annual-chance Flood Approach (0.2PPFA):* 0.2 percent annual chance flood (also known as the 500-year flood); or
- *Approach 4:* the elevation and flood hazard area that result from using any other method identified in an update to the FFRMS.

In many cases, each of these approaches would result in a larger floodplain and a requirement to design projects to be resilient at a higher vertical elevation. For actions that do not meet the definition of an action subject to the FFRMS, FEMA would continue to use the historical floodplain definition, with minor clarifying revisions to help stakeholders better understand the terminology. The NPRM further proposed the use, where possible, of natural systems, ecosystem processes, and nature-based approaches in the development of alternatives for all actions proposed in a floodplain. FEMA proposed other edits to 44 CFR part 9, including edits to clarify the applicability of 44 CFR part 9 to specific FEMA programs and update the monetary thresholds in § 9.5, edits to incorporate the use of the internet in public notice requirement in § 9.8, edits to consolidate temporary housing requirements in § 9.13, and other clarifying edits to update citations and remove outdated terminology.

C. Summary of Changes From the NPRM to the Final Rule

In this final rule, FEMA adopts the changes proposed in the NPRM and FFRMS policy with clarifications in consideration of the relevant comments.

management. See <https://www.fema.gov/glossary/freeboard> (last accessed June 11, 2024).

Consistent with comments received, FEMA’s edits in this final rule add a Federal agency (the National Park Service) to the best available information sources list and incorporate the use of Indigenous Knowledge by adding Indian Tribal governments to that list. The best available information sources list appears at 44 CFR 9.7(c)(3). The list is a non-exhaustive list of resources that FEMA may use to make floodplain determinations. Additional clarifying edits are included in §§ 9.5 and 9.7. The edits to the FFRMS policy accompanying this final rule clarify the use of the 0.2PPFA in coastal areas and clarify FEMA’s use of the Federal Flood Risk Management Floodplain Determination Job Aid (FFRMS Job Aid). FEMA describes these changes in detail below.

D. Impacts of the Final Rule

FEMA estimated the total impacts of this rule by analyzing the impact of the FVA, 0.2PPFA and CISA for FEMA’s Public Assistance (PA), Individual Assistance (IA), and Hazard Mitigation Assistance (HMA) grant programs. FEMA did so by examining the number of projects that would be subject to the proposed requirements in the first 10 years after the rule’s publication.²³ FEMA’s analysis focused on the costs, benefits, and transfer payments (*i.e.*, impacts on FEMA grants) that would result over a 50-year period from applying the requirements of the rule to those projects, for a total period of analysis spanning 60 years. Tables 1 and 2 show the total impacts under the three approaches for each of the affected programs.

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²³ FEMA used an average of the number of affected projects during the prior 10-year period to estimate the average annual impacts of the future 10-year period.

²⁰ 88 FR 67870, Oct. 2, 2023.

²¹ 88 FR 67697, Oct 2, 2023.

²² Freeboard is a factor of safety usually expressed in feet above a flood level for purposes of floodplain

Table 1: Summary of 60-Year Costs, Transfers, and Benefits by Approach and Program for Affected Projects in Years 1-10 (Low Estimate, 2022\$)

Costs ²⁴	Undiscounted	3% Discount Rate		7% Discount Rate	
		Present Value	Annualized	Present Value	Annualized
CISA (primary) (+5-ft)	\$149,215,620	\$127,283,949	\$4,599,146	\$104,802,806	\$7,465,023
PA	\$104,341,798	\$89,005,671	\$3,216,038	\$73,285,315	\$5,220,056
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$43,192,063	\$36,843,704	\$1,331,272	\$30,336,295	\$2,160,831
FVA	\$756,606,840	\$645,400,983	\$23,320,247	\$531,408,984	\$37,851,850
0.2PFA	\$43,407,580	\$37,027,545	\$1,337,915	\$30,487,667	\$2,171,613
FEMA Admin	\$7,752,811	\$6,700,641	\$242,114	\$5,617,336	\$400,118
Not Quantified	Not Estimated: Increased resilience standard for approximately 26,985 facility projects over 10 years, Additional costs for Adding Requirements to Buildings with Basements, Diversion of Projects Out of the Floodplain, Lifecycle maintenance costs for floodproofing, and Project Delays and Forgone Projects				
Transfer Payments from FEMA to Grant Recipients					
CISA Total (primary) (+5-ft)	\$122,766,330	\$104,722,168	\$3,783,922	\$86,225,934	\$6,141,806
PA	\$88,690,530	\$75,654,821	\$2,733,633	\$62,292,516	\$4,437,048
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$32,394,060	\$27,632,790	\$998,454	\$22,752,232	\$1,620,624
FVA Total	\$50,748,250	\$43,289,287	\$1,564,170	\$35,643,448	\$2,538,855
0.2PFA Total	\$35,173,090	\$30,003,358	\$1,084,110	\$24,704,108	\$1,759,654
Benefits					
PA (CISA, primary) (+1-ft)	\$65,817,290	\$56,143,482	\$2,028,630	\$46,227,310	\$3,292,735
Not Quantified	Not Estimated: Damage Avoidance for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects over 10 years, Potential Lives Saved, Increased Public Health and Safety, Decreased Cleanup Time, Protection of Critical Facilities, Reduction of Personal and Community Impacts				

* FEMA focused its analysis on the projects impacted in the first 10 years after the rule's publication. FEMA considered the resulting costs, benefits, and transfer payments of the proposed rule on those projects over a 50-year period, for a total of 60 years. The costs and transfers occur in the first 10 years of the 60-year period because that is when the initial investment to elevate or floodproof them to meet the proposed requirements takes place. This is an upfront cost that occurs when the project is constructed. However, the benefits of the proposed rule are realized over the 50-year useful life of the affected structures.

²⁴To obtain the total costs as in Section 7.12, add each individual approach to the FEMA admin cost.

For example, CISA + FEMA admin = total CISA cost.

Table 2: Summary of 60-Year Costs, Transfers, and Benefits by Approach and Program for Affected Projects in Years 1-10 (High Estimate, 2022\$)

Costs ²⁵	Undiscounted	3% Discount Rate		7% Discount Rate	
		Present Value	Annualized	Present Value	Annualized
CISA (primary) (+5-ft)	\$189,853,700	\$161,949,055	\$5,851,699	\$133,345,292	\$9,498,082
PA	\$144,979,878	\$123,670,781	\$4,468,591	\$101,827,801	\$7,253,115
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$43,192,063	\$36,843,704	\$1,331,272	\$30,336,295	\$2,160,831
FVA	\$74,555,130	\$63,597,039	\$2,297,949	\$52,364,403	\$3,729,876
0.2PFA	\$51,081,940	\$43,573,931	\$1,574,455	\$35,877,816	\$2,555,549
FEMA Admin	\$9,093,061	\$7,843,901	\$283,423	\$6,558,671	\$467,169
Not Quantified	Not Estimated: Increased resilience standard for approximately 26,985 facility projects over 10 years, Additional costs for Adding Requirements to Buildings with Basements, Diversion of Projects Out of the Floodplain, Lifecycle maintenance costs for floodproofing, and Project Delays and Forgone Projects				
Transfer Payments from FEMA to Grant Recipients					
CISA Total (primary) (+5-ft)	\$157,308,700	\$134,187,512	\$4,848,592	\$110,487,049	\$7,869,907
PA	\$123,232,900	\$105,120,163	\$3,798,303	\$86,553,631	\$6,165,148
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$32,394,060	\$27,632,790	\$998,454	\$22,752,232	\$1,620,624
FVA Total	\$61,609,580	\$52,554,220	\$1,898,939	\$43,271,991	\$3,082,230
0.2PFA Total	\$41,696,300	\$35,567,787	\$1,285,169	\$29,285,736	\$2,086,000
Benefits					
PA (CISA, primary) (+1-ft)	\$77,506,550	\$66,114,661	\$2,388,918	\$54,437,358	\$3,877,531
Not Quantified	Not Estimated: Damage Avoidance for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects over 10 years, Potential Lives Saved, Increased Public Health and Safety, Decreased Cleanup Time, Protection of Critical Facilities, Reduction of Personal and Community Impacts				

* FEMA focused its analysis on the projects impacted in the first 10 years after the rule's publication. FEMA considered the resulting costs, benefits, and transfer payments of the proposed rule on those projects over a 50-year period, for a total of 60 years. The costs and transfers occur in the first 10 years of the 60-year period because that is when the initial investment to elevate or floodproof them to meet the proposed requirements takes place. This is an upfront cost that occurs when the project is constructed. However, the benefits of the proposed rule are realized over the 50-year useful life of the affected structures.

Table 3 provides the estimated number of structures and facilities affected by the rule over the first 10 years, assuming that each approach is the only expansion option. Structures, which are walled and roofed buildings, would comply with the FFRMS through

elevating or floodproofing to the required height. Facilities, which are any human-made or human-placed items other than a structure such as roads and bridges, would require different mitigation measures to comply with the increased resilience standard.

The monetized impacts of this rule are representative of the floodproofing and elevation mitigation measures that are required of structures. However, for reasons explained in more detail later, FEMA was unable to monetize the impacts of the rule for facilities.

²⁵To obtain the total costs as in Section 7.12, add each individual approach to the FEMA admin cost.

For example, CISA + FEMA admin = total CISA cost.

Table 3: Estimated Number of Structures and Facilities Affected by the Final Rule in Years 1-10 For Each Approach as if Each Approach Were the Only Expansion Option²⁶

FFRMS Approach	Structures			Total Structures	Facilities		Total Facilities	Total Projects
	PA	IA	HMA		PA	HMA		
FVA	899	1,434	7,755	10,088	26,144	841	26,985	37,073
0.2PFA	688	1,434	7,712	9,834	26,144	841	26,985	36,819
CISA	1,154	1,924	10,398	13,476	26,144	841	26,985	40,461

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Quantified estimates of the benefits of this rule are available for only non-residential PA Category E projects, which are for structures. Due to the project-specific nature of facilities projects and numerous options for making them resilient, FEMA could not estimate the costs of improving flood resilience of facilities.²⁷ Table 2 shows that the total 60-year benefits for non-residential PA Category E projects in the first 10 years is \$54.4 million (7 percent). This benefit is for adding one foot of freeboard, assuming a 59-inch sea level rise (SLR).²⁸ Although the cost for PA Category E projects is \$133.3 million, this cost represents 5 feet of freeboard (FEMA's assumption for CISA).²⁹ FEMA does not have data to quantify the benefits of additional freeboard and thus the quantified benefits represent only a portion of the increased risk reduction that would be achieved through this rule. Ensuring projects are built to the height necessary to avoid additional loss scenarios would provide additional unquantified benefits of avoided damages to the structure, decreased cleanup time and disruption to the community, and increased public health and safety. Moreover, FEMA's use of CISA as its preferred approach

²⁶ These counts are based on the number of closed or obligated projects at the time of analysis. It can take several years for a project to close out or reach the obligation status after the disaster year.

²⁷ Category E projects are public buildings and contents. See Public Assistance Fact Sheet at https://www.fema.gov/sites/default/files/2020-07/fema_public-assistance-fact-sheet_10-2019.pdf.

²⁸ FEMA used one foot for benefits as the 2022 report, "A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains," only specifies monetary benefits for an additional one foot over current requirements. FEMA included this number in the quantified benefits because it is the only monetary benefit available for any freeboard level.

A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains. FEMA. Draft, July 2022, page 16. Available at: <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

²⁹ Costs for the FVA may be a better comparison because they represent 2 or 3 feet of freeboard, depending on criticality. However, the number of projects using FVA and CISA differ, making such a comparison difficult.

would use the best available and actionable scientific data to tailor future flooding risk to each project ensuring that projects are built only to the height necessary and thus maximizing net benefits. Accordingly, FEMA believes the benefits of the rule—quantified and unquantified—would justify its costs.

II. Background and Legal Authority

The President issued Executive Order 11988 (42 FR 26951, May 25, 1977) as amended by Executive Order 13690, "Establishing a Federal Flood Risk Management Standard (FFRMS) and a Process for Further Soliciting and Considering Stakeholder Input," (80 FR 6425, Feb. 4, 2015) and Executive Order 14030, "Climate-Related Financial Risk," (86 FR 27967, May 25, 2021) in furtherance of the NFIA (42 U.S.C. 4001 *et seq.*); the Flood Disaster Protection Act of 1973, as amended (Pub. L. 93–234, 87 Stat. 975); and the NEPA (42 U.S.C. 4321 *et seq.*). Each agency is responsible for implementing Executive Order 11988, as amended, as allowed by and consistent with applicable law within their existing statutory authorities.³⁰

Section II.A below describes Executive Order 11988, the 1978 Guidelines, and the statutory authority underlying the Executive Order. Executive Order 11988, along with the 1978 Guidelines, established an 8-step decision-making process by which Federal agencies carry out Executive Order 11988's direction to avoid the long- and short-term adverse impacts associated with the occupancy and modification of the floodplain, and avoid the direct or indirect support of floodplain development whenever there is a practicable alternative.

Next, Section II.B describes FEMA's statutory authority to require its grant recipients to carry out repairs or construction in accordance with specific standards. Section II.C describes FEMA's implementing regulations at 44 CFR part 9, which closely follow the

model decision-making process under Executive Order 11988. Section II.D describes the development of Executive Order 13690, the FFRMS, and additional guidance in the Revised Guidelines issued in 2015, as well as subsequent amendments to Executive Order 11988. Section II.E describes the substantive components of the FFRMS. Section II.F. describes FEMA's NPRM and supplementary policy implementing the FFRMS.

A. Executive Order 11988, "Floodplain Management"

The President issued Executive Order 11988 (42 FR 26951, May 25, 1977) in furtherance of the NFIA (42 U.S.C. 4001 *et seq.*); the Flood Disaster Protection Act of 1973, as amended (Pub. L. 93–234, 87 Stat. 975); and the NEPA (42 U.S.C. 4321 *et seq.*). The NFIA, as amended by the Flood Disaster Protection Act establishes a multi-purpose program to provide flood insurance, minimize exposure of property to flood losses, minimize the damage caused by flood losses, and guide the development of proposed construction, where practicable, away from floodplains.³¹ The NFIA and the Flood Disaster Protection Act highlight coordination of flood insurance with land management programs in flood-prone areas. NEPA requires Federal agencies to analyze the reasonably foreseeable environmental effects of proposed major Federal actions and evaluate a reasonable range of alternatives to those actions, which includes the evaluation of the impacts of proposed actions in floodplains.³² NEPA mandates that agencies "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences."³³

In furtherance of and consistent with this statutory foundation, Executive Order 11988 directs Federal agencies to avoid, to the extent possible, the long-

³¹ See 42 U.S.C. 4001 and 4102.

³² See 42 U.S.C. 4332(2)(C).

³³ See 42 U.S.C. 4331(b)(3).

³⁰ See 42 FR 26951, May 25, 1977 at Section 2(d); see also 80 FR 6425, Feb. 4, 2015 at Section 5(b).

and short-term adverse impacts associated with the occupancy and modification of floodplains, where there is a practicable alternative. The Executive Order directs each Federal agency to provide leadership and take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for: (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. Each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning, programs, and budget requests reflect consideration of flood hazards and floodplain management; and to prescribe procedures to implement the policies and requirements of the Executive Order.

To meet this direction, each agency, before taking an action, must determine whether the proposed action will occur in a floodplain.³⁴ Section (6)(c) of Executive Order 11988 defined the word “floodplain” to mean “the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year.”³⁵ If the action will occur in a floodplain, the agency must consider alternatives to avoid adverse effects and incompatible development in the floodplain. If the agency finds that the only practicable alternative requires the action to occur in the floodplain, the agency must, prior to taking the action, design or modify the action to minimize potential harm to or within the floodplain. Additionally, the agency must prepare and circulate a notice explaining why the proposed action is located in the floodplain. Particularly relevant to FEMA, the Executive Order also requires agencies

³⁴ Any action FEMA takes in a floodplain, including its provision of grants for disaster assistance, undergoes an analysis pursuant to FEMA’s implementation of Executive Order 11988 (unless the action is specifically exempted from the requirements of the Order and the implementing regulations). The grant recipient, therefore, generally provides information to FEMA about the practicability of alternatives outside the floodplain and other information to assist in the analysis.

³⁵ This is also referred to as the “100-year floodplain” or the “base floodplain.”

to provide appropriate grant funding guidance to applicants to encourage them to evaluate the effects of their proposals in floodplains, prior to submitting grant applications.

Executive Order 11988 directs agencies to prepare implementing procedures in consultation with the Water Resources Council (WRC),³⁶ FEMA, and the Council on Environmental Quality (CEQ). As noted, the WRC issued the 1978 Guidelines, the authoritative interpretation of Executive Order 11988.³⁷ The 1978 Guidelines provided a section-by-section analysis, defined key terms, and outlined an 8-step decision-making process for carrying out the directives of Executive Order 11988.

B. Statutory Authority To Require FFRMS Under FEMA Grant Programs

FEMA has authority to require application of the FFRMS as a condition of funding in its grant programs based on the grant programs’ authorizing statutes. Congress granted FEMA the authority to provide Federal assistance through multiple grant programs under the Stafford Act,³⁸ the NFIA,³⁹ the Homeland Security Act of 2002,⁴⁰ the

³⁶ The WRC, established by statute (42 U.S.C. 1962a–1), is charged with maintaining a continuing study and preparing an assessment biennially, or at such less frequent intervals as the Council may determine, of the adequacy of supplies of water necessary to meet the water requirements in each water resource region in the United States and the national interest therein; and maintaining a continuing study of the relation of regional or river basin plans and programs to the requirements of larger regions of the Nation and of the adequacy of administrative and statutory means for the coordination of the water and related land resources policies and programs of the several Federal agencies. It is responsible for appraising the adequacy of existing and proposed policies and programs to meet such requirements and making recommendations to the President with respect to Federal policies and programs.

³⁷ 42 FR 6030, Feb. 10, 1978. A PDF copy of the 1978 Guidelines can be found at this link: [hud.gov/sites/documents/DOC_14216.PDF](https://www.federalregister.gov/documents/1978/02/10/42-fr-6030) (last accessed Jan. 24, 2024).

³⁸ 42 U.S.C. 5121 *et seq.*

³⁹ 42 U.S.C. 4001 *et seq.*

⁴⁰ 6 U.S.C. 101 *et seq.*; *see also* 6 U.S.C. 314(a)(12), which specifically charges the Administrator with supervising various grant programs authorized under the HSA. Such grant programs have long been governed by floodplain management regulations at 44 CFR part 9, *see, e.g.*, 44 FR 76510 (Dec. 27, 1979), 45 FR 59520 (Sept. 9, 1980). *See also, e.g.*, 2 CFR 200.300(a) (directing Federal awarding agencies to manage and administer Federal awards in a manner so as to ensure that Federal funding is expended and associated programs are implemented in full accordance with the U.S. Constitution, Federal Law, and public policy requirements including, but not limited to, those protecting public welfare and the environment; and requiring the Federal awarding agency to communicate to the non-Federal entity all relevant public policy requirements, and incorporate them either directly or by reference in the terms and conditions of the Federal award.).

Federal Fire Prevention and Control Act of 1974,⁴¹ the Earthquake Hazards Reduction Act of 1977,⁴² and various other appropriations acts. Under each of these authorities, FEMA may set grant eligibility criteria consistent with the respective purposes of such programs and FEMA’s mission, including to protect Federal investments from the risks of further damage.⁴³

Congress enacted the Stafford Act⁴⁴ to “provide an orderly and continuing means of assistance” to State and local governments in carrying out their responsibilities to alleviate the suffering and damage that result from disasters by, among other responsibilities, “encouraging hazard mitigation measures to reduce losses from disasters, including the development of land use and construction regulations” and “identifying the climate and natural hazard resilience of vulnerable communities.”⁴⁵ FEMA has general authority under the Stafford Act to “prescribe such rules and regulations as may be necessary and proper to carry out the provisions of [the Stafford Act], and may exercise, either directly or through such Federal agency as the President may designate, any power or authority conferred to the President by [the Stafford Act].”⁴⁶ The Stafford Act further grants FEMA explicit authority to set the minimum standards for safe land use and construction standards required in the repair or construction of private and public facilities.⁴⁷

Congress enacted the NFIA to authorize a flood insurance program which is designed to “promote the public interest by providing appropriate protection against the perils of flood losses and encouraging sound land use by minimizing exposure of property to

⁴¹ 15 U.S.C. 2229 and 2229a.

⁴² 42 U.S.C. 7701 *et seq.*

⁴³ *See, e.g.*, 6 U.S.C. 609 (granting FEMA approval authority over grant funds for construction awards under its Homeland Security Grant Program, State Homeland Security Grant Program, Urban Area Security Initiative, Operation Stonegarden, Tribal Homeland Security Grant Program, and Nonprofit Security Grant Program); 6 U.S.C. 1182(d)(1) (granting DHS the authority to determine the grant requirements for the Intercity Bus Security Grant Program); 6 U.S.C. 1163(c)(1) (granting FEMA the authority to determine the grant requirements for the Intercity Passenger Rail grant program); 46 U.S.C. 70101 (granting DHS approval authority over grant funds for construction awards under the Port Security Grant Program); 6 U.S.C. 1135(c)(1) (granting DHS the authority to determine the grant requirements for the Transit Security Grant Program); 33 U.S.C. 467f-2(c)(2)(A) (granting FEMA the authority to set the minimum eligibility requirements for the Rehabilitation of High Hazard Dam Program).

⁴⁴ 42 U.S.C. 5121 *et seq.*

⁴⁵ 42 U.S.C. 5121(b)(5) and (7).

⁴⁶ 42 U.S.C. 5164.

⁴⁷ 42 U.S.C. 5165a(a)(1)–(2).

flood losses” and the objectives of which should be “integrally related to a unified national program for flood plain management.”⁴⁸ FEMA has general authority under the NFIA to “issue such regulations as may be necessary” to carry out its provisions.⁴⁹ Section 404 of the NFIA grants FEMA the authority to provide flood mitigation grant funding and requires the activities funded to be consistent with floodplain management criteria developed by the Administrator.⁵⁰

C. 44 CFR Part 9, “Floodplain Management and Protection of Wetlands”

Consistent with the NFIA, the Flood Disaster Protection Act, and NEPA, FEMA promulgated regulations implementing Executive Order 11988 at 44 CFR part 9, “Floodplain Management and Protection of Wetlands.”⁵¹ Part 9 closely follows the 1978 Guidelines in setting forth FEMA’s policy and procedures for floodplain management relating to disaster planning, response and recovery, and hazard mitigation. Part 9 generally applies to FEMA actions, including FEMA direct actions and FEMA’s disaster and non-disaster

⁴⁸ 42 U.S.C. 4001(c). As part of the floodplain management program under the NFIP, FEMA establishes minimum floodplain management criteria, and communities that participate in the NFIP must adopt and enforce floodplain management regulations that incorporate the minimum criteria. 44 CFR 59.2(b), 59.22(a)(3), 60.1(d). FEMA has determined that it is consistent with the purposes of the NFIA to allow communities to adopt more comprehensive floodplain management regulations that exceed the minimum requirements. 44 CFR 60.1(d). Similarly, in its implementation of Executive Order 11988, FEMA prohibits taking any action taken unless it is consistent with the NFIP minimum criteria or any more restrictive Federal, State or local floodplain management standards. 44 CFR 9.11(d)(6).

⁴⁹ 42 U.S.C. 4128(a).

⁵⁰ 42 U.S.C. 4104c and 4102. Please note this rulemaking does not alter the minimum floodplain management criteria that communities adopt to participate in the NFIP. The NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses. 42 U.S.C. 4011(a). As a condition of eligibility, a community must adopt and enforce floodplain management regulations that incorporate NFIP minimum floodplain management criteria developed by the Administrator. 42 U.S.C. 4011(a) and (b); 42 U.S.C. 4102; 44 CFR 59.2(b), 59.22(a)(3), 60.1(d). Further information regarding FEMA’s minimum floodplain management standards for the NFIP can be found at 44 CFR part 59 *et seq.* Because this rule only applies to actions subject to the FFRMS, this rule does not change any FEMA standards applicable to community or individual participation in any aspect of the NFIP. In general, changes to 44 CFR part 59 *et seq.* would require a rulemaking to revise the appropriate sections of the CFR.

⁵¹ FEMA published an interim final rule on December 27, 1979 (44 FR 76510) and a final rule on September 9, 1980 (45 FR 59520). Note this part also implements a related Executive Order 11990, “Protection of Wetlands.” See 42 FR 26961, May 25, 1977.

assistance programs.⁵² Pursuant to section 8 of Executive Order 11988, part 9 does not apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to sections 403 and 502 of the Stafford Act, as amended (42 U.S.C. 5170b and 5192). In addition, FEMA applies part 9 programmatically to the National Flood Insurance Program (NFIP).⁵³ FEMA does not apply part 9 to site-specific actions under the NFIP because the establishment of programmatic criteria, rather than the application of the programmatic criteria to individual situations, is the action with the potential to influence or affect floodplains.⁵⁴

Part 9 outlines FEMA’s 8-step decision-making process for conducting floodplain management reviews before performing certain actions, including approval of grant funding. The 8-step decision making process is:

- (1) Determine whether the proposed action is located in a wetland or floodplain and its potential to affect or be affected by a wetland or floodplain;
- (2) Notify the public of the intent to carry out the proposed action within or affecting a wetland or floodplain, and involve the affected and interested public in the decision-making process;
- (3) Identify and evaluate practicable alternatives to locating the proposed action in a floodplain or wetland, including alternative sites, actions, and the “no action” option;
- (4) Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action;
- (5) Minimize the proposed action’s potential adverse impacts and support to or within the floodplains and wetlands identified under Step 4;
- (6) Re-evaluate the proposed action and other practicable alternatives identified in step 3 based on new information gained in steps 4 and 5;

⁵² 44 CFR 9.4 defines the actions subject to the requirements, which include federal lands and facilities, providing federal funds for construction and improvements, and conducting activities or programs that affect land use.

⁵³ A complete list of FEMA programs to which Part 9 does not apply appears at 44 CFR 9.5. The exemption for actions under the NFIP is located at 44 CFR 9.5(f).

⁵⁴ For example, Part 9 requires FEMA to apply the 8-step process to a programmatic determination of categories of structures to be insured but does not require FEMA to apply an 8-step review to a determination of whether to insure each individual structure. See 44 CFR 9.5(g).

- (7) Inform the public of any final decision that the floodplain or wetland is the only practicable alternative; and
- (8) Implement the action.

There are certain exclusions from all or some of the 8-steps for certain categories of actions being funded by FEMA.⁵⁵

D. Executive Order 13690, the Federal Flood Risk Management Standard and Subsequent Amendments to Executive Order 11988, and Revisions to the 1978 Guidelines

On January 30, 2015, the President issued Executive Order 13690, “Establishing a Federal Flood Risk Management Standard (FFRMS) and a Process for Further Soliciting and Considering Stakeholder Input.”⁵⁶ Executive Order 13690 amended Executive Order 11988 and established the FFRMS. It required FEMA to publish an updated version of the 1978 Guidelines (revised to incorporate the changes required by Executive Order 13690 and the FFRMS) in the **Federal Register** for notice and comment. Executive Order 13690 also required the WRC to issue final Guidelines to provide guidance to agencies on the implementation of executive Order 11988, as amended, consistent with the FFRMS. FEMA, acting on behalf of the Mitigation Framework Leadership Group (MitFLG), published a **Federal Register** notice for a 60-day notice and comment period seeking comments on a draft of the Revised Guidelines on February 5, 2015.⁵⁷ FEMA received over 556 separate submissions.⁵⁸ The final Revised Guidelines were issued on October 8, 2015.⁵⁹

The Revised Guidelines contain an updated version of the FFRMS (located at Appendix G of the Revised Guidelines), reiterate key concepts from the 1978 Guidelines, and explain the new concepts resulting from the

⁵⁵ 44 CFR 9.5(c), (d), (e), and (g).

⁵⁶ 80 FR 6425, Feb. 4, 2015. Section 5(c) of Executive Order 13690 specifically states that the order “is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.”

⁵⁷ 80 FR 6530, Feb. 5, 2015.

⁵⁸ FEMA received approximately 556 separate submissions, which raised over 2700 separate issues and positions. Written comments were received at a series of eight in-person listening sessions across the country (135 submissions); verbal comments were shared during the public comment periods of these same listening sessions (74 commenters); comments were submitted through the FFRMS email address (20 submissions); comments were submitted through *regulations.gov* (326 submissions); and comments were submitted as part of a petition of support (1 submission).

⁵⁹ 80 FR 64008, Oct. 22, 2015.

FFRMS. In response to public comments, the MitFLG clarified the distinction between “actions” and “Federally funded projects.” On August 22, 2016, FEMA published an NPRM entitled “Updates to Floodplain Management and Protection of Wetlands Regulations To Implement Executive Order 13690 and the Federal Flood Risk Management Standard” in the **Federal Register** (81 FR 57402). The rulemaking would have revised FEMA’s regulations on “Floodplain Management and Protection of Wetlands” to implement Executive Order 13690. FEMA also proposed a supplementary policy entitled “FEMA Policy: Guidance for Implementing the Federal Flood Risk Management Standard (FFRMS)” (FEMA Policy 078–3), which would have further clarified how FEMA would apply the FFRMS. The notice of availability and request for comments for the supplementary policy also published in the August 22, 2016, **Federal Register** at 81 FR 56558. On September 20, 2016, FEMA published a notice of data availability regarding a draft report, the 2016 Evaluation of the Benefits of Freeboard for Public and Nonresidential Buildings in Coastal Areas, which had been added to the docket for the proposed rule (81 FR 64403).

On August 15, 2017, the President issued Executive Order 13807 (“Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects”) which revoked Executive Order 13690. See 82 FR 40463, Aug. 24, 2017. Accordingly, on March 6, 2018, in light of the revocation of Executive Order 13690, FEMA withdrew the August 22, 2016, NPRM and supplementary policy (83 FR 9473). On May 20, 2021, the President issued Executive Order 14030 (“Climate-Related Financial Risk”) ⁶⁰ reinstating Executive Order 13690, thereby reestablishing the FFRMS. Executive Order 14030 also states the Revised Guidelines issued in 2015 were never revoked and remain in effect. As such, FEMA reviewed its prior NPRM and proposed policy, and revised its approach to implementation based on lessons learned during and since the 2016 rulemaking process. Specifically, FEMA first partially implemented the FFRMS by policy with respect to covered projects in existing floodplains in its Public Assistance and Hazard

Mitigation Assistance programs.⁶¹ FEMA next proposed to fully implement the FFRMS through the NPRM, which proposed updates to FEMA regulations and a supplemental FFRMS policy.⁶²

E. Substantive Components of the FFRMS

The FFRMS is a flexible framework to increase resilience against flooding and help preserve the natural values of floodplains and wetlands.⁶³ Incorporating the FFRMS will expand the floodplain and require projects to increase their resilience to flooding. Applying the FFRMS will help ensure that Federally funded projects will last as long as intended. In addition, the FFRMS and Revised Guidelines require the evaluation of natural features and nature-based approaches, where possible, in the analysis of practicable alternatives of the decision-making process for all Federal actions. Nature-based approaches can also help minimize an action’s impacts to the floodplain and assist in restoring the natural and beneficial functions of floodplains.

Under the FFRMS, a Federal agency may establish the floodplain for actions subject to the FFRMS using any of the following approaches:

- *Approach 1: Climate-Informed Science Approach (CISA):* Utilizing the best-available, actionable hydrologic and hydraulic data and methods that

⁶¹ See FEMA Policy 104–22–003, “Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim),” June 3, 2022 found at <https://www.fema.gov/sites/default/files/documents/fema-fp-104-22-003-partial-implementation-ffrms-pa-interim.pdf> (last accessed Jan. 24, 2024) and FEMA Policy 206–21–003–0001, “Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Program,” Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024).

⁶² 88 FR 67870, Oct. 2, 2023.

⁶³ Although the FFRMS describes various approaches for determining the higher vertical flood elevation and corresponding horizontal floodplain for Federally funded projects, it is not meant to be an “elevation” standard. The FFRMS is a resilience standard. The vertical flood elevation and corresponding horizontal floodplain determined using the approaches in the FFRMS establish the level to which a structure or facility must be resilient to. This may include using structural or non-structural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand, and rapidly recover from a flood event. See “Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, “Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input” (Oct. 8, 2015), found at https://www.fema.gov/sites/default/files/documents/fema_implementing-guidelines-EO11988-13690_10082015.pdf (last accessed Jan. 24, 2024).

integrate current and future changes in flooding based on climate science;

- *Approach 2: Freeboard Value Approach (FVA):* Freeboard (1 percent annual chance flood elevation + X, where X is 3 feet for critical actions and 2 feet for other actions);

- *Approach 3: 0.2-percent-annual-chance Flood Approach (0.2PFA):* 0.2 percent annual chance flood (also known as the 500-year flood); or

- *Approach 4:* the elevation and flood hazard area that result from using any other method identified in an update to the FFRMS.⁶⁴

The four approaches are described in further detail below.

FFRMS Approach 1: CISA

The Revised Guidelines state that the CISA is the preferred approach, and that Federal agencies should use this approach when data to support such an analysis are available and actionable. The CISA uses existing, sound science and engineering methods (*e.g.*, hydrologic and hydraulic analysis and methods used to establish current flood elevations and floodplain maps), supplemented with best available and actionable climate science and consideration of impacts from projected land cover/land use changes, long-term erosion, and other processes that may alter flood hazards over the lifecycle of the Federal investment.⁶⁵ For areas vulnerable to coastal flood hazards, the CISA includes consideration of the regional sea-level rise variability during the lifecycle of the Federal action. This includes use of global mean sea-level-rise scenarios adjusted to the local relative sea-level conditions and would be combined with surge, tide, and wave data using state-of-the-art science in a manner appropriate to policies, practices, criticality, and consequences. For areas vulnerable to riverine flood hazards (*i.e.*, flood hazards stemming from a river source), the CISA would account for changes in riverine conditions due to current and future changes in climate and other factors such as land use, by applying state-of-the-art science in a manner appropriate to policies, practices, criticality, and consequences (risk). The CISA for critical actions would utilize the same methodology as used for non-critical actions that are subject to Executive Order 11988, as amended, but with an emphasis on criticality as one of the factors for agencies to consider when conducting the analysis.

⁶⁴ See Executive Order 13690 Section 2(i), 80 FR 6425, 6426 (Feb. 4, 2015).

⁶⁵ See Revised Guidelines, pgs. 36–37.

⁶⁰ 86 FR 27967, May 25, 2021. See also Executive Order 13990 (“Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis”), 86 FR 7037, Jan. 25, 2021 (revoking Executive Order 13807).

FFRMS Approach 2: FVA

The FFRMS and Revised Guidelines define freeboard values as an additional 2 feet added to the 1 percent annual chance flood elevation, or, for critical actions, an additional 3 feet added to the 1 percent annual chance flood elevation. In other words, the floodplain established by the FVA is the equivalent of the 1 percent annual chance floodplain, plus either 2 or 3 feet of vertical elevation, as applicable based on criticality, and a corresponding increase in the horizontal extent of the floodplain. The increased horizontal extent will not be the same in every case. When the same vertical increase is applied in multiple actions subject to the FFRMS in different areas, the amount of the increase in the horizontal extent of the respective floodplains will depend upon the topography of the area surrounding the proposed location of the action.

FFRMS Approach 3: 0.2PFA

Agencies may use available 0.2 percent annual chance (or “500-year”) flood data as the basis of the FFRMS elevation and corresponding floodplain extent. Under this approach, the same floodplain and elevation is used for critical and non-critical actions. The FFRMS and Revised Guidelines note that often the 0.2 percent annual chance flood elevation data provided by FEMA in coastal areas only considers storm-surge hazards; this data does not include local wave action or storm-induced erosion that are considered in the computation of flood elevations. The FFRMS and Revised Guidelines encourage agencies to obtain or develop the necessary data, including wave heights, to ensure that any 0.2 percent annual chance flood data applied will achieve an appropriate level of flood resilience or use the FVA approach instead for the proposed investment.

FFRMS Approach 4: Update to FFRMS

The MitFLG, in consultation with the Federal Interagency Floodplain Management Task Force (FIFM-TF), must reassess the FFRMS annually after seeking stakeholder input and provide recommendations to the WRC to update the FFRMS, if warranted. The WRC must issue an update to the FFRMS at least every 5 years. The updates ensure the floodplain determination process for actions subject to the FFRMS reflects current methodologies.

Further Guidance on Application of the FFRMS Approaches to Establishing the Floodplain

The FFRMS and Revised Guidelines state that when an agency does not use

the CISA in a coastal flood hazard area and where the FEMA 0.2 percent annual chance flood elevation does not include wave height, or a wave height has not been determined, the 0.2 percent annual chance elevation should not be used, and the FVA should be used instead. The FFRMS and Revised Guidelines note that where the 0.2 percent annual chance flood elevation does not consider wave action, the result will likely either be lower than the current base flood elevation or the base flood elevation plus applicable freeboard. Where wave action has been incorporated into the 0.2 percent annual chance elevation, the 0.2 percent annual chance elevation can be used.

The Revised Guidelines state that for riverine flood hazard areas, agencies may select either the FVA or 0.2PFA (or a combination of approaches, as appropriate) when actionable science is not available, and an agency opts not to follow the CISA. The agency is not required to use the higher of the elevations but may opt to do so. The elevation standards of the FFRMS are not intended to supplant applicable State, Tribal, territorial, or local floodplain protection standards. If such standards exceed the FFRMS, an agency should apply those standards if the agency determines the application of the standards is reasonable considering the goals of Executive Order 11988, as amended.⁶⁶

F. Summary of the 2023 Proposed Rule and Proposed FFRMS Policy

The proposed rule set forth how FEMA would implement Executive Order 11988, as amended, the FFRMS, and the Revised Guidelines as part of FEMA’s floodplain management regulations, while also updating FEMA’s 8-step process. The proposed rule included the following provisions,

⁶⁶ See Revised Guidelines at 53. The Revised Guidelines suggest agencies should apply a reasonableness standard to higher SLTT floodplain management standards. FEMA has historically deferred to higher local codes and standards from an SLTT government in 44 CFR 9.11(d)(6) and will continue the practice through this rulemaking, rather than applying a case-by-case reasonableness analysis and believes this is appropriate because of program-specific controls that ensure higher standards are reasonable. Specifically, in the PA program, if an SLTT government has adopted a code or standard that exceeds minimum standards set by FEMA, regulations at 44 CFR 206.226(d) require the code to be in place and adopted pre-disaster which guards against an SLTT government’s adoption of unreasonably high codes and standards. With respect to mitigation projects, they are all required to be cost-effective as a minimum criteria of eligibility. See 42 U.S.C. 5170c(a); 42 U.S.C. 5133(b); 42 U.S.C. 4104c(c)(2)(A). This project-by-project cost-effectiveness analysis should guard against any SLTT standards that are unreasonably high.

which remain unchanged in this final rule except as indicated in section I.C of this preamble.

Severability

The NPRM proposed to amend § 9.3 to remove the authorities section as redundant and to replace it with a severability section. FEMA did not receive any comments on its proposal to include a severability provision. The proposed severability provision is therefore incorporated in § 9.3 of this final rule without change. FEMA believes that its authority to require an 8-step decision making process and incorporate the FFRMS into it is well-supported in law and policy and should be upheld in any legal challenge. However, in the event that any portion of the proposed rule is declared invalid, FEMA intends that the various provisions of 44 CFR part 9 be severable. The provisions are not so interconnected that the rule’s efficacy depends on every one of them remaining in place—implementation of the different provisions is sufficiently distinct that FEMA’s aim of updating the 8-step process and incorporating the FFRMS would still be furthered by maintaining the other provisions. For example, if a court were to find unlawful FEMA’s inclusion of the FFRMS approaches in § 9.7(c), FEMA intends to retain the inclusion of consideration of nature-based approaches in the appropriate steps of the 8-step decision making process and all other amendments to the 44 CFR part 9 not affected by the court decision. Similarly, if a court were to find unlawful FEMA’s chosen approach in the proposed policy, FEMA intends to retain the regulatory changes implementing the FFRMS. Those provisions that are unaffected by a legal ruling can be implemented by an agency without requiring a new round of rulemaking simply to promulgate provisions that are not subject to a court ruling.

Conforming Changes to Definitions

The NPRM proposed to amend § 9.4 to reflect the new definitions required by the FFRMS and Revised Guidelines, while also updating other definitions to clarify terms and leverage common usage that has evolved since the regulation was issued. The most significant definitional change proposed by the FFRMS was the change to the meaning of “floodplain.” To harmonize this change in § 9.4, the NPRM proposed to revise a few existing definitions and removed other definitions. In addition, the NPRM proposed to revise the remaining sections of 44 CFR part 9 that

refer generally to the floodplain or refer specifically to the base (or 100-year) floodplain or the 0.2 percent annual chance (or 500-year) floodplain, for clarity.

Distinction Between “Actions Subject to the FFRMS” and Other FEMA Actions

Step 1 in the 8-step process is to determine whether the proposed action is in the floodplain. Because Executive Order 11988, as amended, and the FFRMS revised the definition of the “floodplain” that agencies use for “Federally funded projects,” the NPRM proposed to revise the first step to require FEMA to determine whether the proposed action falls within the definition of an “action subject to the FFRMS.” Under the proposed rule, if FEMA determined that the action is a Federally funded project, *i.e.*, if FEMA determined that the action uses FEMA funds for new construction, substantial improvement, or to address substantial damage to a structure or facility, the FFRMS floodplain would apply. Alternatively, if FEMA determined that the action did not fall under the definition of an action subject to the FFRMS, the existing floodplain analysis would remain in place. For example, if the action was considered non-critical, the 1 percent annual chance floodplain applied, and if the action was considered critical, the 0.2 percent annual chance floodplain applied.

Emphasis on Nature-Based Approaches

Executive Order 11988, as amended, directs agencies to use, where possible, natural systems, ecosystem processes, and nature-based approaches in the development of alternatives for Federal actions in the floodplain. The NPRM proposed to incorporate this requirement in § 9.9, which addresses the requirement to consider practicable alternatives when determining whether to locate an action in the floodplain. This proposed requirement would apply regardless of whether the proposed action is a FEMA Federally funded project. To further explain this proposed requirement, the NPRM proposed to add a definition of “nature-based approaches,” meaning features designed to mimic natural processes and provide specific services such as reducing flood risk and/or improving water quality. The NPRM also proposed to add a definition of “natural features,” meaning the characteristics of a particular environment that are created by physical, geological, biological, and chemical processes and exist in dynamic equilibrium.

Consistent with the Revised Guidelines, FEMA proposed to update

the factors integrated into its impact analysis and minimization measures (Step 4 and Step 5) to identify those opportunities for beneficial floodplain and wetland values, to include natural values related factors that prioritize water resource values, living resource values, and agricultural, aquacultural, and forestry resource values. Applying natural features or nature-based approaches as alternatives furthers the goals in 44 CFR part 9 and allows for FEMA to further encourage those actions that increase the natural and beneficial functions of the floodplain.

The NPRM proposed to update Step 1 of the 8-step process to describe the floodplain determination for those actions that are subject to the FFRMS, and Step 3 to require the consideration of natural features and nature-based approaches in the identification and evaluation of practicable alternatives. The NPRM also proposed to incorporate certain additional exclusions from all or some of the 8-steps for certain categories of actions being funded by FEMA. Specifically, FEMA proposed to remove private bridges and debris clearance and removal under section 502 of the Stafford Act from the 8-step process, while also updating the monetary thresholds for actions under sections 406 and 407 of the Stafford Act.

Proposed FFRMS Policy

The proposed FFRMS policy outlined the FFRMS approach FEMA would use for actions subject to the FFRMS. FEMA’s proposed FFRMS policy would be applicable to actions in the FFRMS floodplain where FEMA funds were used for new construction, substantial improvement, or to address substantial damage. Specifically, the proposed policy would require FEMA to determine the FFRMS floodplain according to the Climate-Informed Science Approach (CISA) for all locations where the best-available, actionable hydrologic and hydraulic data methods that integrate current and future changes in flooding based on climate science exist. When the CISA data was not available and not actionable for a critical action, the proposed FFRMS policy would require FEMA to determine the FFRMS floodplain as the area that would be inundated by the higher of either the 0.2 percent annual chance flood or the 3 feet of freeboard above the base flood elevation (BFE) for that location (the Freeboard Value Approach or FVA). When the CISA is not available and actionable for a non-critical action, the proposed FFRMS policy would require FEMA to determine the FFRMS floodplain as the area that would be

inundated by the lower of either the 0.2 percent annual chance flood or the 2 feet of freeboard above the BFE for that location (the FVA). In coastal areas where the CISA data is not available and actionable, the proposed FFRMS policy would require the FVA be used if the available 0.2 percent annual chance flood elevation does not account for wave action.

FEMA noted in the policy and the NPRM that it was coordinating across the Federal government to develop tools, such as the FFRMS Job Aid published in the public docket associated with this rulemaking,⁶⁷ to assist agencies and stakeholders in determining the FFRMS floodplain and would rely on those tools as the best available information in making its determinations. The FFRMS Job Aid presents a general methodology to identify the FFRMS floodplain for each of the three approaches that relies on information from available FEMA FIRMs, U.S. Geological Survey (USGS) ground elevations, and the 2022 Sea Level Rise Technical Report sea level rise estimates.⁶⁸

FEMA’s proposed FFRMS policy also required that nature-based solutions and natural features be considered and implemented where possible to all actions that are subject to Step 3 of the 8-step decision-making process and not just those actions subject to the FFRMS. Nature-based solutions and natural features must be considered as an alternative action in Step 3. Where it is not possible to use natural features and nature-based solutions as an alternative on their own, they would be considered in conjunction with the proposed action as a minimization measure in Step 5.

Updated FFRMS Resources

The FFRMS approaches include the CISA, an “approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science.” The Revised Guidelines and Appendix H help to define the “best available and actionable science,” stating that best-available generally refers to science, data or information that is:

⁶⁷ See NPRM, 88 FR 67870, 67900 and FEMA Proposed Policy: Federal Flood Risk Management Standard at pg. 5 (posted to the public docket at <https://www.regulations.gov/document/FEMA-2023-0026-0005>). See also https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

⁶⁸ *Id.* at Section 1.6.

- transparent—clearly outlines assumptions, applications, and limitations;
- technically credible—transparent subject matter or more formal external peer review, as appropriate, of processes and source data;
- usable—relevance and accessibility of the information to its intended users; and
- legitimate—perceived by stakeholders to conform to recognized principles, rules, or standards.

Legitimacy might be achieved by existing government planning processes with the opportunity for public comment and engagement.⁶⁹

Actionable science includes theories, data, analyses, models, projections, scenarios and tools that are:

- relevant to the decision under consideration;
- reliable in terms of its scientific or engineering basis and appropriate level of peer review;
- understandable to those making the decision;
- supportive of decisions across wide spatial, temporal, and organizational ranges, including those of time-sensitive operational and capital investment decision-making;
- co-produced by scientists, practitioners, and decisionmakers, and meet the needs of and are readily accessible by stakeholders.⁷⁰

Appendix H further defines a general framework for the CISA by identifying types of changes that should be considered and discussing the importance of considering operational life; provides an approach for incorporating uncertainty into the CISA; and discusses a range of data sources. The document does not prescribe or direct agencies to use specific resources or methods.

In 2023, the Science Subgroup convened by the Flood Resilience Interagency Working Group of the National Climate Task Force published the FFRMS CISA State of the Science Report (“FFRMS CISA State of the Science Report”).⁷¹ This report provides a review and update of the best-available, actionable science that can support application of the CISA, reflecting science and technology advancements made since 2015. Like

⁶⁹ See Revised Guidelines, Appendix H: Climate-Informed Science Approach and Resources, pg.5

⁷⁰ See Revised Guidelines, pg. 51 and Appendix H: Climate-Informed Science Approach and Resources, pg. 5.

⁷¹ Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Mar. 12, 2024).

Appendix H from the Revised Guidelines, the FFRMS CISA State of the Science Report provides non-prescriptive, scientific, and engineering guidance for use by Federal agencies, their non-Federal partners, and other entities in determining future flood hazards under the FFRMS’ CISA option. The FFRMS CISA State of the Science Report refines the initial framework from Appendix H to define two specific workflows for applying the CISA,⁷² while acknowledging that technical competencies and capabilities needed to fully apply the CISA vary and may exceed those available in most Federal agencies and many non-Federal users.⁷³ The Report states that workflow implementation can be scaled to meet resource level and project requirements.⁷⁴

The FFRMS CISA State of the Science Report specifically identifies the latest sea level rise projections from the National Climate Assessment as actionable.⁷⁵ The FFRMS State of the Science Report states each agency should factor projected regional/local sea level change into Federal investment decisions located as far inland as the extent of estimated tidal influence, now and in the future, using the most appropriate methods for the scale and consequence of the decision.⁷⁶ The FFRMS CISA State of the Science Report also suggests that along low-lying coastal shorelines on the Atlantic and Gulf Coasts not subject to runup or overtopping, the appropriate sea level rise estimates can be used similar to freeboard.⁷⁷

⁷² FFRMS CISA State of the Science Report, Coastal workflow starting on pg. 11 and Riverine workflow starting on pg. 38.

⁷³ *Id.* at pg. 5.

⁷⁴ *See id.*

⁷⁵ *Id.* at pgs. 21–22.

⁷⁶ *Id.* at pg. 23.

⁷⁷ The FFRMS CISA State of the Science Report identifies the latest interagency Federal guidance for regionally-based SLR projections as available and actionable by recommending that all agencies should use these data as part of a CISA approach. At pg. 22, the Report states “Federal agencies should apply this latest interagency Federal guidance for regionally-based SLR projections. Scenarios and time horizons should use a consistent national approach based on risk tolerance and criticality.” However, the Report also warns against using the simplified approach with SLR in areas subject to runup and overtopping on pg. 28 “Notably, areas subject to runup and overtopping can be very sensitive to changes in water level (including due to SLR) and the variability of the slope—so within a CISA implementation, these areas should be treated with appropriate analysis and not simple linear addition of flooding components.” Based on these guidelines, the FFRMS Job Aid establishes the use of simplified CISA in specific areas, namely in some coastal environments, specifically along low-lying coastal shorelines on the Atlantic and Gulf Coasts. See FFRMS Job Aid, pg. 10.

This is the basis of the interagency implementation and supporting tools such as the FFRMS Job Aid.⁷⁸ The FFRMS Job Aid is a resource to help Federal agencies and their non-Federal partners (including potential Federal financial aid recipients) conduct a screening to determine if a proposed Federally funded action will be located in an FFRMS floodplain, based on the CISA, FVA, or 0.2PFA. While Appendix H of the Revised Guidelines and the FFRMS CISA State of the Science Report provide more general approaches that could be used to apply the CISA with sufficient time, money and expertise,⁷⁹ FEMA does not believe the data and science for these broader approaches are sufficiently available and actionable for FEMA to implement at scale. As explained below, FEMA prioritized the type and criticality of the action involved, the availability and actionability of the data, and equity concerns, and determined that applying the CISA through these broader, more complex approaches is not appropriate at this time given the agency’s role in helping people recover from disasters in an expedited manner. FEMA instead decided to use consensus interagency approaches that are readily accessible to implement the CISA.

To help FEMA implement the FFRMS, the agency will leverage interagency tools. Specifically, FEMA will follow the methodology laid out in the FFRMS Job Aid to determine whether a site for a proposed action subject to the FFRMS is located within an FFRMS floodplain and if so, the FFRMS flood elevation for that site. FEMA will follow the CISA, FVA, or 0.2PFA Job Aid methodologies according to FEMA’s FFRMS policy. Consistent with the FFRMS Job Aid, FEMA finds that the CISA is currently available and actionable for low-lying coastal shorelines on the Atlantic and Gulf Coasts.⁸⁰ If a site poses other complexities, such as steep bluffs or shorelines armored by large seawalls or similar flood-control structures, the CISA is not available and actionable⁸¹ and FEMA will instead use the FVA or 0.2PFA, per the agency’s policy. For the CISA, FVA and 0.2PFA, FEMA will follow the processes outlined in 44 CFR 9.7 and in FEMA Policy 104–008–2: Guidance on the Use of Available Flood

⁷⁸ Available at https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Mar. 12, 2024).

⁷⁹ FFRMS CISA State of the Science Report, pg.5, Coastal workflow starting on pg. 11, and Riverine workflow starting on pg. 38.

⁸⁰ FFRMS Job Aid, pg. 10.

⁸¹ *Id.*

Hazard Information.⁸² For example, if a preliminary FIRM has more restrictive flood hazard data than an effective FIRM, FEMA will use the preliminary FIRM to identify the appropriate flood elevation.⁸³

Consistent with the FFRMS Job Aid, to determine whether a proposed site is located within the FFRMS floodplain under the CISA and FVA approaches, FEMA will compare the ground elevation at the site (using the U.S. Geological Survey National Map) with the FFRMS flood elevation.⁸⁴ To identify the FFRMS flood elevation under the CISA and FVA, FEMA will identify the BFE at the site or the BFE at the nearest mapped floodplain if the site is outside of the 1% annual chance floodplain. Any relevant characteristics of the action or site will be noted at this stage (e.g., service life, criticality, and flood characteristics).⁸⁵ For the CISA, FEMA will determine the FFRMS flood elevation by using the NOAA Sea Level Rise Viewer.⁸⁶ FEMA will use the service life of the action to select the scenario year.⁸⁷ For non-critical actions, FEMA will use the intermediate scenario, and for critical actions, FEMA will use the intermediate high scenario.⁸⁸ FEMA will then add the appropriate amount of sea level rise to the BFE to reach the FFRMS CISA flood elevation. If the site elevation is less than the CISA flood elevation, then the site is in the FFRMS CISA floodplain. For the FVA, 2 feet will be added to the BFE for non-critical actions or 3 feet for critical actions to determine the FFRMS FVA flood elevation.⁸⁹ If the site elevation is less than the FVA flood elevation, then the site is in the FFRMS FVA floodplain.⁹⁰ For the 0.2PFA, FEMA will compare the location of the site with the horizontal extent of the 0.2 percent annual chance floodplain using the FEMA Map Service Center or National Flood Hazard Layer.⁹¹ If the site is within the floodplain, then it is within the FFRMS 0.2PFA floodplain.⁹²

FEMA published these additional resources in the public docket with this rulemaking⁹³ to further assist the public

in understanding the FFRMS and the approaches utilized, including the availability and actionability of the CISA data and how FEMA would implement the FFRMS through application of the FFRMS Job Aid methodology. FEMA will continue to collaborate across the Federal government to develop tools to facilitate the implementation of CISA and the FFRMS. The IWG recently released for comment a beta version of the Federal Flood Standard Support Tool (FFSST), a novel, interactive, map-based tool that incorporates new data to help users identify if a Federally funded project is in the FFRMS floodplain.⁹⁴

G. Summary of FEMA's Final Rule and Updated Policy

This final rule implements Executive Order 11988, as amended, the FFRMS, and the Revised Guidelines, while also updating FEMA's 8-step process. Consistent with the changes proposed in the NPRM, FEMA is incorporating a severability clause into part 9; updating definitions to implement the FFRMS and reflect current policy and practice; providing the applicable effective date for the changes made in the final rule and further clarifying the rule's scope; updating how FEMA determines whether an action is in a floodplain, consistent with the FFRMS approaches when the action is subject to the FFRMS; and adding an emphasis on nature-based approaches in the 8-step process consistent with Executive Order 11988, as amended.

In this final rule, FEMA incorporates edits to reflect commenter feedback. Specifically, in § 9.7(c)(3), FEMA is adding agencies from Federal and Indian Tribal governments as potential sources of information in making the floodplain determination. These changes better ensure that FEMA will effectively consider relevant and appropriate data in making the floodplain determination under part 9. FEMA is also making clarifying edits in § 9.5(a)(3) to clarify that copies of the legacy regulations will be available on the agency's website and to § 9.7(c)(3) to clarify that FEMA may consider information from the entities listed. FEMA is also making minor technical edits in § 9.7(c)(1)(i)(C) and § 9.11(d)(3)(ii).

FFRMS Policy

FEMA's FFRMS policy is also being finalized with the publication of this rule and will be effective with the rule's

implementation. The FFRMS policy provides guidance on how FEMA will implement the FFRMS across FEMA's programs and further incorporate nature-based solutions into the 8-step process. FEMA is making minor clarifying edits to the FFRMS policy consistent with commenters' suggestions by further clarifying the use of the 0.2PFA in coastal areas and making other technical edits to the document for readability. FEMA is also clarifying in the FFRMS policy that the agency will leverage the FFRMS Job Aid when implementing the FFRMS.

III. Discussion of Public Comments and FEMA's Responses

A. Summary of Public Comments

The NPRM public comment period closed on December 1, 2023, and FEMA received 47 germane comments.⁹⁵ Commenters included non-profit organizations; individuals; local governments; State governments and State government organizations; and for-profit entities. The majority of comments were supportive of FEMA's rule and policy approach to implementing the FFRMS and other updates to part 9. Commenters focused on the regulatory impact analysis (RIA) accompanying the rule; the CISA and the data FEMA would use to determine each of the FFRMS approaches; FEMA's implementation of the FFRMS; and the 8-step process detailed in part 9. FEMA describes the specific revisions in the final rule and addresses commenters' specific concerns below.

B. Comments in Support of the Rule

The majority of commenters were generally supportive of the rule and accompanying FFRMS policy.⁹⁶ Commenters noted appreciation of FEMA's rulemaking efforts to enhance the resilience and sustainability of communities and ecosystems that are vulnerable to flooding. These commenters stated the FFRMS was a critical policy tool to reduce risks and promote sound floodplain management and wetlands protection practices, as well as fiscal responsibility.

Commenters were supportive of the agency's use of the FFRMS approaches in the rulemaking and accompanying FFRMS policy document. A commenter noted the incorporation of the CISA, FVA, and 0.2PFA reflected FEMA's commitment to using diverse and

⁸² Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 12, 2024).

⁸³ See FFRMS Policy, pg. 5.

⁸⁴ FFRMS Job Aid, pgs. 8–9.

⁸⁵ FFRMS Job Aid, pgs. 8–9 and pgs.13–15.

⁸⁶ *Id.*, pgs. 20–23.

⁸⁷ *Id.*

⁸⁸ FFRMS Job Aid, pg. 21.

⁸⁹ FFRMS Job Aid, pg. 8.

⁹⁰ *Id.*, pgs. 8–9

⁹¹ *Id.*, pgs. 30–31.

⁹² *Id.*

⁹³ See <https://www.regulations.gov/document/FEMA-2023-0026-0007> and <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

www.regulations.gov/document/FEMA-2023-0026-0004.

⁹⁴ 89 FR 25674 (Apr. 11, 2024).

⁹⁵ One commenter provided a duplicate comment posted to both the rulemaking and FFRMS policy comments.

⁹⁶ 22 commenters expressed direct support for the rule while 19 other commenters expressed only specific recommendations to improve the rule.

adaptive strategies based on the best-available scientific knowledge. Another commenter supported the floodplain definition revisions, stating that an expanded floodplain definition would ensure that more projects were built with resilience in mind when compared to current projects. A commenter stated FEMA's preferred CISA approach would result in Federally funded projects that were more resilient to current and future flooding and ensured a wiser use of taxpayer dollars. The commenter stated stronger standards were feasible to implement, as many jurisdictions already have existing stronger building and land-use standards. Commenters also indicated support for FEMA's emphasis on using natural systems, ecosystem processes, and nature-based approaches.

Timing

Comment: Some commenters supporting the rule requested FEMA quickly finalize and implement the final rule. While requesting FEMA work quickly to finalize and implement the rule, one commenter noted that the partial implementation policies in place did not fully implement FFRMS as they did not extend the horizontal floodplain. This commenter requested FEMA also integrate FFRMS into the minimum floodplain management standards for the NFIP. The commenter also stated FEMA should ensure FFRMS was sufficiently staffed and should develop a comprehensive plan to track enforcement and any concerns such as environmental justice to ensure effective implementation of the rule.

FEMA Response: FEMA agrees with the commenters on the importance of finalizing and implementing the rule and FFRMS policy. FEMA is issuing this final rule with an effective date of September 9, 2024. As explained in § 9.5(a)(3), the FFRMS applies only to new actions for which assistance is made available pursuant to declarations under the Stafford Act that are commenced on or after the effective date of the final rule, and new actions for which assistance is made available pursuant to notices of funding opportunity that publish on or after the effective date of the final rule.⁹⁷

⁹⁷ Note that FEMA first partially implemented the FFRMS by policy with respect to covered projects in existing floodplains in its Public Assistance and Hazard Mitigation Assistance programs. See FEMA Policy 104-22-003, "Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim)," June 3, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implementation-ffrms-pa-interim.pdf (last accessed Jan. 24, 2024) and FEMA Policy 206-21-003-0001, "Partial Implementation of the Federal Flood Risk

FEMA declines to accommodate the commenter's request to integrate the FFRMS into the minimum floodplain management standards for the NFIP because it is beyond the scope of this rulemaking. The NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses.⁹⁸ As a condition of eligibility, a community must adopt and enforce floodplain management regulations that meet or exceed the NFIP minimum floodplain management criteria developed by the Administrator.⁹⁹ Further information regarding FEMA's minimum floodplain management standards for the NFIP can be found at 44 CFR part 59 *et seq.* Because this rule only applies to "actions subject to the FFRMS,"¹⁰⁰ this rule does not change any FEMA standards applicable to community or individual participation in any aspect of the NFIP. In general, changes to 44 CFR part 59 *et seq.* would require a rulemaking to revise the appropriate sections of the CFR.

As an illustrative example, if an NFIP-participating community owns a structure in a floodplain that has been substantially damaged and the community decides to repair it using community funds, funding from a flood insurance payment, or other funding that is not FEMA grant funding, the community's floodplain management regulations, not the FFRMS, would apply to the repair project. However, if that same structure was substantially damaged by a disaster event, and the community applied for assistance under a FEMA grant program like the Public Assistance program, the FFRMS would apply to that repair project.

Management Standard for Hazard Mitigation Assistance Program," Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema-policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024). Some current FEMA actions may be subject to these partial implementation policies; however, those actions would not be subject to this final rule or policy.

⁹⁸ 42 U.S.C. 4011(a).

⁹⁹ 42 U.S.C. 4011(a) and (b); 42 U.S.C. 4102; 44 CFR 59.2(b), 59.22(a)(3), 60.1(d).

¹⁰⁰ See "Guidelines for Implementing Executive Order 11998, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input," 80 FR 64008 (Oct. 22, 2015) (providing notice of the availability of the Revised Guidelines in the docket for the rulemaking at <https://www.regulations.gov/document/FEMA-2015-0006-0358> (main content) and <https://www.regulations.gov/document/FEMA-2015-0006-0372> (appendices)) also available at <https://www.fema.gov/sites/default/files/documents/fema-implementing-guidelines-EO11998-13690-10082015.pdf> (last accessed Mar. 11, 2024).

FEMA agrees with the commenter that it is important to adequately staff for FFRMS implementation. FEMA is accordingly ensuring that sufficient staff at headquarters and regional offices are appropriately trained to provide technical assistance. FEMA currently leverages the 8-step process detailed in 44 CFR part 9 as the mechanism to implement Executive Order 11988. Step 8 of the process found at 44 CFR 9.6(b) requires FEMA to review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in § 9.11 are fully implemented. Under this provision, oversight responsibility is integrated into existing processes associated with FEMA's grant management requirements. FEMA is not making changes to these requirements in the final rule and will continue to use the current process to ensure compliance with the FFRMS and Executive Order 11988, as amended. 2 CFR 200.339 also allows FEMA to take action to remedy a recipient's noncompliance with federal requirements, including those required by 44 CFR part 9, such as imposing new conditions on the award or deobligating funding for the award if a recipient does not adhere to the requirements set forth during the part 9 review process.

C. Comments in General Opposition to the Rule

Four commenters expressed opposition to the rule overall. Those commenters raised concerns about the complexity of the FFRMS approaches, uncertainty about the CISA standard, and the application of FFRMS to specific types of FEMA actions. The commenters stated concerns with the potential increased costs associated with implementing FFRMS and with FEMA's economic impact analysis accompanying the rule. The commenters also stated concerns with implementing the FFRMS given conflicting Federal, State, local, and other requirements. Commenters stated the FFRMS was a "one-size-fits-all" approach that lacked the flexibility to address regional and local needs. Commenters stated the use of the CISA introduced uncertainty into the regulations contrary to the fundamental principles outlined in Executive Orders 12866 and 13563. Commenters also stated FEMA's analysis of the costs and benefits associated with the rulemaking did not adequately quantify the costs and benefits of several components of the risk reduction strategies in the rule. Commenters raised questions regarding FEMA's statutory authority to implement the rule. One commenter

stated Congress should define the floodplain. This commenter raised similar concerns regarding the use of the CISA and lack of data sources that map the FFRMS floodplain. FEMA responds to some of the general comments in opposition to the rule in the comment summaries and responses immediately below and responds in more detail to the remainder of the comments in the following sections of the preamble.

Comment: One commenter requested FEMA extend the comment deadline associated with the rule for an additional 60 days. The commenter requested an extension of the comment period given the complexity of the rule and policy and to implement extensive public outreach.

FEMA Response: FEMA received 48 comments to the public docket associated with this rulemaking and no other requests to extend the comment period were received. The 60-day comment period provided is consistent with 44 CFR 1.3(b) and Executive Orders 12866 and 13563. This timeframe provided a reasonable opportunity for public comment and is particularly appropriate given FEMA's prior engagement on this topic. FEMA completed extensive outreach in 2015 as part of the development and publication of the Revised Guidelines, and also sought public input in connection with the agency's prior NPRM in 2016.¹⁰¹ Additional outreach will be completed as part of the rule's implementation as FEMA will distribute additional information to SLTT partners and the public explaining again what the

FFRMS is and how the agency will further implement the Executive Orders. FEMA's FFRMS policy will also be reassessed on a four-year cycle to ensure the approach continues to meet the goals of Executive Order 11988, as amended. During the four-year review process, FEMA's FFRMS policy will be reviewed, revised, extended, and/or rescinded as appropriate.

FEMA does not believe additional engagement is needed to finalize this rule. All but a few of commenters expressed support for the rule and FEMA's FFRMS policy and many requested swift implementation, consistent with the need to protect federal dollars and communities from increasing flood risk.

Comment: One commenter stated the rulemaking was premature in the absence of a clearly defined process for implementing the CISA and urged FEMA to withdraw the rule from consideration. The commenter expressed concern that FEMA will take a haphazard approach—completing each analysis of the extent and elevation of the CISA floodplain on a case-by-case basis and doing so using data that may not be complete or is not widely known or available to the public. The commenter stated that in the end, neither the process nor the outcome will be predictable or replicable.

FEMA Response: FEMA disagrees. This rulemaking is not premature, and FEMA provided information in and accompanying the NPRM explaining how the CISA and the FFRMS will be implemented. Each analysis will be completed on a case-by-case basis consistent with the current 8-step process, which has been in place for over four decades, to determine the floodplain, but the data used to make the analysis is publicly available and replicable using the FFRMS CISA State of the Science Report, the FFRMS Job Aid, and FEMA's FFRMS policy. As explained above, the FFRMS CISA State of the Science Report identifies the latest sea level rise projections from the National Climate Assessment as available and actionable data and the appropriate sea level rise estimates can be used to approximate future 1 percent annual chance flood levels. These estimates can simply be added to the current 1 percent annual chance flood elevation to approximate the future 1 percent annual chance flood level, in low-lying coastal shorelines on the Atlantic and Gulf Coasts not subject to runcup or overtopping. The FFRMS Job Aid¹⁰² provides the methodology FEMA

will use to determine the floodplain and elevation under the CISA where data is actionable and available (namely in low-lying coastal shorelines on the Atlantic and Gulf Coasts consistent with the FFRMS CISA State of the Science Report). FEMA's FFRMS policy further explains that the CISA is used where actionable and available and provides alternatives where such data is not actionable and/or available. The CISA analysis can be completed using these publicly available materials for areas with actionable and available data. FEMA anticipates actionable and available data will increase over time and the interagency tools provided will be updated to reflect the new data.

Comments: Two commenters requested FEMA complete additional analyses before finalizing the rule. Both commenters referenced other flood-related regulatory and policy actions, including the Technical Mapping Advisory Council (TMAC)'s proposal to increase the regulatory floodplain and increase the NFIP floodplain management standards for land management and use; Risk Rating 2.0 for flood insurance premiums; and USACE's proposed levee safety updates as well as risk informed decision making.

One commenter requested the rule be deferred until FEMA completed a cumulative impacts assessment and considered associated actions to mitigate the impacts of the actions above on communities participating in the NFIP, mapping and accreditation, low to moderate income families, and disadvantaged communities. The commenter further requested FEMA withdraw the rule until a regulatory analysis applying sound cost-benefit analysis principles and a comprehensive socio-economic impact analyses to address the full and intended scope of FFRMS were completed. The commenter stated the regulatory impact analysis should address cumulative impacts and the need for mitigation of impacts to community property values, tax bases, the distribution of real income, as well as the impacts on affordable housing and low to moderate income families and disadvantaged communities.

The other commenter stated that different flood regulations and policies may overlap with or duplicate each other and potentially lead to redundancy, confusion, and additional costs. The commenter requested FEMA conduct a more thorough quantitative cost-benefit analysis, considering the

¹⁰¹ Established by the 2013 Climate Action Plan, the Climate Task Force met with stakeholders from State, local, Tribal, and territorial governments; private businesses; trade associations; academic organizations; civil society; and other stakeholders to develop and provide recommendations in November 2014. President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President*, (2014), available at https://obamawhitehouse.archives.gov/sites/default/files/docs/task_force_report_0.pdf at 7 (last accessed Jan. 24, 2024). FEMA, acting on behalf of the MitFLG and consistent with Executive Order 13690, published a draft of the Revised Guidelines for notice and comment on February 5, 2015 at 80 FR 6530. During the public comment period, over 25 meetings were held across the country with State, local, and Tribal officials and interested stakeholders to discuss the Revised Guidelines. There were also 9 public listening sessions across the country that were attended by over 700 participants from State, local, and Tribal governments, and other stakeholder organizations to discuss the Revised Guidelines. The final Revised Guidelines were published on October 22, 2015 at 80 FR 64008. FEMA published a notice of proposed rulemaking to implement FFRMS initially in 2016 at 81 FR 57402 (Aug. 22, 2016) along with a notice of availability and request for comment on a FFRMS policy at 81 FR 56558 (Aug. 22, 2016) and a notice of availability regarding a draft report at 81 FR 64403 (Sept. 20, 2016).

¹⁰² Available at https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-

[determination-job-aid.pdf](https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf) (last accessed Mar. 12, 2024).

cumulative effects of recent floodplain governing rules to make well informed decisions regarding appropriate risk reduction strategies and ensure a thorough understanding of the overall impact of the rule's implementation. The commenter requested FEMA conduct a comprehensive assessment of cumulative impacts to ensure a more informed and coordinated approach and requested that FEMA provide additional documentation on how FFRMS would impact other Federal agencies' programs, such as USACE's civil works projects and whether FEMA's FFRMS policy would supersede other Federal agencies' rules and regulations. The commenter stated FEMA relied on a subjective assessment of the rule's costs and benefits. The commenter asked FEMA to closely coordinate with other agencies that typically co-regulate projects, including USACE with water resources projects.

The commenter also stated that the FFRMS could lead to further deterioration of key infrastructure, where meeting the new, higher standards is not technically or financially feasible, resulting in communities leaving the infrastructure to deteriorate in place and not serve the public need. The commenter stated that these types of costs should be considered in the regulatory analyses.

FEMA Response: FEMA disagrees this rule should be deferred. While FEMA understands the commenters' interest in the policy activities mentioned, the agency does not believe those actions are relevant to this rulemaking or require additional analysis to finalize this rule. The commenters reference a recommendation made by the TMAC in a recent annual report¹⁰³ that FEMA expand the NFIP regulatory floodplain as defined in 44 CFR 59.1 to which the NFIP's minimum floodplain management criteria set forth in 44 CFR 60.3 applies, and the commenters suggest that FEMA must delay this rulemaking until it has analyzed the effects of that recommendation. That is not necessary because FEMA has not implemented the TMAC recommendation and therefore it has no current effect on communities. The TMAC is a Federal advisory committee established to review and make recommendations to FEMA on matters related to the national flood mapping program authorized under the Biggert-Waters Flood Insurance Reform Act of

2012.¹⁰⁴ The national flood mapping program requires FEMA to review, update, and maintain NFIP rate maps.¹⁰⁵ It is outside the scope of this rule.

The commenters also refer to the NFIP's pricing approach¹⁰⁶ for NFIP policyholders as a new "flood regulation" that requires analysis prior to finalizing this rulemaking. However, this rulemaking does not impact the NFIP's site-specific actions, such as how FEMA rates the premium for a flood insurance policy. Further, the population of NFIP policyholders is much larger than the number of FEMA grant recipients who will be impacted by this rule.

One commenter states FEMA needs to account for how the rule will impact mapping and accreditation under the NFIP; however, the rule does not appreciably impact those areas of the NFIP. This rule and the accompanying policy implement the FFRMS for actions where FEMA funds are used for new construction, substantial improvement or repairs to address substantial damage, and requires that nature-based solutions and natural features be considered and implemented where possible to all actions that are subject to Step 3 of the 8-step decision-making process. Nature-based solutions and natural features must be considered as an alternative action in Step 3. Where it is not possible to use natural features and nature-based solutions as an alternative on their own, they would be considered in conjunction with the proposed action as a minimization measure in Step 5. Neither FEMA's flood mapping program nor its accreditation of levees under the NFIP are actions subject to the FFRMS and, to the extent that any programmatic or policy change to either of those areas are required to undergo the 8-step process under 44 CFR part 9, it is unlikely that a consideration of nature-based solutions will result in changes with demonstrable impacts. FEMA cannot address the other actions referenced, such as the USACE's civil works projects and levee safety updates, as these involve other Federal agencies, and questions regarding those actions are best addressed by those agencies directly.

FEMA believes that the commenter's concerns about this rule's economic impacts is inconsistent with this rule's relatively limited applicability. FEMA

defines an "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility," consistent with Executive Order 11988, as amended, and the Revised Guidelines. The FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as the IA, PA, and HMA programs, and grants processed by FEMA's Grants Programs Directorate (GPD) (involving grants for preparedness activities). This rule does not regulate privately funded activity in the floodplain. As such, the implementation of the FFRMS will have negligible impacts on community property values, tax bases, and the distribution of real income. Additionally, FEMA expects the impacts on affordable housing for low to moderate income households and disadvantaged communities to be minimal since most actions subject to FFRMS requirements are non-residential. FEMA only funds residential construction in the IA and HMA programs; FEMA funds 153 residential IA projects and 268 HMA residential projects per year on average. The majority of the costs associated with FFRMS requirements will be covered by FEMA funding.

Comment: A commenter stated the FFRMS policy and rule were one-sided, as they limited how people could use and live in flood-prone areas without a clear goal to support economic growth or sensible development within reasonable limits. The commenter stated Congress likely would not endorse a flood risk strategy that did not consider using flood-prone areas optimally for the country's benefit. The commenter stated the rule's benefits were unclear given the emphasis on constraints and a lack of consideration for economic development as part of resilience. The commenter recommended that FEMA adjust the policy to include efficient and smart use of flood-prone areas while acknowledging the limitations on development.

FEMA Response: The revisions to part 9 are consistent with FEMA's long-standing requirement as part of implementation of Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains and wetlands if those actions are the only practicable alternative. FEMA's regulations provide for consideration of the need for economic development and community resilience, while also bolstering the resilience of communities and Federal

¹⁰³ TMAC 2023 Interim Report, available at https://www.fema.gov/sites/default/files/documents/fema_rm-tmac-2023-interim-report-30OCT2023.pdf (last accessed Mar. 28, 2024).

¹⁰⁴ 42 U.S.C. 4101a.

¹⁰⁵ 42 U.S.C. 4101b.

¹⁰⁶ Also known as Risk Rating 2.0, Equity in Action. See <https://www.fema.gov/flood-insurance/risk-rating> (last accessed Mar. 18, 2024).

assets against the impacts of flooding. For instance, through the 8-step process, FEMA considers alternative locations, alternative actions, natural features, nature-based approaches, and the no action alternative under the practicability analysis. The definition of “practicable” makes clear that practicability depends on the situation and includes consideration of all pertinent factors, such as natural environment, social concerns, economic aspects, legal constraints, and agency authorities. In addition, if there is no practicable alternative, FEMA will perform or fund the action in the floodplain or wetland and will minimize any adverse impacts when doing so. Under § 9.9 as well, in determining the practicability of the alternatives, FEMA considers economic aspects.

D. FEMA’s Authority for Part 9 and Revisions

Two commenters wrote comments concurring with FEMA’s statutory and other authority for the rulemaking.

Comments: Both commenters stated the rule was a valid use of FEMA’s regulatory authority, citing to the NFIA, as amended by the Flood Disaster Protection Act (42 U.S.C. 4001 *et seq.*), the Stafford Act (42 U.S.C. 5121 *et seq.*), and the NEPA (42 U.S.C. 4321 *et seq.*). One commenter noted the Congressional intent in the Stafford Act for the Federal Government to develop land use and construction regulations to help State and local governments mitigate risk and reduce losses and FEMA’s broad discretion to define “safe land use and construction practices” as a condition of Stafford Act funding for both public and private structures.¹⁰⁷ The commenter stated section 101 of NEPA required FEMA to use all practicable means to ensure Federal plans, programs, and resources “(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations; (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings; [and] (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences” among other priorities.¹⁰⁸ The commenter stated the FFRMS reflects a tradition of executive action to enforce reasonable floodplain management and wetland protection. Another commenter noted the NFIA and Flood Disaster Protection Act require FEMA to establish land use criteria for

floodplain management¹⁰⁹ and that NEPA requires Federal agencies to evaluate the environmental and related social and economic effects of their proposed actions, which includes the evaluation of the impacts of proposed actions in the floodplains.¹¹⁰ Further, the commenter stated the Stafford Act directed FEMA to encourage “hazard mitigation measures to reduce losses from disasters, including development of land use and construction regulations.”¹¹¹ The commenter stated FEMA’s regulations were consistent with these legislative directives.

FEMA Response: FEMA agrees with the commenter that the agency has statutory authority to implement FFRMS. Please refer to section II.B for a description of FEMA’s statutory authority to implement grant programs and to require its grant recipients to carry out repairs or construction in accordance with specific standards.

Three commenters raised concerns regarding FEMA’s legal authority to amend part 9 and implement FFRMS.

Comment: One commenter stated Congress should establish the definition of floodplains. The commenter acknowledged defining the geographic scope of a floodplain was not an easy task, but stated the implications on landowners and others made it a job best left for Congress. The commenter stated that Congress drafted and debated language over the last twenty plus years on the issue and stated that Congress has had the opportunity to revisit and refine Federal floodplain policies as part of NFIP regular reauthorization process. The commenter stated it was bad public policy to delegate defining the limits of Federal authority to the agencies, citing to challenges other agencies have had defining “waters of the United States” and reiterating the need for Congressional action.

FEMA Response: This comment appears to confuse the definition of floodplain under the NFIP with the definition of floodplain that is being altered with this rulemaking, and, as such, makes incorrect statements and assumptions about the role Congress has played or should play. This rulemaking is not altering the definition of floodplain under the NFIP. The NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses.¹¹² As a condition of eligibility, a community must adopt and enforce floodplain

management regulations that meet or exceed the NFIP minimum floodplain management criteria developed by the Administrator.¹¹³ The floodplain and other definitions governing the NFIP can be found at 44 CFR 59.1. This rulemaking is updating the definition of floodplain in 44 CFR part 9 as applied to actions subject to the FFRMS, defined as actions where FEMA funds are used for new construction, substantial improvement, or repairs to address substantial damage to structures and facilities.¹¹⁴ As set forth, in section II.B, Congress has authorized FEMA to implement grant programs and to require its grant recipients to carry out repairs or construction in accordance with specific standards.

Comment: Two commenters requested FEMA cite the specific and clear Congressional authority for each objective and mandate of FFRMS. Both commenters noted the President may have the authority to impose mandates on Federal projects as cost-saving measures, but regulation of private and non-Federal activities within the floodplain was limited to those jurisdictions where local communities have imposed upon themselves the burden of floodplain regulation as a condition of participation in the NFIP. The commenters stated that applying the FFRMS to private and non-Federal government entities under other regulatory programs was outside FEMA’s statutory authority.

FEMA Response: Please refer to section II.B for a description of FEMA’s statutory authority to implement grant programs and to require its grant recipients to carry out repairs or construction in accordance with specific standards. Contrary to the commenter’s assertions, this rule applies the FFRMS to FEMA funded projects for new construction, substantial improvement, and repairs to address substantial damage. It does not regulate privately funded activity in the floodplain, it does not alter the definition of floodplain under the NFIP, and it does not apply

¹¹³ 42 U.S.C. 4011(a) and (b); 42 U.S.C. 4102; 44 CFR 59.2(b), 59.22(a)(3), 60.1(d).

¹¹⁴ See “Guidelines for Implementing Executive Order 11998, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input,” 80 FR 64008 (Oct. 22, 2015) (providing notice of the availability of the Revised Guidelines in the docket for the rulemaking at <https://www.regulations.gov/document/FEMA-2015-0006-0358> (main content) and <https://www.regulations.gov/document/FEMA-2015-0006-0372> (appendices)) also available at https://www.fema.gov/sites/default/files/documents/fema_implementing-guidelines-EO11988-13690_10082015.pdf (last accessed Mar. 11, 2024).

¹⁰⁷ 42 U.S.C. 5165a.

¹⁰⁸ 42 U.S.C. 4331(b).

¹⁰⁹ 42 U.S.C. 4102, 42 U.S.C. 4104c.

¹¹⁰ 42 U.S.C. 4332(2)(C).

¹¹¹ 42 U.S.C. 5121(b)(5).

¹¹² 42 U.S.C. 4011(a).

the FFRMS to any programs other than FEMA's grant programs.

Comment: One of the commenters stated that FEMA was acting without clear statutory authority as implementing the FFRMS fell within the scope of a major question because of the standard's aggregate economic impacts over time. Two commenters recommended FEMA remove any application of FFRMS to private and non-Federal activities covered by permitting, loan, or grant-in-aid programs administered by Federal agencies except where clear statutory authority has been granted and also sever any and all objectives related to regulating floodplain activities to protect wetlands. The commenters stated Federal authority over wetlands was limited by the Clean Water Act and recent Supreme Court rulings, including *Sackett v. EPA*.¹¹⁵

FEMA Response: FEMA disagrees the aggregate economic impacts over time associated with this rulemaking are a matter of such "deep economic and political significance" as to constitute a "major question," as described by the Supreme Court in *West Virginia v. EPA*.¹¹⁶ While FEMA expects that this rule would carry important benefits and would ultimately save significant taxpayer dollars, this rule is not akin to the rule in *West Virginia*, where the agency's "own modeling concluded that the rule would entail billions of dollars in compliance costs (to be paid in the form of higher energy prices), require the retirement of dozens of coal-fired plants, and eliminate tens of thousands of jobs across various sectors."¹¹⁷ This rulemaking requires FEMA grant recipients to build a subset of the construction projects that FEMA funds to a higher standard in an expanded floodplain. There is an increase in the costs associated with this more resilient building standard, but that increase is paid primarily by FEMA and is ultimately a fraction of what grant recipients might already spend using Federal funds to accomplish such construction.

Even if the major questions doctrine did apply, there is clear statutory authority and longstanding precedent for the rule. FEMA has authority to require application of the FFRMS as a condition of funding in its grant programs based on the grant programs' authorizing statutes. Congress granted FEMA the authority to provide Federal assistance through multiple grant programs under the Robert T. Stafford

Disaster Relief and Emergency Assistance Act (Stafford Act),¹¹⁸ the NFIA,¹¹⁹ the Homeland Security Act of 2002,¹²⁰ the Federal Fire Prevention and Control Act of 1974,¹²¹ the Earthquake Hazards Reduction Act of 1977,¹²² and various other appropriations acts. Under each of these authorities, FEMA may set grant eligibility criteria consistent with the respective purposes of such programs and FEMA's mission, including to protect Federal investments from the risks of further damage.¹²³ Under the Stafford Act and the NFIA, which authorize the programs that fund the majority of the actions subject to the FFRMS, FEMA has general rulemaking authority.¹²⁴ Further, FEMA has explicit authority under the Stafford Act to set the minimum standards for safe land use and construction standards required in the repair or construction of private and public facilities.¹²⁵ Further, in the time since Executive Order 11988 was first issued in 1977 and FEMA issued its implementing regulations at 44 CFR part 9 in 1979 and 1980, Congress has amended FEMA's governing authorities multiple times without overriding part

¹¹⁸ 42 U.S.C. 5121 *et seq.*

¹¹⁹ 42 U.S.C. 4001 *et seq.*

¹²⁰ 6 U.S.C. 101 *et seq.*; *see also* 6 U.S.C.

314(a)(12), which specifically charges the Administrator with supervising various grant programs authorized under the HSA. Such grant programs have long been governed by floodplain management regulations at 44 CFR part 9, *see, e.g.*, 44 FR 76510 (Dec. 27, 1979), 45 FR 59520 (Sept. 9, 1980). *See also, e.g.*, 2 CFR 200.300(a) (directing Federal awarding agencies to manage and administer Federal awards in a manner so as to ensure that Federal funding is expended and associated programs are implemented in full accordance with the U.S. Constitution, Federal Law, and public policy requirements including, but not limited to, those protecting public welfare and the environment; and requiring the Federal awarding agency to communicate to the non-Federal entity all relevant public policy requirements, and incorporate them either directly or by reference in the terms and conditions of the Federal award.).

¹²¹ 15 U.S.C. 2229 and 2229a.

¹²² 42 U.S.C. 7701 *et seq.*

¹²³ *See, e.g.*, 6 U.S.C. 609 (granting FEMA approval authority over grant funds for construction awards under its Homeland Security Grant Program, State Homeland Security Grant Program, Urban Area Security Initiative, Operation Stonegarden, Tribal Homeland Security Grant Program, and Nonprofit Security Grant Program); 6 U.S.C. 1182(d)(1) (granting DHS the authority to determine the grant requirements for the Intercity Bus Security Grant Program); 6 U.S.C. 1163(c)(1) (granting FEMA the authority to determine the grant requirements for the Intercity Passenger Rail grant program); 46 U.S.C. 70101 (granting DHS approval authority over grant funds for construction awards under the Port Security Grant Program); 6 U.S.C. 1135(c)(1) (granting DHS the authority to determine the grant requirements for the Transit Security Grant Program); 33 U.S.C. 467f-2(c)(2)(A) (granting FEMA the authority to set the minimum eligibility requirements for the Rehabilitation of High Hazard Dam Program).

¹²⁴ *See* 42 U.S.C. 5164; 42 U.S.C. 4128(a) and (b).

¹²⁵ 42 U.S.C. 5165a(a)(1)-(2).

9.¹²⁶ Consistent with the approach that FEMA has taken for decades, this rule revises part 9 pursuant to FEMA's statutory authorities and in line with Executive Order 11988, as amended.

Finally, the comments related to wetlands and the Supreme Court's decision in *Sackett v. EPA* are not germane to this rulemaking. FEMA's proposed changes to the definition of wetlands within the regulation was limited to reorganizing the placement of examples within the definition and removing an outdated resource. FEMA's proposed changes do not change how the agency makes wetland determinations.

E. Definitions

FEMA received over 40 specific comments on the proposed rule's definitions in § 9.4. Commenters were generally supportive of the proposed revisions but sought clarification or offered suggestions to enhance the definitions provided in the proposed rule. FEMA has carefully reviewed the commenters' suggestions and is not revising the NPRM definitions in this final rule but is providing multiple clarifications below.

1. General Comments on Definitions

Comments: Commenters requested additional clarity regarding definitions and additional engagement on definitions generally. A commenter requested FEMA provide clear definitions and describe abbreviations before they are used in the rulemaking, policy, and any additional guidance or resources provided. The commenter provided an example of the term "AC floodplain" used in a graphic without definition. Another commenter requested FEMA engage stakeholders from a range of relevant backgrounds in the review process to gather varied perspectives and ensure that definitions are clear and universally understood.

FEMA Response: FEMA will distribute additional resources to the public and SLTT partners after the rule's publication to ensure that stakeholders understand what the FFRMS is and how the agency will implement the revised part 9. These resources will include additional examples to help applicants better understand the FFRMS as they apply for FEMA programs. FEMA appreciates the

¹²⁶ *See, e.g.*, Disaster Mitigation Act of 2000, Public Law 106-390, 114 Stat. 1552 (Oct. 30, 2000); Post-Katrina Emergency Management Reform Act of 2006, Public Law 109-295, 120 Stat. 1452 (Oct. 4, 2006); Sandy Recovery Improvement Act of 2013; Public Law 113-2, 127 Stat. 47 (Jan. 29, 2013); Disaster Recovery Reform Act of 2018, Public Law 115-254, 132 Stat. 3448 (Oct. 5, 2018).

¹¹⁵ *Sackett v. EPA*, 598 U.S. 651 (2023).

¹¹⁶ 142 S. Ct. 2587 (2022).

¹¹⁷ *Id.* at 2604.

commenter's concern and has updated Figure 1 in the FFRMS policy to clarify "AC floodplain" means "annual chance floodplain."

FEMA engaged stakeholders as part of the development and publication of the Revised Guidelines, which contain most of the definitions FEMA uses in this rulemaking. Stakeholders also provided specific feedback on the definitions in § 9.4 as part of this rulemaking effort and FEMA addresses their concerns in this final rule.

2. 0.2PFA

Comment: A commenter expressed support for the definition of the 0.2 percent annual chance flood elevation (0.2PFA), agreeing with the use of the terminology similar to annual exceedance probability for defining flow, floodplains, and water surface elevation in the floodplain.

FEMA Response: FEMA appreciates the commenter's consideration of the definition.

3. Agency

Comment: One commenter requested clarification on how the term "agency" was defined under part 9.

FEMA Response: FEMA defines "agency" in § 9.4 as "the Federal Emergency Management Agency (FEMA)." FEMA is not changing the definition of "agency" in this final rule.

4. Critical Action

Comments: Five commenters asked FEMA to further clarify the definition of "critical action," stating the definition was too vague and left too much room for interpretation. Commenters asked for a list of examples of critical actions to support the definition in § 9.4 and/or sufficient information to distinguish between critical and non-critical actions. One commenter asked FEMA to provide examples related to the transportation sector and recommended roadways, bridges, and culverts not be considered critical actions. One commenter requested a process for local representatives to provide input on what constitutes critical action/critical facilities.

FEMA Response: FEMA's definition of "critical action" is consistent with Executive Order 11988, as amended, through the 1978 Guidelines and further clarified in the Revised Guidelines. FEMA notes the term "critical action" is not new but was developed and implemented initially with Executive Order 11988 in 1977. The Revised Guidelines provide further details on what constitutes a critical action. FEMA will leverage the information in the Revised Guidelines when providing

additional guidance to stakeholders. The determination of whether an action to create or extend the useful life of a structure or a facility is a critical action is generally made on a case-by-case basis consistent with the information found in the Revised Guidelines. Local representatives have input on whether a particular action is a "critical action" as part of the agency's 8-step process.

5. Federal Action

Comment: Two commenters sought clarification on the term "Federal action." Commenters sought clarification on what is a "Federal action" subject to the FFRMS and stated confusion and inconsistency could result among different Federal agencies and programs implementing the FFRMS. One commenter asked for additional clarification on whether specific FEMA programs were subject to the FFRMS. That commenter also sought clarification on how the FFRMS would interact with other Federal laws and regulations that govern floodplain management, such as the NFIP, NEPA, and the Endangered Species Act (ESA).

FEMA Response: In this rulemaking, FEMA revises § 9.4 to define "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility." As explained above, the requirements of this rule apply to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD.

Part 9 only applies to FEMA actions. Other Federal agencies will implement FFRMS through their own regulations and/or policies. To ensure consistency, all Federal agencies will utilize the Revised Guidelines in their own FFRMS implementation. Per 44 CFR 9.11(d)(6), no action may be taken if it is inconsistent with the NFIP or any more restrictive Federal, State, or local floodplain management standards.

FEMA funding actions are also evaluated pursuant to the NEPA, ESA, and other environmental and historic preservation requirements. The Federal action will not be approved unless it meets all applicable environmental and historic preservation requirements.

6. Floodplain

Comments: A commenter requested FEMA coordinate with the agency's TMAC to ensure the new rule's definition of "floodplain" in § 9.4 accounts for potential changes in the definition and mapping of floodplains

recommended by the TMAC. Another commenter asked how the floodplain would be defined in the FFRMS and if the floodway would be considered a regulatory floodplain. The commenter stated it was unclear how the expanded horizontal FFRMS floodplain would impact future State Department of Transportation's maintenance work in coordination with the Federal Highway Administration (FHWA).

FEMA Response: FEMA appreciates the commenter's concerns. The purpose of TMAC is to provide analysis under the NFIA. The requirements of Executive Order 11988, as amended, are distinct from TMAC recommendations and thus FEMA disagrees with the commenter that coordination with TMAC is required to finalize this rule. As explained above, the TMAC is a Federal advisory committee established to review and make recommendations to FEMA on matters related to the national flood mapping program authorized under the Biggert-Waters Flood Insurance Reform Act of 2012.¹²⁷ The national flood mapping program requires FEMA to review, update, and maintain NFIP rate maps.¹²⁸ While the framework FEMA uses in part 9 is distinct from mapping recommendations for flood prone areas TMAC made in their recent annual report, FEMA believes that the flexibility outlined in 44 CFR 9.7 and the practice of using the best available information will allow the application of part 9 to adjust to any change made in the mapping process should FEMA adopt any of the TMAC recommendations.

As explained in the NPRM in 44 CFR 9.4, FEMA defines the "Federal Flood Risk Management Standard Floodplain" as the floodplain established using one of the approaches described in 44 CFR 9.7(c). The floodway and the regulatory floodway are also defined in 44 CFR 9.4 and are within the floodplain for purposes of part 9. The requirements of this rule will apply to actions funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD. Roads that are under the jurisdiction of another Federal agency, such as those under the FHWA, are subject to that agency's requirements as they generally are ineligible for funding under FEMA's grant assistance programs.

¹²⁷ 42 U.S.C. 4101a.

¹²⁸ 42 U.S.C. 4101b.

7. Nature-Based Approaches

While some commenters expressed support for the definition of “nature-based approaches” in the rule, other commenters requested specific revisions.

Comment: One commenter stated the definition of “nature-based approaches” failed to take into account a design intent to protect or restore natural processes; and did not include reference to hybrid gray/green solutions that might be required for restoring habitat, attenuating floods, and keeping communities safe. The commenter suggested a definition closer to the “nature-based solutions” definition published on FEMA’s website. The commenter requested FEMA work with other Federal agencies to agree on common definitions for key terminology. Further, the commenter recommended that FEMA remove language stating that nature-based approaches “generally, but not always, must be maintained in order to reliably provide the intended level of service,” because maintenance requirements are highly variable and are also generally necessary to maintain grey infrastructure. The commenter stated that “nature-based solutions specifically aim to work with nature (as opposed to grey infrastructure solutions that often are designed to control or work against nature processes) and therefore can be less susceptible to catastrophic failure or repeated maintenance and can require lower maintenance costs overall.” This commenter also requested FEMA include “green infrastructure” when describing the definition. The commenter recommended FEMA include a broader range of ecosystem-based activities in the description of natural and nature-based actions, especially those more appropriate for larger or more rural floodplains. The commenter provided specific scenarios of nature-based approaches.

FEMA Response: FEMA appreciates the commenter’s concerns and believes the definition as written is appropriate. The definition is consistent with the glossary definition in the Revised Guidelines. The Revised Guidelines provide broad guidance in implementing Executive Order 11988, as amended and “offer a common point of reference so that each agency can use or amend their procedures as appropriate.”¹²⁹ Consistency with the Revised Guidelines definition helps ensure more consistent implementation of nature-based approaches across the Federal government and meets the

commenter’s request for FEMA to utilize common terminology with other Federal agencies. Changes such as those proposed by the commenter would increase the potential for inconsistency and stakeholder confusion working on projects involving multiple Federal agencies.

FEMA notes that the Revised Guidelines state that nature-based approaches can restore natural processes, and the agency does not believe the definition excludes either protecting or restoring natural processes. For purposes of part 9, nature-based solutions are specific to floodplains and wetlands, and the commenter’s references to nature-based solutions on the agency’s website reflects the full range of natural hazards FEMA programs may mitigate. Regarding maintenance, FEMA believes the language is appropriate in the definition as written. The use of “maintenance” is to differentiate between nature-based approaches and natural features. Nature-based approaches are designed to mimic natural processes, but they are not wholly naturally occurring. As such, they may require some form of maintenance to ensure they are performing as intended. In comparison, natural features are those characteristics of the environment that are naturally occurring and exist in a dynamic equilibrium, so should require little to no maintenance in serving their purpose. FEMA understands the commenter’s concern that “green infrastructure” is more expansive than stated in the NPRM and plans to provide additional resources that will incorporate examples to address some of the specific scenarios raised by the commenter. FEMA notes the definition of “nature-based approaches” states that nature-based approaches are sometimes referred to as “green infrastructure.”

Comments: Two other commenters requested edits to the definition of “nature-based approaches” to incorporate restoration and conservation of natural systems. The commenters stated that such edits would ensure all relevant nature-based approaches are adequately considered. Another commenter recommended expanding the definition of “nature-based approaches” by removing the reference to “green infrastructure” at the beginning of the definition and incorporating the statement “Nature-based approaches include green infrastructure practices, as well as restoration approaches such as the restoration of wetland and floodplain hydrology and other river processes” into the definition while also revising

the language regarding maintenance to state such approaches can be self-sustaining or need ongoing maintenance.

FEMA Response: While FEMA appreciates the commenters’ concerns to include restoration or conservation of naturally occurring systems and processes and concerns related to green infrastructure, FEMA’s definitions are consistent with the glossary definition in the Revised Guidelines and the changes proposed by the commenters could result in inconsistencies including inconsistent implementation across other Federal agencies. As explained above, the Revised Guidelines help ensure key terminology is consistent across Federal agencies implementing FFRMS. The Revised Guidelines state that nature-based approaches can restore natural processes, and FEMA does not believe the definition excludes restoring or conserving natural systems. FEMA will provide additional resources with additional examples of nature-based approaches including more information on green infrastructure to address the commenters’ concerns. FEMA will also coordinate with other Federal agencies regarding the use of nature-based solutions as part of the FFRMS implementation.

FEMA appreciates the commenter’s suggestion to specifically reference “the restoration of wetland and floodplain hydrology and other river processes” in the definition of “nature-based approaches,” but disagrees that such an edit is needed to the definition to address the commenter’s concerns.

FEMA’s longstanding requirements in 44 CFR 9.11 outline the agency’s requirements to restore and preserve the natural and beneficial values served by floodplains and wetlands. This requirement to restore and preserve the values served by floodplains and wetlands, *see, e.g.*, 44 CFR 9.11(b)(3) & (e), applies to all actions located within a floodplain or wetland or that affect a floodplain or wetland, including actions that use nature-based approaches.

As explained above, the use of “maintenance” is to differentiate between nature-based approaches and natural features and FEMA does not believe the changes suggested by the commenter are appropriate. Nature-based approaches are designed to mimic natural processes, but they are not wholly naturally occurring. As such, they may require some form of maintenance to ensure they are performing as intended. In comparison, natural features are those characteristics of the environment that are naturally occurring and exist in a dynamic

¹²⁹ Revised Guidelines at pg. 13.

equilibrium, so should require little to no maintenance in serving their purpose. FEMA understands the commenter's concern that "green infrastructure" is more expansive than stated in the NPRM and plans to provide additional resources that will incorporate examples to address some of the specific scenarios raised by the commenter. FEMA notes the definition of "nature-based approaches" states that nature-based approaches are sometimes referred to as "green infrastructure" and the proposed changes merely restate language already incorporated into the definition.

Comment: One commenter restated concerns from a 2016 NPRM comment that the current definition listed "green roofs" or "downspout disconnection" as examples of nature-based approaches, and recommended FEMA provide more applicable examples of nature-based approaches, including "property acquisitions and relocations;" "dam removal;" "levee notching, setbacks, or removal;" and "stream crossing upgrades." The commenter also recommended FEMA expand the definition of nature-based approaches to encompass the restoration and conservation of natural features, providing added emphasis on the use of actions to bolster natural flood risk and water quality management services.

FEMA Response: FEMA's definition of "nature-based approaches" in the final rule, like the definition in the NPRM, does not contain "green roofs" or "downspout disconnection." FEMA's definition is consistent with the Revised Guidelines glossary definition and, as explained above, the changes proposed by the commenter could result in inconsistencies including inconsistent implementation across other Federal agencies. While FEMA appreciates the commenters' concerns to include restoration or conservation of naturally occurring systems and processes and concerns related to green infrastructure, the Revised Guidelines help ensure key terminology is consistent across Federal agencies implementing FFRMS. Although the Revised Guidelines state that nature-based approaches can restore natural processes, FEMA does not believe the definition excludes either protecting or restoring natural processes.

FEMA referred to green roofs and downspout disconnection in the preamble to the NPRM as potential examples of green infrastructure, but not as part of the proposed regulatory definition. See 88 FR at 67890. As part of implementing this final rule, FEMA will provide additional resources with additional examples to address the

commenter's concerns as explained above.

Comment: One commenter asked how FEMA defines natural systems and ecosystem processes.

FEMA Response: FEMA defined "nature-based approaches" and "natural features" in proposed § 9.4. FEMA believes those definitions are sufficient and the terms the commenter used are generally accepted terms found in Executive Order 11988, as amended, that do not require additional definition in this final rule.

8. Natural and Beneficial Values of Floodplains and Wetlands and Natural Features

FEMA received three comments on the definitions of "natural and beneficial values of floodplains and wetlands" and "natural features."

Comment: One commenter requested FEMA incorporate more explicit references to biodiversity, ecosystem functioning, and natural values into the regulation and requested "habitat connectivity" be added to the definition of "natural and beneficial values of floodplains and wetlands" as an example under "Living Resource Values."

FEMA Response: FEMA respectfully declines the commenter's request, as the agency believes the concept habitat connectivity is adequately addressed under Living Resource Values through the changes made in this final rule. Specifically, the final rule describes Living Resource Values as "providing habitats and enhancing biodiversity for fish, wildlife, and plant resources." This language adequately encompasses habitat connectivity, and no edits are required to the final rule.

Comment: A commenter requested FEMA include "functions" in addition to values when referring to protecting or restoring floodplains and wetlands to read "the beneficial functions and values of floodplains and wetlands."

FEMA Response: FEMA's definition of "natural and beneficial values of floodplains and wetlands" incorporates functions and FEMA does not believe additional edits are required.

Comment: One commenter supported the changes proposed to the definitions of "natural and beneficial values of floodplains and wetlands," and "wetlands" and additional definitions for "nature-based approaches" and "natural features" and requested FEMA develop post-regulatory guidance on functional floodplains and wetlands and nature-based solutions.

FEMA Response: FEMA agrees the changes to the definitions of "natural and beneficial values of floodplains and

wetlands" and "wetlands" and the addition of definitions for "nature-based approaches" and "natural features" are helpful features of the rule. FEMA will distribute additional resources to SLTT partners and the public identifying what the FFRMS is, and how the agency will further implement the Executive Orders and part 9.

9. New Construction

Comment: One commenter recommended the definition of "new construction" include "allowed new construction" associated with systems that must be located in the floodplain for supplementing water supply. The commenter requested the rule require consideration of specific stormwater runoff requirements for construction that must be completed in the floodplain and that FEMA recognize managed aquifer recharge (MAR)-related activities might be subject to other State and/or Federal regulation.

FEMA Response: The definition of "new construction" in part 9 must be broad in nature to support the various types of projects and activities FEMA may perform or fund. FEMA specifically incorporated examples in the definition of "new construction" to relate to typical FEMA actions, but those examples are not exhaustive. Under the 8-step decision-making process, FEMA identifies and evaluates practicable alternatives. If there is no practicable alternative outside of the floodplain, such as for functionally dependent uses,¹³⁰ the action may be carried out in the floodplain. The types of actions described by the commenter (managed aquifer recharge floodwater storage retention, spillways, injection wells and other built systems that must be located in the floodplain for their intended purpose of supplementing water supply), would be determined to be functionally dependent uses with likely no alternative outside of the floodplain. FEMA believes no changes are required to the regulation language, as those types of actions would be allowable subject to the application of the FFRMS and the minimization requirements outlined in 44 CFR 9.11. FEMA notes some agency actions will also be subject to other Federal, State, Tribal, territorial, and/or local requirements and FEMA addresses this issue in the FFRMS policy.

¹³⁰ Functionally dependent use means those actions which cannot perform their intended function unless they are located in or in close proximity to water. See 44 CFR 9.4.

10. Practicable

Comments: Two commenters were supportive of the definition of “practicable.”

FEMA Response: FEMA agrees with the commenters that the updated definition of “practicable” in § 9.4 ensures nature-based approaches are considered as practicable alternatives consistent with Executive Order 11988, as amended.

Comment: One commenter stated the definition of “practicable” was extremely vague and might not provide sufficient guidance to ensure meaningful comparison of alternatives. Recognizing the agency’s need for a broad definition to account for differences in situations, the commenter noted the definition did not provide much guidance to determine what is truly “practicable,” as opposed to merely expedient. The commenter requested FEMA require consideration of long-term environmental, community, and economic benefits and costs of an alternative, to ensure practicability determinations were not skewed towards grey infrastructure or in-floodplain actions. The commenter wrote those actions appeared cheaper or more convenient in the short-term but carried greater long-term adverse effects, risks, and/or costs.

FEMA Response: FEMA did not make significant changes to the definition of “practicable.” The changes made in the NPRM and finalized in this rule add an agency authorities factor to clarify the agency’s statutory and regulatory authorities may also limit FEMA’s actions. These changes also updated the factors for consistency with the Revised Guidelines. FEMA does not believe additional changes are required to the definition of “practicable” as the factors listed are not all inclusive. The regulatory text in § 9.9 also provides examples and FEMA will provide additional examples in resources to SLTTs and the public to further clarify as appropriate.

11. Restore

Comment: One comment requested the agency provide examples of what “natural functions” of the floodplain means and specifically include “wildlife habitat and connectivity, carbon sequestration, and water quality improvement.”

FEMA Response: FEMA’s definition of “restore” in § 9.4 does not require the revisions requested. FEMA’s definition of the “natural and beneficial values of floodplains and wetlands” provides examples of what natural functions of the floodplain mean and additional

edits are not required to address the commenter’s concerns. Specifically, the definition provides some examples but is not all inclusive. FEMA can provide additional examples in resources to SLTTs and the public to further clarify as appropriate.

12. Structures and Facilities

Comment: One commenter recommended linear transportation structures not fall under the definition of “structures.”

FEMA Response: FEMA defines both “structures” and “facilities” in § 9.4 and the agency believes these definitions are sufficiently clear. In the FFRMS policy, FEMA addresses both structures and facilities and how the agency will apply FFRMS to each. See section G of the FFRMS policy for more guidance on facilities. FEMA edited the FFRMS Policy accompanying this final rule to further clarify that section G.2 applies to “facilities.” Linear transportation structures fall under the definition of “facilities” for purposes of this part.

13. Wetlands

While one commenter wrote in support of the revised definition of “wetlands,” three other commenters requested revision to the definition.

Comment: One commenter stated the use of the United States Fish and Wildlife Service (USFWS) ’s wetlands definition was problematic, stating in their experience, USFWS declined to engage on projects unless the projects involved species protected by the Endangered Species Act (ESA) and their habitat. The commenter noted water projects and developments involve regulation by the U.S. Army Corps of Engineers (USACE) more often than with USFWS, and recommended FEMA revise the definition of “wetlands” to use the USACE’s long-standing wetland definition.

FEMA Response: FEMA appreciates the commenter’s suggestion and declines to change the definition as the agency believes the reference to USFWS is more appropriate than to USACE’s definition. FEMA’s definition is consistent with the definition of “wetlands” in Executive Order 11990 and the agency is implementing that Executive Order with this regulation. FEMA believes changes to this definition may result in conflating the implementation of Executive Order 11990 with the Clean Water Act. While the commenter is correct that the USACE definition focuses on flood attenuation or mitigation, FEMA’s part 9 implementation goes beyond those considerations for wetlands. FEMA also notes the agency performs Section 7

consultation with USFWS under ESA for actions that affect protected species or critical habitat.

Comment: One commenter recommended FEMA retain the reference to the specific publication provided in the definition of “wetlands.” The commenter stated the publication provided extensive examples and further clarification of what should be considered wetlands and was still used in the definition by the USFWS. The commenter requested the definition be updated to the correct year of publication in the final rule.

FEMA Response: FEMA’s definition is consistent with the definition of “wetlands” in Executive Order 11990, and the agency is implementing that Executive Order with this regulation. FEMA believes deleting the reference to a specific publication in the regulations will not result in a less specific definition as the commenter states. Eliminating references to specific publications helps reduce the potential for the regulations to be outdated if the publication is updated or replaced. As the commenter pointed out, the current regulatory text does not reference the correct year of the publication and the final rule will eliminate confusion around this point. FEMA still anticipates remaining consistent with the USFWS definition for purposes of part 9.

Comment: One commenter recommended the final rule specify whether artificially induced and/or isolated wetlands were included and add clearer agency expectations for subsections under the agency’s FFRMS policy, particularly those involving wetlands.

FEMA Response: FEMA has not changed how the 8-step process applies to wetlands and does not intend to as part of FFRMS implementation in this rulemaking. FEMA’s definition is consistent with the definition of “wetlands” in Executive Order 11990 and the agency is implementing that Executive Order with this regulation. FEMA believes the commenter is conflating the implementation of Executive Order 11990 with the Clean Water Act and FEMA’s part 9 implementation goes beyond those considerations for wetlands.

14. Additional Definitions Requested

In addition to the new and revised definitions provided in the NPRM, commenters requested FEMA add definitions to the final rule.

Comment: One commenter stated the need for clearer definitions was paramount to avoiding ambiguity and ensuring a shared understanding of key

terms. The commenter referenced the Climate-Informed Science Approach (CISA) as a term lacking a definition in the rule as an example of the need for more clarity.

FEMA Response: FEMA appreciates the commenter's concerns but changes to the final rule are not required to resolve those concerns. FEMA's explanation of the Climate-Informed Science Approach is consistent with Executive Order 11988, as amended, and the Revised Guidelines. Rather than providing specific definitions in regulatory text, FEMA describes each approach in § 9.7(c) and in the FFRMS policy. FEMA believes these explanations are sufficiently clear and, because they are consistent with the Executive Order and Revised Guidelines, will not result in ambiguity.

Comment: One commenter recommended adding a definition of "development" for consistency with the NFIP at 44 CFR part 59. The commenter also recommended adding a definition of "non-critical actions" to help define structures and facilities that clearly do not fall under the critical action standard and reduce misunderstandings.

FEMA Response: FEMA defines "support of floodplain and wetland development" in § 9.4 and a definition of "development" is incorporated into that definition. In the FFRMS policy, FEMA clarifies what constitutes a non-critical action as any activity that does not meet the definition of critical action. FEMA does not believe a specific definition in the regulatory text is necessary given the definition of "critical action" already provided in § 9.4.

F. FFRMS Applicability

Commenters requested clarification on the applicability of FFRMS generally as well as to specific types of actions.

1. Generally

Comments: Two commenters sought clarification on the Federal actions that are subject to FFRMS. Both commenters stated that the term "action subject to the FFRMS" could cause misinterpretation or confusion among different Federal agencies implementing the FFRMS. Another commenter asked whether the regulation and FFRMS policy would affect only new construction funded by FEMA. The commenter recommended a clarification to help States understand where FEMA's regulations implementing the FFRMS apply and whether FFRMS applied to State DOT projects funded through FHWA. The commenter also recommended FEMA clarify how the

FFRMS applied to FEMA-funded, non-FEMA but still Federally-funded, and State-funded activities.

FEMA Response: FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility," consistent with Executive Order 11988, as amended, and the Revised Guidelines. FEMA believes this definition is sufficiently clear. As explained in the preamble to the NPRM, 44 CFR part 9 applies to FEMA actions. As explained above, the requirements of this rule apply to grants funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD (involving grants for preparedness activities). All Federal agencies will utilize the Revised Guidelines for their own FFRMS implementation. Roads that are under the jurisdiction of another Federal agency, such as those under the FHWA, are subject to that agency's requirements as they generally are ineligible for funding under FEMA's grant assistance programs.

As explained in § 9.5(a)(3), FEMA will apply FFRMS only to new actions for which assistance is made available pursuant to declarations under the Stafford Act that are commenced on or after the effective date of the final rule, and new actions for which assistance is made available pursuant to notices of funding opportunity that publish on or after the effective date of the final rule. Ongoing projects will not be impacted by this final rule.¹³¹

Comment: A commenter requested FEMA clearly define how Federally funded expansions, renovations, rebuild, rehabilitations and similar activities would be impacted by the FFRMS. The commenter noted many infrastructure projects are not static

¹³¹ Note that FEMA first partially implemented the FFRMS by policy with respect to covered projects in existing floodplains in its Public Assistance and Hazard Mitigation Assistance programs. See FEMA Policy 104-22-003, "Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim)," June 3, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implemetnation-ffrms-pa-interim.pdf (last accessed Jan. 24, 2024) and FEMA Policy 206-21-003-0001, "Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Program," Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024). Some current FEMA actions may be subject to these partial implementation policies; however, those actions would not be subject to this final rule or policy.

structures, but rather periodically require rehabilitation, renovation, and/or expansion and thus would include a combination of rehabilitation of existing construction, modification of existing infrastructure, and entirely new infrastructure elements that would be combined during a project to create the "new" final structure and/or system. The commenter stated that FFRMS seemed to apply only to new structures that can be sited or elevated without moving or damaging existing construction and requested confirmation of that understanding. Another commenter commended FEMA's proposed policy provisions for identifying actions that might be subject to determinations of substantial damage or substantial improvement.

FEMA Response: Part 9 does not apply only to new structures, and FEMA believes the rule and FFRMS policy are sufficiently clear on this point. As stated above, FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility," consistent with Executive Order 11988, as amended, and the Revised Guidelines.

In § 9.4, FEMA defines "new construction" in this final rule as "the construction of a new structure or facility or the replacement of a structure or facility which has been totally destroyed. New construction includes permanent installation of temporary housing units because even though such housing may initially have been planned to be temporary, when it is permanently installed, it becomes a permanent housing solution for survivors. New construction in wetlands includes draining, dredging, channelizing, filling, diking, impounding, and related activities." Also in § 9.4, FEMA further defines "substantial improvement" as any repair, reconstruction or other improvement of a structure or facility, which has been damaged in excess of, or the cost of which equals or exceeds, 50 percent of the pre-disaster market value of the structure or replacement cost of the facility (including all "public facilities" as defined in the Stafford Act) (1) before the repair or improvement is started, or (2) if the structure or facility has been damaged and is proposed to be restored. Substantial improvement includes work to address substantial damage to a structure or facility. As it related to the commenter's stated concern, if a facility is an essential link in a larger system, the percentage of damage will be based on the cost of repairing the damaged facility relative to

the replacement cost of the portion of the system which is operationally dependent on the facility. The term “substantial improvement” does not include any alteration of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places. Where an action falls under one of the definitions above, it would be considered an action subject to FFRMS.

The revisions to part 9 do not change FEMA’s long-standing requirement as part of implementing Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains if those actions are the only practicable alternative. Through the 8-step process, FEMA considers alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis. If there is no practicable alternative, FEMA will perform or fund the action and will minimize any adverse impacts when doing so.

2. FEMA Specific Programs

Commenters also commented on the applicability of FFRMS to specific FEMA programs.

Comments: Some commenters stated support for FEMA’s policy regarding FFRMS applicability to temporary and permanent housing. One commenter requested FEMA give careful consideration to potentially unintended consequences of greatly expanded requirements for victims of a catastrophic disaster in need of emergency federal disaster assistance. The commenter cited a study related to the impacts of Hurricane Ian and discussed how the flood extent in many areas was approximated by the Special Flood Hazard Area (SFHA) boundaries, noting without constraints in development in the SFHA, flood damages for the area studied would have skyrocketed. Another commenter expressed concern that the proposed rule could increase local costs and delay affordable housing projects. The commenter requested FEMA consider ways to advance affordable housing projects, such as through expansion of its “Housing Mitigation Assistance” grants and requested the agency make accommodations for such projects to support a more expeditious regulatory process.

FEMA Response: FEMA appreciates the commenter’s interest in the agency’s Individuals and Households Program. FEMA’s revisions in § 9.13 reflect the agency’s consideration of the need for disaster survivors to quickly recover, while also addressing the need for more

resilient housing. FEMA notes this rulemaking will not expand the SFHA for NFIP purposes nor does it apply to a local community’s permitting processes under the NFIP’s floodplain management regulations. Those regulations are found at 44 CFR part 59 *et seq.* FEMA notes the agency does not have “Housing Mitigation Assistance” grants, but where FEMA provides funding for housing, the agency will consider social concerns and economic aspects as part of the practicability analysis in the 8-step process.

Comments: Multiple commenters referenced the NFIP and FFRMS applicability. One commenter stated that FEMA only applies the 8-step process programmatically to the NFIP as a whole. The commenter further noted the FFRMS would only apply to new construction or substantial improvement to existing structures or facilities that receive FEMA funding. The commenter stated support for exempting all privately funded activities from the FFRMS as those activities were beyond the scope of FEMA’s authority and would create challenges in determining the geographic scope of the FFRMS defined floodplain and increased construction costs that would negatively impact housing affordability.

Another commenter wrote asking if the FFRMS policy would impact where new flood insurance policies could be issued. The commenter recommended FEMA consider coordinating with other Federal agencies and expanding the Coastal Barrier Resources Act (CBRA) and/or identifying additional areas where new flood insurance policies could not be issued based on FFRMS approaches.

A third commenter wrote the work needed to restore floodplain connectivity should have a streamlined regulatory process and additional financial and technical support to meet regulatory burdens. The commenter stated a fundamental tenet of the NFIP was to discourage increases in base flood elevation from “traditional development,” whereas floodplain restoration projects are intended to increase the base flood elevation in areas where it is safe and socially acceptable to do so. The commenter stated floodplain restoration work was urgently needed in many flood-prone areas, but the NFIP requirements hindered federal investments in floodplain restoration work. The commenter stated that regulatory reforms are needed to ensure Federal restoration dollars could be leveraged to help reduce flood risks and damages.

FEMA Response: FEMA agrees with the commenter that privately funded

activities are not subject to this rule. This rulemaking is not regulating privately funded action; instead, this rulemaking applies to actions subject to the FFRMS, *i.e.*, Federally funded projects for new construction, substantial improvement, and repairs to address substantial damage. For the purposes of regulating private activities, the NFIP’s floodplain management standards will continue to generally apply in NFIP participating communities.¹³² The commenter is also correct that FEMA applies part 9 programmatically to the NFIP.¹³³ Notwithstanding the programmatic application of part 9 to the NFIP, the expanded floodplain established under this rule has no impact on where new flood insurance policies may be issued (including community eligibility for the NFIP participation and individual premiums) because the expanded floodplain only applies to actions subject to the FFRMS.

In short, part 9 does not apply to the issuance of flood insurance policies. This rule and accompanying policy will have no effect on where new flood insurance policies may be issued. FEMA notes that only Congress can expand CBRA, and USFWS has primary authority for the implementation of CBRA. While FEMA appreciates the commenter’s concerns regarding floodplain restoration, regulatory reforms to the NFIP suggested by the commenter are beyond the scope of this rulemaking.

3. Facilities

Four commenters had questions regarding the applicability of the final rule and FFRMS policy to facilities.

Comment: A commenter recommended FEMA clarify special considerations for infrastructure projects by providing more information and guidance on how to implement FFRMS for “facilities.” The commenter stated essential facilities like roadways, bridges, and utilities might be vulnerable to flood damage and required even more attention, but the rule was largely silent as to how FFRMS applied to these projects.

The same commenter wrote of their experience with agencies struggling to adequately assess relevant flood risks when evaluating vital facilities and

¹³² The NFIP’s floodplain management standards are generally found at 44 CFR 60.3. There are variances and exceptions from the standards written into 60.3. Additionally, some communities have higher standards above the NFIP’s floodplain management minimum requirements.

¹³³ A comprehensive list of FEMA programs to which Part 9 does not apply appears at 44 CFR 9.5. The exemption for actions under the NFIP is located at 44 CFR 9.5(f).

recommended incorporating language into Steps 1 and 5 of the 8-step process, clarifying appropriate considerations and methods to apply the FFRMS to facilities. The commenter requested FEMA set forth factors to consider when defining the FFRMS floodplain for facilities (such as considering a larger project area and vulnerability of nearby assets that could be affected) to encourage better, more informed decisions. The commenter also recommended FEMA revise § 9.11 to clarify that although elevation is not universally required for facilities, mitigation measures for facilities subject to the FFRMS must be designed to be resilient to the FFRMS flood elevation.

Another commenter encouraged FEMA to provide more information and guidance in the final rule on implementing the FFRMS for facilities. The commenter stated that most facilities would likely require different implementation considerations and standards than those defined in the rule for structures. The commenter stated that elevation may not be an appropriate means to improve or achieve resilience for facilities and requested that the final rule and related guidance provide variables to consider, which could help define appropriate resilience measures in addition to or in place of elevation.

FEMA Response: FEMA appreciates the commenter's references to challenges with assessing relevant flood risks for vital facilities and infrastructure. As the commenter notes, several factors must be considered when implementing the FFRMS for facilities. FEMA believes that the agency's 8-step process and implementing policy account for the specific concerns raised in the examples provided. The agency's policy reflects a preference for using the CISA that considers sea level rise and FEMA's practicability analysis incorporates social concerns and economic aspects into the 8-step process. FEMA's revisions to part 9 reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so that all people, including those from vulnerable and underserved communities, can get help when they need it.¹³⁴ Additionally, FEMA reviews all proposed FEMA-funded actions for potential

disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process.

For the reasons described below, FEMA's current proposed FFRMS policy uses the FFRMS flood elevation and corresponding floodplain to establish the minimum level to which a structure or facility must be resilient. For facility projects that are subject to the FFRMS, the FFRMS flood elevation represents the magnitude of flooding that must be considered in incorporating flood resilient design features into project designs. This approach allows the FFRMS to be integrated as one element of project-specific comprehensive design methods and leaves open the possibility of more prescriptive design requirements as infrastructure design methods improve, better incorporating consideration of continually changing hazard conditions.

Due to the vast diversity of facilities, the highly project-specific nature of facilities projects, and numerous options for making them resilient, infrastructure standards (in terms of narrowly scoped specifications) to reduce risk from climate change and future conditions currently do not exist on a national level. This lack of established standards, and the long timeline necessary to develop them, requires consideration of less prescriptive approaches. In the absence of such standards, Federal agencies that oversee construction of infrastructure projects such as the FHWA and USACE apply project-specific risk assessment and adaptive management approaches, which generally require data collection, detailed studies, benefit-cost analyses, and consideration of various alternatives, adaptation, and mitigation measures.¹³⁵

¹³⁵ See, e.g., Federal Highway Administration Hydraulic Engineering Circular No. 17, 2nd Ed: Highways in the River Environment—Floodplains, Extreme Events, Risk, and Resilience 2016, available at https://www.fhwa.dot.gov/engineering/hydraulics/library_arc.cfm?pub_number=2&id=162 (last accessed Jan. 24, 2024), Federal Highway Administration Hydraulic Engineering Circular No. 25, 2nd Ed: Highways in the Coastal Environment October 2014, available at <https://www.fhwa.dot.gov/engineering/hydraulics/pubs/nhi14006/nhi14006.pdf> (last accessed March 28, 2024), US Army Corps of Engineers Engineering and Construction Bulletin 2018-14: Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Works Studies, Designs, and Projects, available at <https://wbdg.org/ffc/dod/engineering-and-construction-bulletins-ecb/usace-ecb-2018-14> (last accessed Jan. 24, 2024), and US Army Corps of Engineers Engineer Regulation No. 1100-2-8162: Incorporating Sea Level Change in Civil Works Programs, June 2019, available at [FEMA already incorporates many of these approaches into its grant requirements. FEMA Recovery Interim Policy 104-009-11 Version 2.0, "Consensus-Based Codes, Specifications and Standards for Public Assistance" \(December 20, 2019\) requires "application of the latest nationwide consensus-based codes, specifications and standards that incorporate hazard resistance for PA funded projects," including buildings, electric power, roads, bridges, potable water, and wastewater.¹³⁶ Appendix A of the policy includes an extensive list of risk assessment and adaptive management methods which applicants are required to use "as the minimum design criteria for eligible projects." Eligibility for Hazard Mitigation Assistance funding requires SLTT partners to have up-to-date hazard mitigation plans, which incorporate community-wide risk assessment and adaptive management approaches applicable to facilities or linear infrastructure.](https://www.publications.usace.army.mil/USACE-</p>
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Further, FEMA does not believe changes to the final rule are required as the regulation applies the 8-step process to any action, as defined in 44 CFR 9.4, which includes facilities. In the 8-step process, FEMA considers not just whether proposed actions would be in a floodplain or wetland, but also whether the proposed action would affect a floodplain or wetland. FEMA has routinely applied Steps 1 and 5 to facilities. FEMA also applies Step 4, which identifies impacts of a proposed action at and beyond the proposed action location. FEMA will distribute additional resources for the public and SLTT partners to help identify what the FFRMS is, and how the agency will implement the Executive Orders. These resources will help applicants better understand the FFRMS as they apply for FEMA programs.

Section G.2. of FEMA's FFRMS policy discusses flood risk minimization for facilities. FEMA's FFRMS policy uses the FFRMS flood elevation and corresponding floodplain to establish the minimum level to which a structure or facility must be resilient. For facilities projects that are subject to the FFRMS, the FFRMS flood elevation represents the magnitude of flooding that must be considered in incorporating flood resilient design features into facility project designs.

[Publications/Engineer-Regulations/udt_43546_param_orderby/Pub_x0020_Number/udt_43546_param_direction/descending/?udt_43546_param_page=3](https://www.fema.gov/sites/default/files/2020-05/DRRA1235b_Consensus_BasedCodes_Specifications_and_Standards_for_Public_Assistance122019.pdf) (last accessed Jan. 24, 2024).

¹³⁶ https://www.fema.gov/sites/default/files/2020-05/DRRA1235b_Consensus_BasedCodes_Specifications_and_Standards_for_Public_Assistance122019.pdf (last accessed Apr. 2, 2024).

¹³⁴ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

This approach allows the FFRMS to be integrated as one element of project-specific comprehensive design methods, and leaves open the possibility of more prescriptive design requirements as infrastructure design methods improve, better incorporating consideration of continually changing hazard conditions.

FEMA further believes that revising the text of § 9.11 to clarify that mitigation measures for facilities subject to FFRMS must be designed to be resilient to the FFRMS flood elevation, as the commenter requested, is not necessary. As the commenter noted, this point is made in the FFRMS policy, and FEMA does not believe changes to the regulatory text are required to achieve the FFRMS resilience.

Comment: One commenter raised several questions regarding FFRMS implementation and facilities. The commenter stated that building transportation infrastructure to survive extreme events is a good investment, but the FFRMS is overly conservative and based on risk of low probability. The commenter asked about the applicability of part 9 and the FFRMS to a range of potential actions from linear transportation structures to roadways, bridges, and culverts and raised concerns with how FFRMS application to these types of actions might raise conflicts with other Federal, State, or local agencies. The commenter also stated concerns about elevating facilities and provided an example of where the FFRMS would elevate a bridge to a height greater than the flood-prone height of the connecting roads. The commenter recommended FEMA clarify roadways and associated bridges and culverts were not required to perform an alternatives analysis for their location in a floodplain.

FEMA Response: FEMA appreciates the commenter's concerns regarding the applicability of FFRMS and part 9 to specific infrastructure projects. FEMA defines both "structures" and "facilities" in § 9.4 and the agency believes these definitions are sufficiently clear to explain FFRMS and part 9 applicability to specific actions. Executive Order, 11988, as amended, requires both structures and facilities be resilient against current and future flood hazards. FEMA believes that, as described by the commenter, roadways, bridges, culverts, and linear transportation structures would fall under the definition of "facilities" for this part and thus would not necessarily be exempt from part 9.

As explained above, FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial

improvement, or to address substantial damage to a structure or facility." The FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD. FEMA does not fund repairs or improvements to Federal-aid roads, and this rulemaking would not be applicable to those roads. Rather, the FHWA regulations would govern those actions. Where FEMA may provide funding, FEMA's FFRMS policy provides details on how FEMA will coordinate with other agencies when implementing actions in the same area as another Federal agency. *See* FFRMS policy Section H, page 9. When coordinating with other Federal agencies, FEMA generally defaults to the FFRMS policy approach in FEMA's FFRMS policy, as appropriate. Where FEMA provides funding for these activities, FFRMS applies to improve resilience to facilities against both current and future flood risks.

In the FFRMS policy, FEMA addresses both structures and facilities and how the agency will apply FFRMS to each. *See* section G of the FFRMS policy for more guidance on facilities. Note FEMA edited the FFRMS policy accompanying this final rule to further clarify that section G.2 applies to "facilities," by using the term "Facilities" instead of the term "Non-Structure Facilities."

Further, § 9.11(d)(6) states when FEMA is providing funding, a more restrictive Federal, State, or local floodplain management standard will be applied. Section G.2 of FEMA's FFRMS policy further discusses flood risk minimization for facilities and clarifies that FEMA would also allow methods other than elevation to be used to improve resilience against flooding up to the flood elevation of the FFRMS floodplain in conjunction with any other applicable codes and standards.¹³⁷

FEMA's FFRMS policy uses the FFRMS flood elevation and corresponding floodplain to establish the minimum level to which a structure or facility must be resilient. The minimization requirements are similar to how FEMA currently implements

¹³⁷ *See* FFRMS Policy, pg. 8, "Particularly in cases where elevation may not be feasible or appropriate for non-structure facilities, the FFRMS floodplain, determined according to the process described in section C of this policy, establishes the level to which a structure or facility must be resilient. Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand and rapidly recover from a flood event."

part 9 for the 1 percent and 0.2 percent annual chance floods. For facility projects that are subject to the FFRMS, the FFRMS flood elevation represents the magnitude of flooding that must be considered in incorporating flood resilient design features into facility project designs. This approach allows the FFRMS to be integrated as one element of project-specific comprehensive design methods and leaves open the possibility of more prescriptive design requirements as infrastructure design methods improve, better incorporating consideration of continually changing hazard conditions. Further, as explained above, FEMA already incorporates FHWA Hydraulic Engineering Circulars 17 and 25 (*Highways in the River Environment* and *Highways in the Coastal Environment*) into its Public Assistance grant requirements.

To address the commenter's concerns regarding overly conservative methods, FEMA notes the FFRMS is a flexible framework to define the floodplain that allows agencies to choose among several approaches to expand the base floodplain to a higher vertical elevation and corresponding horizontal extent for all Federally funded projects. FEMA's FFRMS policy is not a one-size-fits-all approach. Rather, FEMA's policy approach is flexible to address criticality of the action being taken, data availability based on the location of the action, and equity concerns.

Finally, the final rule does not change many of the current requirements for proposed actions. Proposed actions involving roadways, bridges, and culverts located in or impacting floodplains and wetlands continue to be subject to alternatives analysis under Executive Order 11988, as amended, and part 9. For certain small-scale actions under FEMA's PA program, the proposed rule increases the dollar value thresholds for projects that are exempt from the 8-step process or that are subject to an abbreviated 8-step review.

Comment: The same commenter stated that enhancing resilience should be the responsibility of the States to enable community-specific strategies. The commenter requested clarification on whether States and localities could use Federal funds for resilience measures, such as raising or widening roadways and bridges to meet the increased vertical elevation and expanded horizontal floodplain while still qualifying for FEMA funding. The commenter further stated the FFRMS would remove risk to structures from risk-based design criteria some States had in place and would require a one-size-fits-all approach for bridge-sized

structures. The commenter also noted some non-Federal partners might not allow States to select the FFRMS approach. The same commenter stated the FFRMS approaches added an unnecessary factor of safety for proposed actions, as many States would replace a structure multiple times before the CISA floodplains would take place. The commenter stated it was impossible to accurately predict change over long periods of time due to the nature of these systems.

FEMA Response: FEMA agrees that States and localities should lead their own efforts to enhance resilience. FFRMS is required for Federal actions that are subject to the FFRMS to protect against current and future flood risks and help ensure that Federally-funded projects last as long as intended. FEMA's FFRMS policy is not a one-size-fits-all approach. Rather, FEMA's policy approach is flexible to address criticality of the action being taken, data availability based on the location of the action, and equity concerns. Risk is an inherent factor in applying all of the FFRMS approaches. FEMA considers the criticality of the action in determining the level of risk that must be considered in minimizing flood hazards. Critical actions are those actions for which even a slight chance of flooding is too great and would be protected to a higher level under the FFRMS.

FEMA explained above the applicability of the FFRMS and the 8-step process generally to facilities. As noted above, part 9 only applies to FEMA actions. Where FEMA may provide funding, FEMA's FFRMS policy provides details on how FEMA will apply the appropriate FFRMS approach to improve resilience to facilities against both current and future flood risks.

SLTTs can provide input into the determination. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used in lieu of the FFRMS. FEMA values additional input from SLTT partners and the public in the 8-step process. FEMA notes, where the agency provides funding, any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

Regarding the commenter's concerns about replacing a facility or structure several times over a period of time, FEMA's preferred approach (CISA) incorporates service life as part of determining the FFRMS floodplain. FEMA understands the commenter's concerns and will determine the appropriate service life on a case-by-case basis for each action. The FFRMS

Job Aid provides additional information on service life and how FEMA will make those individual determinations.¹³⁸

Comment: The same commenter also wrote by raising the base flood elevation, the FFRMS would make the floodway obsolete and asked if FEMA would stop using floodways to regulate construction, and let local governments decide how much development was acceptable while adhering to the FFRMS. The commenter further recommended "temporary encroachments," such as temporary structures required for bridge construction, be explicitly exempted from the FFRMS.

FEMA Response: FEMA assumes the commenter's reference to the base flood elevation is the base flood elevation established and applicable under the NFIP. This final rule does not raise the base flood elevation under the NFIP. The NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses.¹³⁹ As a condition of eligibility, a community must adopt and enforce floodplain management regulations that incorporate NFIP minimum floodplain management criteria developed by the Administrator.¹⁴⁰ Further information regarding FEMA's minimum floodplain management standards for the NFIP can be found at 44 CFR part 59 *et seq.* Any update to those standards would require a rulemaking to revise the appropriate regulatory sections of the CFR. By contrast, the FFRMS as implemented by this rulemaking, only applies to actions where FEMA funds are used for new construction, substantial improvement, or repairs to address substantial damage to structures and facilities.¹⁴¹

As explained above, § 9.4 defines both "floodway" and "regulatory floodway." The definition of "floodway" was not changed with this final rule and the definition of "regulatory floodway" was

¹³⁸ See FFRMS Job Aid, pg. 14.

¹³⁹ 42 U.S.C. 4011(a).

¹⁴⁰ 42 U.S.C. 4011(a) and (b); 42 U.S.C. 4102; 44 CFR 59.2(b), 59.22(a)(3), 60.1(d).

¹⁴¹ See "Guidelines for Implementing Executive Order 11998, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input," 80 FR 64008 (Oct. 22, 2015) (providing notice of the availability of the Revised Guidelines in the docket for the rulemaking at <https://www.regulations.gov/document/FEMA-2015-0006-0358> (main content) and <https://www.regulations.gov/document/FEMA-2015-0006-0372> (appendices)) also available at https://www.fema.gov/sites/default/files/documents/fema_implementing-guidelines-EO11988-13690_10082015.pdf (last accessed Mar. 11, 2024).

further clarified by eliminating the reference to a specific amount set by the NFIP and instead defining the term to mean the area regulated by Federal, State, or local requirements to provide for the discharge of the base flood so that the cumulative rise in water surface is no more than a designated amount above the base flood elevation. These edits more accurately encompass situations where communities have adopted more restrictive floodway definitions than the minimum specified by the NFIP. The changes are intended to help stakeholders better understand what a regulatory floodway is and how it is determined without tying the term to a specific amount that can change under the NFIP.

Regarding temporary encroachments, § 9.5(c)(1) exempts actions under PA category B pursuant to section 403 of the Stafford Act. Those actions may include temporary repairs to structures and facilities. Any temporary work associated with permanent work, however, is generally included in the 8-step analysis for the permanent action.

Comment: A commenter stated the RIA was limited and inadequate and cited several examples of where FEMA should improve the RIA. Specifically, the commenter stated that FEMA attempted to isolate a population of actions where the standards would be applied, limiting the analysis to structures that will be paid for with Federal funds and did not capture the costs and benefits of the regulatory alternatives that would be associated with applying the FFRMS to Federal licenses and permits. The commenter also stated that FEMA did not consider the impacts of the new standards on the floodplain regulations mandated for communities that participate in the NFIP and the economic impacts of applying the new standards to NFIP floodplain mapping and the accreditation of levees under the NFIP. The commenter further stated accreditation was mapping and the scope of 44 CFR part 9 included application of the 8-step process to NFIP mapping.

FEMA Response: FEMA appreciates the commenter's suggestions regarding the RIA but believes the commenter's requests go beyond the scope of this rulemaking. FEMA disagrees with the commenter that the RIA should capture costs and benefits associated with Federal licenses and permits. The changes made to part 9 to implement FFRMS only apply to actions subject to the FFRMS. FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement,

or to address substantial damage to a structure or facility,” consistent with Executive Order 11988, as amended, and the Revised Guidelines. The FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA’s GPD. Accordingly, the scope of FEMA’s regulatory impact analysis is limited to the FEMA projects where the FFRMS standards would be applied.

FEMA further does not believe the agency is required to consider the impacts of the new standards on the floodplain regulations mandated for communities that participate in the NFIP and the economic impacts of applying the new standards to NFIP floodplain mapping and the accreditation of levees under the NFIP. As explained above, the NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses. As a condition of eligibility, a community must adopt and enforce floodplain management regulations that incorporate NFIP minimum floodplain management criteria developed by the Administrator. Further information regarding FEMA’s minimum floodplain management standards for the NFIP can be found at 44 CFR part 59 *et seq.* By contrast, the FFRMS as implemented by this rulemaking, only applies to actions where FEMA funds are used for new construction, substantial improvement, or repairs to address substantial damage to structures and facilities.

G. FFRMS Approaches

1. CISA

Several commenters expressed support for the use of the CISA but sought additional clarification on implementation of the approach. A few commenters raised concerns with the use of the CISA.

General Comments

Comment: A commenter stated utilizing the CISA to determine the FFRMS floodplain where possible was of critical importance as CISA offered a forward-thinking approach to improve resilient development considering both current and future flood risk. The commenter noted the necessary data and modeling capabilities underpinning CISA have continued to expand in recent years, making CISA an increasingly practicable methodology for more accurately determining the extent of the FFRMS floodplain.

FEMA Response: FEMA agrees with the commenter that since the introduction of the CISA in 2015, additional data has become available to better inform CISA.¹⁴² FEMA believes data availability and actionability will continue to advance for CISA in the future. Specifically, FEMA expects more data will be developed, supporting broader-based application of CISA as agencies implement the FFRMS, and this data will be considered and incorporated into future updates of the FFRMS and FEMA’s implementation thereof. FEMA’s policy approach is to use CISA where available, recognizing the data is still not available in every location.

Comment: Two commenters wrote the CISA did not promote predictability or reduce uncertainty as required by Executive Orders 12866 and 13563 and instead left the public to guess a standard from a range of possible climate scenarios. The commenters stated questions regarding the flood hazard area and elevation remain unanswered within the CISA and the approach lacked specific criteria for making those determinations. The commenters noted FEMA did not propose to require the use of CISA in the agency’s 2016 NPRM because of the lack of available CISA data and stated those concerns still exist. The commenters further stated that the lack of coherent decision criteria within the CISA raised concerns about the clarity of Congressional authority guiding the standard.

FEMA Response: FEMA disagrees with the commenters that the CISA results in uncertainty for the public as the agency provided information on the CISA with the NPRM. Appendix H of the Revised Guidelines¹⁴³ provides an overview of the available and actionable data for CISA, which is the basis for interagency supporting tools to implement the FFRMS. As explained above, the Science Subgroup convened by the Flood Resilience Interagency Working Group (IWG) of the National

Climate Task Force published the FFRMS CISA State of the Science Report.¹⁴⁴ The FFRMS CISA State of the Science Report refines the initial framework from Appendix H and specifically identifies the latest sea level rise projections from the National Climate Assessment as actionable, stating that each agency should factor projected regional/local sea level change into Federal investment decisions located as far inland as the extent of estimated tidal influence, now and in the future, using the most appropriate methods for the scale and consequence of the decision.¹⁴⁵ This report is the basis of the interagency implementation and supporting tools such as the FFRMS Job Aid.¹⁴⁶ FEMA is relying on these interagency processes to select and evaluate the data and methods used. FEMA published the FFRMS Job Aid and the FFRMS CISA State of the Science Report in the public docket associated with this rulemaking.¹⁴⁷ FEMA also posted the FFRMS Job Aid on its website¹⁴⁸ and currently plans to use the methodology found in the FFRMS Job Aid to determine the FFRMS floodplain as explained above.

FEMA believes the policy approach detailed in the agency’s FFRMS Policy is sufficiently certain for FFRMS implementation. As detailed in the FFRMS Policy, FEMA will use the CISA when such data is available and actionable as further explained in Appendix H of the Revised Guidelines¹⁴⁹ and refined in the FFRMS CISA State of the Science Report.¹⁵⁰ Where the CISA data is not available and/or actionable, the agency will use either the FVA or 0.2PFA depending on the criticality of the action and data availability. Consistent with the

¹⁴⁴ Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁴⁵ FFRMS CISA State of the Science Report, pp. 23.

¹⁴⁶ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁴⁷ See <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁴⁸ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024).

¹⁴⁹ Revised Guidelines, pgs. 16–17 and 50–52.

¹⁵⁰ FFRMS CISA State of the Science Report, pgs. 7–8.

¹⁴² See “Federal Flood Risk Management Standard Climate-Informed Science Approach (CISA) State of the Science Report,” available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁴³ Available at https://www.fema.gov/sites/default/files/documents/fema_implementing-guidelines-EO11988-13690_10082015.pdf (last accessed Jan. 24, 2024).

information in the FFRMS CISA State of the Science Report regarding data availability/actionability,¹⁵¹ FEMA will initially rely on the methodology from the FFRMS Job Aid¹⁵² to make the CISA, FVA, and 0.2PFA determinations.

FEMA understands data availability and actionability is a key factor in completing this analysis in a consistent, equitable manner. As stated above, since the introduction of the CISA in 2015, additional data has become available to better inform CISA.¹⁵³ FEMA believes data availability and actionability will continue to advance for CISA in the future. However, as actionable climate data are currently only available along low-lying coastal shorelines on the Atlantic and Gulf Coasts not subject to runoff or overtopping pursuant to the FFRMS CISA State of the Science Report,¹⁵⁴ FEMA is proposing the FVA and 0.2PFA alternatives in the absence of actionable CISA data. FEMA notes, consistent with current practice, the agency will continue make the floodplain determinations as part of the action taken, reducing the burden on applicants in the process. FEMA estimated the cost for determining the appropriate FFRMS floodplain in the Administrative Cost section within the RIA.

CISA Implementation

Commenters inquired as to how FEMA would implement CISA as part of the agency's FFRMS implementation.

Comment: A commenter requested FEMA amend § 9.7(c)(i)(A) to require an assumption that “climate impacts would be more rather than less severe under conditions of uncertainty.”

FEMA Response: FEMA is not codifying the specific climate scenarios to be used as part of the CISA analysis. As previously explained, FEMA is relying on interagency tools to determine CISA flood elevations and corresponding horizontal floodplains. FEMA will initially implement this final rule using the FFRMS Job Aid that was published in the public docket

associated with this rulemaking along with the proposed rule. The FFRMS Job Aid is also on FEMA's website.¹⁵⁵

Comments: One commenter characterized CISA as a framework built upon continually evolving models, projections, and assumptions regarding climate change and anticipated future conditions. The commenter stated the decision criteria under the CISA approach was not adequately defined in the rule and the information provided about CISA in the rule regarding the best available information remained unspecified, raising concerns about project implementation and general uncertainty. Another commenter recommended that FEMA make clear its ability to update how it implements the FFRMS approaches as necessary according to the latest climate science, rather than going through a rulemaking process for each successive update. The commenter stated that the CISA State of the Science Report provided robust information on CISA implementation but because of its length was not necessarily an easily accessible reference document. The commenter recommended providing succinct and practical guidance on CISA to facilitate implementation of the approach. The comment suggested that such guidance could include a representative list of acceptable data sources and guidance on how to interpret and apply these sources (for instance, how to choose an appropriate timeline or planning scenario).

FEMA Response: FEMA's explanation of the CISA is consistent with Executive Order 11988, as amended, and the Revised Guidelines. FEMA has not provided specific definitions of each approach under FFRMS but rather describes each in § 9.7 and also in the FFRMS policy. FEMA believes these explanations are sufficiently clear and will not result in ambiguity or misunderstanding because they are consistent with the Executive Order and Revised Guidelines.

FEMA further believes the information provided is consistent with Executive Order 11988, as amended; the Revised Guidelines; and the CISA State of the Science report. The information is also sufficient to implement FFRMS and CISA. FEMA will rely on 44 CFR 9.7, FEMA Policy 104–008–2: Guidance on the Use of Available Flood Hazard

Information,¹⁵⁶ the Revised Guidelines, and the FFRMS CISA State of the Science Report in determining whether CISA and flood hazard data is available and actionable. The FFRMS CISA State of the Science Report¹⁵⁷ is the basis of the interagency implementation and supporting tools such as the FFRMS Job Aid.¹⁵⁸ FEMA published the FFRMS Job Aid and the FFRMS CISA State of the Science Report in the public docket associated with this rulemaking.¹⁵⁹ FEMA also posted the FFRMS Job Aid on its website.¹⁶⁰

FEMA intends to leverage the FFRMS Job Aid when implementing FFRMS. FEMA will initially rely on the methodology found in the FFRMS Job Aid for determining the FFRMS floodplain and, as explained elsewhere in our responses, will accept higher standards provided by other Federal, State, or local entities in accordance with 44 CFR 9.11(d)(6) so long as it is as least as restrictive as FEMA's FFRMS floodplain determination and adopted by the community for use, including where communities have adopted local CISA. FEMA will continue to collaborate across the Federal government to develop tools to facilitate the implementation of CISA and the FFRMS. The IWG recently released a beta version of the Federal Flood Standard Support Tool (FFSST), a novel interactive, map-based tool that incorporates new data to help users identify if a Federally funded project is in the FFRMS floodplain, for comment.¹⁶¹ FEMA intends to provide additional resources to assist stakeholders as FFRMS is implemented.

¹⁵⁶ Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 12, 2024). The FFRMS proposed and final policies reference this existing FEMA policy in Section D.1.

¹⁵⁷ Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁵⁸ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁵⁹ See <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁶⁰ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024).

¹⁶¹ 89 FR 25674 (Apr. 11, 2024).

¹⁵¹ *Id.*

¹⁵² FFRMS Job Aid, pgs. 7–11 generally.

¹⁵³ See “Federal Flood Risk Management Standard Climate-Informed Science Approach (CISA) State of the Science Report,” available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁵⁴ FFRMS CISA State of the Science Report, pgs. 22–23 and 28.

¹⁵⁵ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

Consistent with Executive Order 11988, as amended, and the Revised Guidelines, CISA requirements will change as the available and actionable data change. The MitFLG in consultation with the Federal Interagency Floodplain Management Task Force (FIFM-TF) will reassess FFRMS annually, after seeking stakeholder input, and provide recommendations to the WRC to update FFRMS, including the FVA, if warranted based on accurate and actionable science that takes into account changes to climate and other changes in flood risk. The WRC shall issue an update to FFRMS at least every 5 years.¹⁶²

Comments: Three commenters requested that FEMA clarify how it will determine that CISA data are available and actionable when determining the FFRMS floodplain. One of the commenters asked whether CISA data availability was dependent on FEMA mapping using CISA data. Another commenter requested clarity on how CISA would be assessed. The commenter noted the CISA data must be “existing” and both “available” and “actionable,” and stated this implied that entities proposing a project were only obligated to rely on information that was already existing, available, and actionable, which was inconsistent with the rest of the rule that focused on creating project-specific assessments.

FEMA Response: Data availability is not dependent on the development of FEMA regulatory mapping products (such as effective Flood Insurance Rate Maps [FIRMs]) utilizing CISA data. The Revised Guidelines require agencies to utilize the “best available and actionable science.” The Revised Guidelines state that in this context, “best-available” generally refers to science, data or information that is:

- Transparent—clearly outlines assumptions, applications, and limitations;
- Technically credible—transparent subject matter or more formal external peer review, as appropriate, of processes and source data;
- Usable—relevance and accessibility of the information to its intended users;
- Legitimate—perceived by stakeholders to conform to recognized principles, rules, or standards. Legitimacy might be achieved by existing government planning processes with the opportunity for public comment and engagement.¹⁶³

The Revised Guidelines further state that actionable science includes theories, data, analyses, models, projections, scenarios and tools that are:

- Relevant to the decision under consideration;
- Reliable in terms of its scientific or engineering basis and appropriate level of peer review;
- Understandable to those making the decision;
- Supportive of decisions across wide spatial, temporal, and organizational ranges, including those of time-sensitive operational and capital investment decision-making;
- Co-produced by scientists, practitioners, and decision-makers, and meet the needs of and are readily accessible by stakeholders.

These concepts of best-available and actionable science are further described in Part II, Step 1 of the Revised Guidelines, in the context of the various approaches for determining a floodplain and in Appendix H of the Revised Guidelines specifically as it relates to the CISA.¹⁶⁴

As previously explained, the FFRMS CISA State of the Science Report¹⁶⁵ contains an up-to-date review and update of the best-available, actionable science that can support application of the CISA, and is the basis of the interagency implementation and supporting tools such as the FFRMS Job Aid.¹⁶⁶ FEMA will initially rely on the methodology in the FFRMS Job Aid to determine the FFRMS floodplain when implementing this final rule.

FEMA disagrees with the commenter that requiring CISA data be available and actionable is inconsistent with the rest of the rule. The 8-step process is action-specific, and the floodplain determination is made based on the location of the action, but the data to determine the floodplain at that location must be available and actionable for CISA to be utilized. FEMA’s FFRMS policy further defines where CISA is applicable.

¹⁶⁴ See Revised Guidelines at pgs. 16–17.

¹⁶⁵ Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁶⁶ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

Comments: FEMA received comments regarding the service life of proposed actions and how the agency would calculate the service life of actions. One commenter suggested FEMA provide guidelines on how to determine an appropriate period. Another commenter noted FEMA used a default 50-year lifecycle analysis that would not be appropriate for all actions and requested FEMA provide information on how the 50-year lifecycle timeline was determined, as well as guidelines on how to determine the appropriate lifecycle on a case-by-case basis.

FEMA Response: FEMA’s analysis of the rule’s benefits relied upon a report defaulting to a 25-year and 50-year lifecycle for all actions. However, when making floodplain determinations, FEMA intends to determine the appropriate service life on a case-by-case basis for each action. This will ensure that FEMA evaluates floodplain hazards over the appropriate lifecycle for each action. The FFRMS Job Aid provides additional information on service life and how FEMA will make those individual determinations.¹⁶⁷

FEMA’s RIA used the 2022 report titled “A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains,” (“2022 report”) in its analysis of benefits. The 2022 report calculated benefits for increased freeboard over 25-year and 50-year useful lives under a variety of climate change scenarios.¹⁶⁸ FEMA’s analysis considered the benefits of the rule assuming a 50-year useful life.

Comment: A commenter stated some states, such as California, had guidelines on sea level rise and those guidelines were inconsistent with the CISA +5 feet option discussed in the rule’s regulatory impact analysis. The commenter stated such an elevation requirement would be overbuilt per those State guidelines. The commenter stated that CISA would be overly conservative for many locations, because of what the commenter characterized as CISA’s one-size-fits-all approach.

FEMA Response: FEMA’s regulatory impact analysis utilizes an assumption of +5 feet for CISA as an analysis point. The +5 feet is an assumption because FEMA does not currently have detailed enough data to estimate the average CISA level within the United States based on currently available CISA data and the additional CISA data that will

¹⁶⁷ See FFRMS Job Aid, pg. 14.

¹⁶⁸ The FEMA BCA Toolkit recommends using a 50-year project useful life for public buildings and a 25-year project useful life for nonresidential buildings.

¹⁶² Section 4, Executive Order 13690, 80 FR 6425 (Feb. 4, 2015).

¹⁶³ See Revised Guidelines at pgs. 16–17.

continue to become available over time. However, CISA is not a one-size-fits-all approach. FEMA notes the FFRMS Floodplain Determination Job Aid indicates the CISA method is recommended for actions along low-lying coastal shorelines on the Atlantic and Gulf Coasts. For Pacific coasts and other coasts with bluffs, FEMA may initially use the FVA approach.

SLTTs can provide input into the determination. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used, including local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data result in a more restrictive standard.

FEMA's FFRMS policy is not a one-size-fits-all approach; rather, the agency's policy approach is flexible to address criticality of the action being taken, data availability based on the location of the action, and equity concerns. FEMA is not codifying the specific climate scenarios to be used as part of the CISA analysis. As previously explained, FEMA is relying on interagency tools to determine CISA flood elevations and corresponding horizontal floodplains. FEMA will initially implement this final rule using the FFRMS Job Aid that published in the public docket associated with this rulemaking along with the proposed rule. The FFRMS Job Aid is also on FEMA's website.¹⁶⁹

Comment: The same commenter stated that when designing bridges and embankments, the CISA approach considers impacts from projected land cover/land use changes, long-term erosion, and other processes that may alter flood hazards over the lifecycle of the Federal investment. The commenter asked how the estimates for long-term erosion and scour would be determined. This commenter further stated the outcomes from these estimates were subject to uncertainty, resulting in overdesign and greatly reducing the likelihood of the CISA data actually occurring.

FEMA Response: FEMA's FFRMS policy provides details on how FEMA will implement FFRMS for facilities. This analysis is completed on a case-by-case basis and may require the services of a professional engineer, as appropriate, consistent with FEMA program requirements. More information on consideration of flood

characteristics such as erosion and scour can be found in the Revised Guidelines.¹⁷⁰

Whether CISA data are available and/or actionable will depend in part upon the location of the action being taken. FEMA believes the policy approach detailed in the agency's FFRMS policy is sufficiently certain for FFRMS implementation. As detailed in the FFRMS policy, FEMA will use the CISA where such data is available and actionable. FEMA is relying on interagency tools to determine CISA flood elevations and corresponding horizontal floodplains. Where the CISA data are not available and actionable, the agency will leverage either the FVA or 0.2PFA depending on the criticality of the action and data availability.

Where the CISA data are available and actionable, the CISA floodplain must be at least as restrictive as the 1 percent annual chance flood elevation or 0.2PFA, again depending on the criticality of the action. In this way, FEMA has addressed equity concerns in the policy approach, specifically to mitigate the likelihood of over- and under-building. FEMA believes that allowing for a lower standard for non-critical actions helps address concerns related to overbuilding. Selecting the lower approach for non-critical actions will still result in a higher level of resilience than the current requirements under part 9 while also taking equity and cost-effectiveness considerations into account.

CISA Applicability

Comment: A commenter requested FEMA apply the CISA to all of the agency's mapping and map revision processes. The commenter wrote that letters of map amendment (LOMAs) and letters of map revision-based on fill (LOMR-Fs) essentially allowed FEMA to piecemeal exempt properties and stated the combination of Executive Orders and statutes required FEMA to build a robust and well-informed mapping program to guide development away from floodplains. The commenter stated the exclusion of LOMAs and LOMR-Fs from FFRMS created an exception that would swallow the rule.

FEMA Response: FEMA appreciates the commenter's support of the CISA and understands the commenter's concerns regarding LOMAs and LOMR-Fs. FEMA is not making changes to the agency's NFIP mapping process with this rulemaking or accompany FFRMS

policy. The NFIP's regulations on mapping and changes to FEMA maps are found at 44 CFR part 70 *et seq.* Further, the proposed changes to part 9 do not affect implementation of the NFIP's floodplain management regulations. Those regulations are found at 44 CFR part 59 *et seq.* The framework that FEMA uses in part 9, including the revised definition of floodplain applicable to actions subject to the FFRMS under this rule, is distinct from NFIP mapping. FEMA believes that the flexibility outlined in 44 CFR 9.7 and the practice of best available information will allow the application of part 9 to adjust to any future change made in the NFIP mapping process.

CISA and Equity Considerations

Comment: A commenter requested FEMA consider inequities in access to the best available climate science as some communities may not have access to the CISA data. The commenter acknowledged FEMA's proposed alternatives to the CISA but requested the agency consider how this rule would unintentionally exacerbate inequities in flood preparedness and safety across the country and how FEMA would distribute Federal funding and other financial assistance to address these discrepancies.

FEMA Response: FEMA's revisions to part 9 reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it.¹⁷¹ FEMA notes any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

As part of the implementation cost, FEMA will publicize the FFRMS to public and SLTT partners, identifying what the FFRMS is and how the agency will implement the Executive Order as amended and part 9. These resources will help applicants applying for FEMA-funded assistance programs. FEMA's regional offices will also provide technical assistance in support of FFRMS implementation.

As climate science data continues to be advanced, FEMA will continue to rely on 44 CFR 9.7, FEMA Policy 104-008-2: Guidance on the Use of

¹⁶⁹ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁷⁰ See Revised Guidelines pg. 23 for information on flooding characteristics and Appendix H of the Revised Guidelines for information on the CISA, pgs. 20-22.

¹⁷¹ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

Available Flood Hazard Information,¹⁷² and the Revised Guidelines in determining whether CISA and flood hazard data is available and actionable. Appendix H of the Revised Guidelines and the CISA FFRMS State of the Science Report provide an overview of the available and actionable data for CISA, which is the basis for these interagency supporting tools. The Revised Guidelines also provide an explanation of how the FFRMS will be updated in the future. Additionally, where a community does have access to CISA data and has adopted its use for floodplain management, that data will be used pursuant to 44 CFR 9.11(d)(6), as long as it results in a more restrictive standard. In this way the unique considerations of a particular community are also taken into account.

2. FVA

Comment: A commenter stated FEMA should be prepared to reassess the use of 2 and 3 feet of freeboard in the FVA according to the latest climate science. The commenter requested the FFRMS should explicitly allow this type of reassessment to take place without rulemaking.

FEMA Response: The FVA is an alternative approach to the CISA under the FFRMS. FEMA cannot independently revise the FFRMS. The MitFLG in consultation with the FIFM-TF will reassess the FFRMS annually, after seeking stakeholder input, and provide recommendations to the WRC to update the FFRMS, including the FVA, if warranted based on accurate and actionable science that takes into account changes to climate and other changes in flood risk. The WRC shall issue an update to the FFRMS at least every 5 years.¹⁷³

FEMA appreciates the intent behind the comment, namely that the agency should implement the FFRMS in a way that allows for reassessments that account for changes in climate science. FEMA has ensured that its implementation of the FFRMS will allow for such updates. Specifically, in this final rule, FEMA will implement the FFRMS by adopting the flexible framework identified in Executive Order 11988, as amended by Executive Order 13690, in its entirety, instead of mandating a particular approach in its regulations and will provide additional guidance (more readily capable of revisions and updates) that addresses

which approach FEMA would generally use for different types of actions. Consistent with Executive Order 11988, as amended, and the Revised Guidelines, the CISA requirements will change as the available and actionable data change and FEMA will similarly update its guidance, as appropriate, to account for such changes.

3. 0.2PFA

Comments: Commenters asked questions about the 0.2PFA and how FEMA would implement the approach. A commenter expressed support for the use of the 0.2PFA as an effective alternative to the CISA while technology and capabilities to implement CISA are scaling to a nationwide level. At the same time, the commenter recommended that FEMA allow for the flexibility to use the most protective and up-to-date science in coastal regions or where higher quality data and analytics are available. The same commenter wrote that FEMA should continue educating the public regarding flood risk from flood events that could affect areas beyond the 0.2 percent annual chance floodplains. The commenter stated that during the past two decades, many storm events of a magnitude greater than a 0.2PFA event have occurred, such as the 2010 Nashville flood and the 2017 inland flood induced by Hurricane Harvey. The commenter stated that while reliance on the 0.2PFA would significantly reduce flood risk in comparison to reliance upon the 1 percent annual chance floodplain, FEMA should not be satisfied that this would be sufficient. The commenter also requested FEMA include land surface flooding. The commenter also recommended the flood mitigation standard for critical infrastructure (such as subway systems, metropolitan wastewater treatment facilities, and others) be different and higher than those for non-critical. Another commenter requested FEMA account for the area of elevation that was above or below sea level to plan for implementation of the 0.2PFA.

FEMA Response: FEMA's policy approach provides flexibility. As explained in the FFRMS policy, FEMA will use the CISA to determine the floodplain where that data is available and actionable. Where the CISA data is not available or actionable, FEMA will utilize either the FVA or 0.2PFA depending on the criticality of the action and data availability. FEMA notes there is no requirement in the FFRMS or the Revised Guidelines to select the higher approach when not using the CISA, as FFRMS is a resilience standard. "When an agency is not using

the Climate-informed Science Approach in riverine flood hazard areas, the agency may select either the Freeboard Value Approach or the 0.2-percent-annual chance elevation, as appropriate, and is not required to use the higher of the two."¹⁷⁴

FEMA will continue to rely on 44 CFR 9.7, FEMA Policy 104-008-2: Guidance on the Use of Available Flood Hazard Information,¹⁷⁵ and the Revised Guidelines in determining whether CISA and flood hazard data is available and actionable. FEMA will use the best available information in making the floodplain determination under part 9, and the best available information may include information that is non-regulatory or FEMA preliminary flood hazard data. To be designated as the best available information, it must be at least as restrictive as information provided by effective FIRMs. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used and this includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard.

To clarify, FEMA is not relying on the 1 percent annual chance floodplain in the FFRMS approaches. Rather, FEMA is relying on the CISA, FVA, or 0.2PFA. FEMA's FFRMS policy clarifies the agency will use the higher of the FVA or 0.2PFA for critical actions when CISA data is not available or actionable. FEMA will continue to utilize the 1 percent annual chance floodplain under part 9 only for those actions that are not subject to the FFRMS and are considered non-critical actions.

FEMA has considered and will continue to consider flooding characteristics such as land surface flooding consistent with § 9.7. FEMA's FFRMS policy also emphasizes whether the action is a critical action as one of the factors to consider when conducting the analysis as to the approach to utilize when CISA data is not available or actionable.

Regarding the commenter's concerns about elevation, the interagency tools FEMA will use to determine the 0.2PFA, as well as CISA and FVA, will account for ground elevation.

Comment: One commenter wrote only 20 percent of the country had detailed horizontal floodplain boundaries of the 0.2 percent annual chance floodplain

¹⁷² Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 12, 2024).

¹⁷³ Section 4, Executive Order 13690, 80 FR 6425 (Feb. 4, 2015).

¹⁷⁴ See Revised Guidelines, pg. 57.

¹⁷⁵ Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 12, 2024).

and that the elevation determination was also important given that some flood depths could be lower in the 0.2 annual chance floodplain than in the 1 percent annual chance floodplain. A commenter stated the lack of comprehensive elevation information for the 0.2PFA would cause confusion among stakeholders and applying FFRMS without accounting for distinct elevation profiles undermined the practicality and success of the policy. Another commenter supported utilizing the 0.2PFA and FVA when the CISA data was not available and not actionable. The commenter noted wave modeling should be included when applying the 0.2PFA and FEMA had not regularly produced maps that incorporate wave modeling. The commenter requested FEMA regularly include wave modeling in its 0.2 percent annual chance flood maps.

FEMA Response: As explained above, FEMA's FFRMS policy identifies data availability as a factor in determining the FFRMS approach to be used for a specific action. FEMA recognizes data availability of the 0.2 percent annual chance floodplain, as well as technical considerations relating to how wave action may be incorporated, can be challenges in implementing the 0.2PFA. In coastal areas, the Revised Guidelines note Federal agencies should use the FVA as the minimum elevation when not using the CISA if the 0.2 percent annual chance flood information depicted on FEMA's regulatory products considers storm-surge hazards but not wave action, and wave action data cannot be obtained from other sources.

As the commenter notes, when the CISA is not available and the 0.2PFA is used in coastal areas, the 0.2PFA should consider wave action. As the Revised Guidelines state, before using the 0.2PFA in that situation, an analysis should be conducted of coastal flood hazards at the site that incorporates the local effects of wave action, scour and erosion, wave run-up, and overtopping.¹⁷⁶ In some instances, the FEMA 0.2 percent annual chance flood elevation, which does not consider wave action, will be lower than the current BFE or the FVA. As noted in the Executive Summary of this preamble, FEMA edited the agency's proposed FFRMS policy to clarify that FIRMs and Federal Insurance Studies (FIS) provide 1 percent annual chance flood elevations including wave action in coastal areas; however, the 0.2 percent annual chance flood elevations generally are stillwater elevations that do not account for the effects of wave

action. To emphasize the importance of this for non-critical actions in particular, the FFRMS policy wording has been clarified and relocated to Section C.3.a, stating that when the lower of the 0.2PFA or FVA is used, the FVA flood elevation must be used in those instances where the 0.2-percent-annual-chance flood elevation does not account for the effects of wave action.¹⁷⁷ For critical actions, the policy approach is to use the higher of the FVA or 0.2PFA, which would avoid relying on 0.2PFA in situations where the 0.2PFA elevations would be lower.

4. Fourth Approach

Comment: A commenter stated the fourth approach listed in the rule was a "hedge" and resulted in inexcusable operational uncertainty to the FFRMS. The commenter stated the public would struggle to understand the appropriate standard on an annual basis given this approach. Another commenter stated the fourth approach was a "safety net" and consistent with the other commenter, stated the approach amplified operational uncertainty within FFRMS rather than addressing it.

FEMA Response: FEMA disagrees that the fourth approach in the regulation provides additional uncertainty for the public. This approach is provided in the Revised Guidelines, and FEMA would provide notice to the public of any such approach and the adoption of that approach consistent with Executive Order 11988, as amended.

5. Alternatives to FFRMS Approaches

Comment: One commenter suggested that cost-benefit analysis could serve as an alternative to using the FFRMS approaches. The commenter stated cost-benefit analysis informed by risk could be scaled to the circumstances of decisions and would achieve better results than applying error-prone arbitrary standards. The commenter stated that benefits and costs can be broadly conceived to include more than values reflected in market transactions. The commenter wrote that FEMA applied cost-benefit analysis in a partial way to its hazard mitigation program only and asked how not leveraging a cost-benefit analysis but instead applying the FFRMS approaches would result in net Federal resource savings.

FEMA Response: As an initial matter, FEMA notes that establishing the floodplain for each project on the basis of individualized cost-benefit assessments would potentially be inconsistent with the commenter's stated preference for predictability and

reduced uncertainty (as reflected in the commenter's objection to the CISA standard). For instance, the commenter's proposal could require individualized flood risk assessments that would make it challenging for private parties to predict the applicable floodplain prior to engaging with FEMA. In addition, in at least some cases, the commenter's proposed approach would call for consideration of relevant data and science in order to understand the potential costs and benefits of building to different levels of resilience. Although as reflected throughout this response and preamble, FEMA shares the commenter's sensitivity to cost and preference to limit unnecessary expenditures to the extent possible, FEMA does not believe that the approach suggested by the commenter is necessarily more likely to be predictable or administrable, or to maximize net benefits.

While not all of FEMA's programs are statutorily required to be cost-effective, FEMA has consistently leveraged cost-benefit analysis and will continue to do so along with minimum standards for floodplain management across the agency's programs to provide for Federally funded projects that are both cost-effective and result in more resilient communities.

In its NPRM and proposed policy, FEMA explained how the agency considered cost along with data availability, criticality of the action, and equity in establishing a flexible framework for FFRMS implementation. Consistent with the Revised Guidelines, FEMA's preferred approach is the CISA, but the FFRMS policy explains the CISA must be available and actionable and where it is not, the FVA or 0.2PFA will be utilized depending on the criticality of the action and availability of data.

FEMA believes the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and the natural values of floodplains are preserved. If, in the future, the commenter were to identify a specific cost-benefit methodology that warranted adoption via the process outlined in the Executive Order, FEMA could in principle pursue such an option.

Comments: Some commenters recommended FEMA adopt specific building codes and design standards as part of this rulemaking. One commenter

¹⁷⁶ See Revised Guidelines, pg. 57.

¹⁷⁷ See section C.3.a note 13, pg. 4.

stated FEMA's rule was consistent with ASCE Policy Statement 421. The commenter recommended FEMA adopt both the current 2022 edition of ASCE 7 as well as Supplement #1 and Supplement #2 for the Flood Chapter, and the upcoming revision to ASCE 24. Another commenter recommended FEMA require up-to-date editions of the International Residential Code (IRC) and International Building Code (IBC) to ensure the FFRMS incorporates the most stringent flood provisions for Federally assisted construction in flood zones. Another commenter also recommended FEMA specifically adopt a reference to the ANSI/FM Approvals 2510 standard for floodproofing/flood mitigation products, similar to the U.S. Department of Housing and Urban Development (HUD)'s proposal to allow floodproofing of non-residential areas below the FFRMS floodplain elevation in their NPRM.

FEMA Response: FEMA appreciates the commenter's concerns and notes the agency does implement specific codes and standards through grant program policies and requirements.¹⁷⁸ However, the scope of this rule is limited to implementation of FFRMS consistent with Executive Order 11988, as amended, and the Revised Guidelines; FEMA did not propose to adopt specific building codes and standards in the NPRM. FEMA may, however, clarify the use of such standards through additional guidance.

FEMA adopted a Building Codes Strategy¹⁷⁹ in March 2022 that focuses on leveraging partnerships to promote current hazard resistant building codes; understanding stakeholder needs to identify opportunities that advance building code adoption and enforcement; amplifying climate science messaging to increase public demand for building codes and standards; and targeting building code adoption outreach to the most vulnerable communities to achieve a more resilient

nation. FEMA believes the changes made in this final rule and the FFRMS policy will further this strategy without mandating specific codes and standards in the regulatory text. FEMA will continue to review and update the agency's policies and guidance regarding codes and standards to ensure the agency is promoting use of the standards consistent with FEMA program requirements.

FEMA appreciates the commenter's request that the agency mirror HUD's proposal to allow floodproofing of non-residential structures below the FFRMS flood elevation. FEMA already allows for floodproofing of non-residential structures below the floodplain in 44 CFR 9.11(d)(3) and will continue to allow floodproofing below the FFRMS flood elevation. No changes to the regulatory text are required to achieve this result.

H. FEMA's FFRMS Policy Approach

1. Overall

Comments: Commenters offered support for the edits proposed to § 9.7 and the accompanying proposed FFRMS policy document to implement FFRMS. Commenters also stated specific support for FEMA's policy decision to prioritize the use of CISA when determining the FFRMS floodplain for actions subject to the FFRMS. Commenters were also generally supportive of FEMA's approach to utilize either the FVA or 0.2PFA where CISA data was not available or not actionable.

FEMA Response: FEMA appreciates the commenter's agreement with the general policy approach detailed in FEMA's FFRMS policy and the agency is finalizing that policy approach with the publication of this final rule. FEMA notes the revisions made to part 9 apply only to FEMA projects and not all Federally funded projects as some commenters suggested. All Federal agencies will utilize the Revised Guidelines for their own FFRMS implementation.

Comment: One commenter wrote in support of the revisions to § 9.7. The commenter stated that a recent TMAC report indicated that existing 1 percent and 0.2 percent annual chance floodplains were insufficient for informing land use practices and stated the use of CISA aligned with TMAC's principle to use a climate-informed map for floodplain management, separate from the 1 percent annual chance map used for NFIP mandatory purchase and other regulatory requirements.

FEMA Response: FEMA appreciates the commenter's support of the agency's preferred approach and the

clarifications made in § 9.7 as part of this final rule. Executive Order 11988, as amended, and the FFRMS reinforce the importance of avoiding adverse impacts associated with actions in or affecting a floodplain and minimizing potential harm if an action must be located in a floodplain. As amended, Executive Order 11988 directs agencies to use a higher vertical flood elevation and corresponding horizontal floodplain than that of the base flood for Federally funded projects to address current and future flood risk and help ensure that projects last as long as intended. FEMA appreciates the commenter's reference to the recent TMAC recommendations, but notes TMAC recommendations are not binding on FEMA and relate directly to the NFIP, not necessarily to part 9 and this final rule.

Comment: One commenter was not supportive of FFRMS, stating that a national "one-size-fits-all" approach that lacked flexibility to address specific regional and local circumstances and needs and a uniform strategy would not adequately address the nuanced and varied nature of flood dynamics. The commenter wrote that without tailored considerations for regional variations, FFRMS overlooked critical factors, risking inconsistency and inefficiency in flood management efforts.

FEMA Response: The FFRMS is a resilience standard with flexibility in the approach selected to meet the standard. FEMA's FFRMS policy explains how the agency selects the FFRMS approach to use for each project and is not a "one-size-fits-all" policy. The FFRMS policy is flexible to address data availability based on the location of the action, criticality of the action being taken, and equity concerns and allows consideration of regional variations and community concerns.

SLTTs can provide input into the floodplain determination. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data result in a more restrictive standard. FEMA values additional input from SLTT partners and the public throughout the 8-step process.

Comment: Another commenter also opposed FFRMS, stating that the approaches based on elevation and areal extent determined by flood elevations across the watershed were subject to availability heuristic bias. The commenter stated that higher is not always better and that FFRMS did not consider whether the standard was prone to error and therefore introduced

¹⁷⁸ For example, FEMA Recovery Interim Policy 104-009-11 Version 2.1, "Consensus-Based Codes, Specifications and Standards for Public Assistance" (December 20, 2019) requires "application of the latest nationwide consensus-based codes, specifications and standards that incorporate hazard resistance for PA funded projects" including buildings, electric power, roads, bridges, potable water, and wastewater. Available at https://www.fema.gov/sites/default/files/2020-07/fema_DRRRA-1235b-public-assistance-codes-standards-interim-policy.pdf (last accessed Jan. 24, 2024). HMA also specifically references ASCE 24 and ASCE 7 in the HMA Program and Policy Guide available at <https://www.fema.gov/grants/mitigation/hazard-mitigation-assistance-guidance> (last accessed Jan. 24, 2024).

¹⁷⁹ See "Building Codes Strategy" March 2022 available at https://www.fema.gov/sites/default/files/documents/fema_building-codes-strategy.pdf (last accessed Jan. 24, 2024).

new risks, including the risk that FFRMS would impose more costs than it achieves in benefits. The commenter stated FEMA acknowledged the proposed standard would make errors and, in some cases, imposed costs greater than anything it prevented or saved. The commenter recommended that FEMA test its new standard in proposed use cases to determine where the standard would make errors. The commenter recommended that where the probability and consequences of errors from using the standard were significant, the agency should resort to detailed cost-benefit analysis. The commenter recommended that the FFRMS be formulated with reference to alternatives and cost-benefit analysis, stating the public deserves some clarity about when FFRMS applies and when it did not.

FEMA Response: FEMA disagrees with the commenter that the agency is assuming higher is universally better. There is no requirement in the FFRMS or the Revised Guidelines to select the most restrictive standard, as FFRMS is a resilience standard. The Revised Guidelines state “[w]hen an agency is not using the Climate-informed Science Approach in riverine flood hazard areas, the agency may select either the Freeboard Value Approach or the 0.2-percent-annual chance elevation, as appropriate, and is not required to use the higher of the two.”¹⁸⁰ In some instances, building to a higher elevation may lead to overbuilding and thus not be the most cost-effective, equitable approach particularly for non-critical actions. FEMA believes its proposed approach to use the CISA, and to utilize the lower of the FVA or 0.2PFA where the CISA is not available and actionable, reflects appropriate sensitivity to cost and risk.

Further, the revisions to part 9 do not change FEMA’s long-standing requirement as part of implementing Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains if those actions are the only practicable alternative. Through the 8-step process, FEMA will consider alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis. If there is no practicable alternative, FEMA will perform or fund the action and will minimize any adverse impacts when doing so.

Regarding clarity on the application of FFRMS, FEMA defines “action subject to the FFRMS” as “any action where FEMA funds are used for new

construction, substantial improvement, or to address substantial damage to a structure or facility.” The FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA’s GPD. FFRMS applies only to Federal actions and this rule only applies to those actions FEMA takes using Federal funding. This rulemaking is generally not expected to negatively impact individuals and their ability to pay. Where applicable, any increased costs associated with this rulemaking would be subject to cost share requirements for FEMA’s programs.

FEMA also disagrees with the commenter that the agency acknowledged the FFRMS would create errors and would impose costs greater than anything the standard would prevent or save. FEMA believes the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA’s implementation of the FFRMS. This rule will improve the resilience of Federal investments to be better protected from flood damage and promote preservation of the natural and beneficial values of floodplains.

FEMA believes the regulatory impact analysis was sufficiently detailed to analyze the FFRMS approaches in general, as the RIA itself was not intended to analyze the costs and benefits of applying the FFRMS standards to specific use cases. FEMA conducted an analysis to create a range of the potential impacts. FEMA does not know how many projects will be subject to the FVA, 0.2PFA, or CISA requirements over the 10-year period as FEMA anticipates it to continually change. Therefore, FEMA has analyzed the impact of FVA, 0.2PFA and CISA for each of the programs, PA, IA, and HMA as if each were the only FFRMS expansion option. Evaluation of the practicability of certain FFRMS standards in the context of specific use cases occurs as part of the 8-step process, and to the extent that FEMA finds certain approaches to be incompatible with practicable implementation in certain cases, FEMA may issue further guidance on the topic. In general, however, commenters did not identify categories of actions for which application the FFRMS approaches appears likely to be particularly problematic.

While FEMA could not quantify the costs and benefits of several aspects of this rule, FEMA was able to quantify the number of structures and facilities that would be impacted by the rule. FEMA was transparent about its inability to quantify the costs and benefits of several aspects of the rule. FEMA provided a literature review of relevant benefits that could be realized from flood mitigation, an analysis of benefits quantified for the rule, and a qualitative description of additional benefits that could be realized from the rule. FEMA conducted a quantitative cost-benefit analysis based on the data available.

2. Application of the FFRMS Approaches for Critical and Non-Critical Actions

Comments: Commenters were generally supportive of FEMA’s policy approach to utilize the higher of the FVA or 0.2PFA for critical actions where CISA data was not available and/or actionable. Some of these commenters, however, expressed concerns with utilizing the lower of the FVA or 0.2PFA for non-critical actions where CISA data was not available and not actionable. Several of these commenters inaccurately stated policy positions on the FFRMS approaches selected by other Federal agencies for non-critical actions.

Commenters requested that FEMA adopt the higher of the FVA or 0.2PFA for non-critical actions where CISA data was not available and not actionable. Commenters stated that FEMA’s policy decision to utilize the lower standard would undermine the urgent need to design development proposals to a more resilient standard and minimize overall impacts to the floodplain. In response to FEMA’s statements in the NPRM regarding concerns with overbuilding and inequitable outcomes that may not be cost-effective, a commenter noted that FEMA has consistently advocated for states and localities to embrace stricter standards such as updated building codes that can have similar cost implications. Commenters also wrote that upfront investments in resilient development produced significant cost savings to communities in the long run and stated that the cost of construction was not the only consideration for costs, particularly for housing. These commenters requested FEMA consider the higher standard for non-critical actions, stating that the long-term benefits would outweigh the costs.

FEMA Response: As explained above, there is no requirement in the FFRMS or the Revised Guidelines to select the most restrictive standard, as FFRMS is

¹⁸⁰ See Revised Guidelines, pg. 57.

a resilience standard. The Revised Guidelines state “[w]hen an agency is not using the Climate-informed Science Approach in riverine flood hazard areas, the agency may select either the Freeboard Value Approach or the 0.2-percent-annual chance elevation, as appropriate, and is not required to use the higher of the two.”¹⁸¹ While the approach the commenters suggested would ensure that applicants were building all actions to the most protective level where CISA data is not available, this approach may lead to overbuilding and thus not be the most cost-effective, equitable approach particularly for non-critical actions. FEMA believes the agency’s approach is sufficiently protective of all actions and would be less expensive and complex to administer and implement than the commenters’ approach.

FEMA did consider the long-term costs and benefits of the rulemaking and policy and does not agree with the commenters that FEMA’s policy approach would result in inequities. Rather, FEMA believes the policy approach is appropriate as it will help ensure communities can rebound quickly and effectively from a disaster.

Comments: Other commenters requested FEMA require the use of the more protective standard for non-critical actions to better align with HUD’s proposed rule to implement the FFRMS. Several of those commenters stated that aligning with HUD’s approach would reduce conflicts and delays. One commenter stated that FEMA’s approach to use a lower elevation for non-critical projects facilitated a beneficial benefit/cost ratio. That commenter stated the higher standard should not be overly burdensome and consistent with another commenter noted the cost of construction was not the only consideration for costs, particularly for housing.

FEMA Response: As explained above, there is no requirement in the FFRMS or the Revised Guidelines to select the most restrictive standard, as FFRMS is a resilience standard. While the approach the commenter suggested would ensure applicants were building all actions to the most protective level where CISA data is not available, this approach may lead to overbuilding and thus not be the most cost-effective, equitable approach, particularly for non-critical actions. FEMA believes the agency’s approach is sufficiently protective of all actions and would be less expensive and complex to administer and implement than the commenter’s approach.

While HUD’s rule would require all proposed actions that require an Environmental Impact Statement (EIS) under NEPA to define the FFRMS floodplain using CISA, FEMA does not believe it is appropriate to require CISA in every instance where an EIS is required. FEMA cannot utilize CISA if CISA data is not available and actionable even if an action requires an EIS. Where CISA data is both available and actionable, FEMA will require CISA, including for those proposed actions that require an EIS.

HUD proposed to use the CISA to determine the FFRMS floodplain where the data is available and actionable. For non-critical actions where CISA is unavailable, HUD will use the 0.2PFA. Where the 0.2PFA is also unavailable for non-critical actions, HUD will use the FVA. For critical actions where CISA is unavailable, HUD will use either the 0.2PFA or the FVA to determine the FFRMS floodplain, whichever results in the larger floodplain and higher elevation. The only significant difference between HUD’s policy approach and FEMA’s is that HUD will first use the 0.2PFA for non-critical actions where it is available, but the CISA is not, and FEMA will use the lower of the 0.2PFA and the FVA for non-critical actions where CISA is not available.

FEMA considered requiring the use of the 0.2PFA when CISA is not available for non-critical actions rather than the lower of the 0.2PFA or FVA. While application of the 0.2PFA may provide a more consistent reduction of flood risk as it is probability based, the relationship to the FVA varies depending on topography (*i.e.*, in some instances the 0.2PFA may result in a lower flood elevation than the FVA). Application of only the 0.2PFA without a comparison to the FVA may result in building to a higher resilience standard than is necessary. There could also be equity concerns related to underbuilding or overbuilding to this standard, as communities seek to rebound quickly and effectively from a disaster. Data availability of the 0.2 percent annual chance floodplain can also be a challenge in implementing the 0.2PFA, as well as technical considerations relating to how wave action may be incorporated. In coastal areas, the Revised Guidelines note Federal agencies should use the FVA as the minimum elevation when not using the CISA if the 0.2 percent annual chance flood information depicted on FEMA’s regulatory products considers storm-surge hazards but not wave action and wave action data cannot be obtained from other sources. Only some

of those coastal areas have included wave action in the computation of the 0.2 percent annual chance floodplain.

FEMA’s FFRMS policy provides details on how FEMA will coordinate with other agencies when implementing actions in the same area as another Federal agency. See Section H, page 9. FEMA’s interagency consultative role in the broader implementation of the FFRMS across the Federal government, through the agency’s participation in the Interagency Working Groups and the FIFM–TF helps ensure consistent and effective implementation.

FEMA agrees with the commenter that equity is an important consideration and FEMA incorporated equity into the agency’s policy approach as explained above. Equity was a primary consideration for FEMA’s policy approach, not a desire to achieve a better benefit-cost ratio for non-critical actions as the commenter suggests. FEMA did consider the long-term costs and benefits of the rulemaking and policy and does not agree with the commenters that the policy approach would result in inequities. Rather, FEMA believes the policy approach is appropriate as it will help ensure communities seeking to rebound quickly and effectively from a disaster may do so.

Comment: One commenter also stated using the less restrictive standard could result in greater impacts on floodplains, ESA-listed species, Tribal treaty rights, and realized costs to vulnerable communities. The commenter stated using the higher standard between FVA or 0.2PFA when CISA data was not available and not actionable would not only prevent impacts on floodplains but would also avoid a similar situation that required expensive infrastructure upgrades and government liability after poorly located initial development within floodplains.

FEMA Response: As explained above, there is no requirement in the FFRMS or the Revised Guidelines to select the most restrictive standard, as FFRMS is a resilience standard. While the approach the commenter suggested would ensure applicants were building all actions to the most protective level where CISA data is not available, this approach may lead to overbuilding and thus not be the most cost-effective, equitable approach particularly for non-critical actions. FEMA believes the agency’s approach is sufficiently protective of all actions and would be less expensive and complex to administer and implement than the commenter’s approach.

A more restrictive application of the FVA or 0.2PFA would not necessarily

¹⁸¹ See Revised Guidelines, pg. 57.

determine whether an action will impact a protected species or critical habitat or impact Tribal treaty rights. In step 4 of the 8-step process, FEMA determines impacts to the floodplain which include changes to the hydraulics and hydrology of the floodplain which informs on potential impacts to protected species and their critical habitats. FEMA will also perform Section 7 consultation under the Endangered Species Act where appropriate.

3. Alternative Policy Approaches

Comments: Two commenters provided feedback on FEMA's specific request for comment on requiring the highest elevation for all actions regardless of criticality. One commenter noted FEMA's policy approach was flexible and acknowledged the need to be flexible and design an approach that would not unduly burden communities. The commenter recommended that FEMA continue to evaluate these approaches and consider revising and strengthening the standards if the standards become insufficiently protective. The other commenter stated that completing the required floodplain analysis for any one of the approaches would be challenging on its own and to require the analysis and consideration of all three would be costly and might not yield results materially different from the CISA. The commenter stated that because CISA would result in a determination of the appropriate level of resilience to design minimization measures, it would be unnecessary to require the use of the highest standard for all actions. The commenter stated that such an approach would be costly and, in some instances, would result in projects being built to higher resilience levels than required. This commenter supported FEMA's policy approach for critical actions as separate and apart from other actions, stating by separating critical actions from others, FEMA would be able to properly balance different levels of protection with minimization and mitigation measures and cost considerations.

FEMA Response: FEMA appreciates the commenters' consideration of the alternatives and understanding of the need for a flexible approach balancing cost and equity considerations. FEMA agrees with the commenter that the use of the highest standard for all actions is not always appropriate and the FFRMS policy reflects the decision to use the lower standard for non-critical actions. FEMA intends to continue to evaluate the policy approach as FFRMS is implemented and will consider future revisions as appropriate. While FEMA

understands the commenter's concern that completing the analysis for all of the approaches for every action could be an administrative burden on the agency, the agency does not believe that completing the analysis for any one of the approaches is on its own too challenging. As explained above, FEMA will use the FFRMS Job Aid to determine the FFRMS floodplain for actions, and that tool provides the agency and stakeholders with a methodology and process for completing the analysis.

Comment: Two commenters wrote that FEMA artificially constrained the agency's consideration of alternatives to just the three disclosed regulatory approaches in the proposal and did not consider no regulatory action as an alternative. One of the commenters added that FEMA did not assess how private and non-Federal interests would adapt to flooding without regulation and the no regulation alternative likely understated flood adaptation, which resulted in the cost-benefit analysis overstating the benefits of the three regulatory alternatives. The commenter also wrote the true value of cost-benefit analysis is nearly always realized when alternatives are identified that achieve substantial benefits and at much less cost than much higher levels of regulation. The commenter stated that FEMA could have analyzed other alternatives, such as strategic choices of use-case subsets for application of the various FEMA standards rather than all use-cases being subject to CISA. The commenter further stated that the FVA or 0.2PFA entail much lower analysis costs and are probably better suited to decisions where the costs of the structures or costs of adaptation were lower. The commenter stated avoiding the CISA in those situations might result in substantial cost savings.

FEMA Response: FEMA's policy approach detailed in the NPRM preamble explains how the agency balanced consideration of costs with data availability, criticality of the action, and equity in establishing a flexible framework for FFRMS implementation. Consistent with the Revised Guidelines, FEMA's preferred approach is the CISA, but the FFRMS policy explains the CISA must be available and actionable and where it is not, the FVA or 0.2PFA will be utilized depending on the criticality of the action and availability of data. The CISA is FEMA's preferred approach, as FEMA believes it has the potential to be the best and most well-informed approach to building resilience in an equitable manner and ensuring a reduction in disaster-related suffering. CISA is designed to meet

current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity. FEMA understands the availability and actionability of data are key factors in completing the RIA in a consistent, equitable manner and believes data availability and actionability will continue to advance for the CISA. In response to the commenter's concerns that FEMA did not assess how private and non-Federal interests would adapt to flooding without regulation, FEMA notes that this regulation would not regulate purely privately funded activity in the floodplain. To the extent that private incentives exist to plan for increased flood risk, those incentives are substantially diluted by the use of FEMA assistance to support projects. FEMA thus did not understate private incentives to plan for flood risk and did not overstate the benefits of the regulatory alternatives.

FEMA's policy approach includes consideration of the alternatives as part of the framework explained above. FEMA intends to continue to evaluate the policy approach as FFRMS is implemented and will consider future revisions as appropriate. Additionally, FEMA's RIA does analyze all three approaches, as well as the no action alternative the commenter references. Under the No Action alternative, although non-Federal jurisdictions or private entities may continue to adapt to the future risk of flooding over time, the current Federal standards would remain. To the extent that private incentives exist to plan for increased flood risk, those incentives are substantially diluted by the use of FEMA assistance to support projects. Accordingly, such adaptation is unlikely to occur as quickly or as fully as this rule, leaving Federal investments at a greater risk of flooding than under the final rule. Because of the greater risk to structures and facilities, there is also a greater risk to life. In addition, the natural value and function of the floodplains would be at a greater risk of loss under the No Action alternative. However, the No Action alternative would initially cost incrementally less than the FFRMS approach and would result in less administrative complexity as compared to implementing the FFRMS. Overall, based on the evaluation, the FFRMS was selected over the No Action alternative for the benefits that it provides to Federal investments and those who use them.

In response to the commenter's suggestion on how FEMA should have analyzed other alternatives, such as strategic choices of use-case subsets for

application of the various FEMA standards rather than all-use cases being subject to CISA, FEMA did complete an analysis of all three approaches. FEMA analyzed the impact of the FVA, 0.2PFA, and CISA for each of the programs (PA, IA, and HMA) as if each approach were the only FFRMS expansion option to create a range (see sections 7.4, 7.5, and 7.6 in the RIA). In reality, it is likely that with FFRMS, there will be a mix, with some projects falling under CISA, FVA, or 0.2PFA. Therefore, the actual cost will fall somewhere within the range. FEMA selected the CISA as the primary approach, as it is the preferred option. CISA is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity. As noted above, FEMA intends to continue to evaluate the policy approach as FFRMS is implemented and will consider future revisions as appropriate. Such revisions could in principle include defaulting to the FVA or 0.2PFA for smaller investments, although FEMA believes that the administrative costs associated with implementing the CISA are likely to decline over time.

Further, FEMA did consider the long-term costs and benefits of the rulemaking and policy. Rather, FEMA believes the policy approach is appropriate, as it will help ensure communities can rebound quickly and effectively from a disaster.

4. Comments on FEMA's FFRMS Policy

Comment: A commenter requested FEMA revise the proposed principle B in the FFRMS policy ("Avoid, to the extent possible, the long- and short-term adverse impacts associated with occupancy and modification of floodplains and avoid direct or indirect support of floodplain development wherever there is a practicable alternative") to include additional language for FEMA to restore and preserve the natural and beneficial functions and values of wetlands and floodplains. Another commenter requested FEMA add a principle to the FFRMS policy and final rule specific to the restoration and preservation of the natural and beneficial functions and values of floodplains, and use of natural systems, ecosystem processes, and nature-based approaches.

FEMA Response: FEMA believes the commenters' requested revisions are unnecessary. The principles laid out in the FFRMS policy are an abbreviated version of FEMA's policy statements found in § 9.2. As stated in new § 9.2(d), FEMA shall "[r]estore and preserve the

natural and beneficial values served by floodplains" and "[p]reserve and enhance the natural values of wetlands." FEMA's longstanding requirements in 44 CFR 9.11(e) outline the agency's requirements to restore and preserve the natural and beneficial values served by floodplains and wetlands. These current requirements meet the commenters' concerns and remain unchanged in this rulemaking process.

Comment: A commenter requested other specific edits to the policy document, including adding "dry" before floodproofing throughout the document and replacing "minimization standards" with "residential flood resistant design and construction requirements." The commenter also suggested FEMA add emphasis that nature-based solutions complement the elevation requirements versus being alternative actions and implementing a nature-based solution would not exempt an applicant from the elevation requirements.

FEMA Response: FEMA believes the current language in the FFRMS policy is sufficiently clear. FEMA believes adding "dry" before floodproofing is not necessary as floodproofing is described in detail in new § 9.11(d)(3)(ii) and section G.1.c of the FFRMS policy. Further, FEMA's policy references the use of the agency's additional resources including FEMA's NFIP Technical Bulletins that address floodproofing.¹⁸² Using the term "minimization requirements" is consistent with the minimization provisions and minimization standards in § 9.11. The term "flood risk minimization measures" is preferred by FEMA to avoid confusion with "hazard mitigation" actions funded by FEMA.

FEMA believes that natural features and nature-based solutions should be considered as project alternatives and used where possible. Where they are not practicable as an alternative on their own, natural features and nature-based solutions may be incorporated into actions as minimization measures. The FFRMS policy clarifies the FFRMS is a resilience standard and where elevation may not be feasible or appropriate, the

FFRMS floodplain establishes the level to which a structure or facility must be resilient. Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand and rapidly recover from a flood event.

Comment: The same commenter requested several clarifications. The commenter requested FEMA clarify the requirements provided in the policy were minimum requirements not maximums and that applicants could exceed those requirements. The commenter requested FEMA clarify the policy's requirements apply regardless of whether or not substantial improvement or substantial damage is triggered and also clarify whether a structure within an FFRMS floodplain must comply with the policy's requirements.

The commenter also requested clarifications on—

- The application of FFRMS to FEMA's benefit-cost analysis tool used by some FEMA programs;
- whether the FFRMS policy limited where certain projects could be done, citing an example of mitigation reconstruction projects being prohibited in V Zone; and
- what constitutes a critical action and specifically whether or not certain specific actions would be considered critical, such as construction of new safe room and stand-alone generator projects if they are supporting a critical facility.

FEMA Response: The commenter is correct that FFRMS is a minimum requirement under part 9. In section C.4 of the policy, FEMA clarifies pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used. Actions may follow a higher standard so long as the action complies with FEMA's program requirements.

In section A.2 of FEMA's FFRMS policy, the agency clarifies applicability of the policy to specific actions, including actions involving substantial improvement and substantial damage. FEMA does not believe the policy requires additional revision given the language in section A.2 regarding applicability. Section C of the policy explains how FEMA determines the FFRMS floodplain. Specific actions listed in section A.2 that are within the FFRMS floodplain are subject to the requirements of the policy.

FEMA appreciates the commenter's interest in the application of the Benefit-Cost Analysis (BCA) tool to the FFRMS process for FEMA programs. FFRMS does consider current and future flood risks. Where CISA is available and

¹⁸² See FFRMS Policy, pg. 8, Section G.1.d "FEMA guidance provides technical information on elevation methods for new construction and retrofitting existing structures with various types of foundations. Guidance is available in NFIP Technical Bulletins (1–11), FEMA P–758: Substantial Improvement/Substantial Damage Desk Reference, FEMA P–936: Floodproofing Non-Residential Buildings, FEMA P–348: Protecting Building Utility Systems from Flood Damage, FEMA P–467–2: Floodplain Management Bulletin on Historic Structures, among other FEMA publications."

actionable, sea level rise is specifically incorporated into the determination of the FFRMS flood elevation. FEMA's FFRMS policy will generally not change BCA requirements for FEMA programs. For FEMA's HMA program, additional elevation above the BFE incorporated into the design of the project and attributed to current and future flood risk such as sea level rise would be allowable in the BCA. Currently, pre-calculated benefits that streamline the cost-effectiveness determination for structure elevation projects are limited to structures where some part of the structure is within the SFHA. For an elevation project where the entire structure footprint is outside the SFHA, a BCA will be required to show cost-effectiveness. For FEMA's PA program, cost-effectiveness requirements apply only to Hazard Mitigation measures on projects to restore disaster damaged structures and facilities. FFRMS elevation requirements are mandated by law and therefore are eligible for financial assistance without additional cost-effectiveness analysis. FEMA notes any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

The requirements of § 9.11(d)(1) still apply and remain unchanged in this final rule. The commenter references V Zone mitigation reconstruction projects. For V Zone actions that are new construction, FEMA is prohibited from funding such actions unless the action is functionally dependent or facilitates open space use. The HMA Program and Policy Guide also states HMA mitigation reconstruction projects are prohibited in the V Zone and in floodways¹⁸³ and this final rule and FFRMS policy will not change that requirement. HMA mitigation reconstruction actions that are within the FFRMS floodplain must either be relocated or elevated to the FFRMS requirements.

Regarding the commenter's request for clarification on whether or not specific actions were considered critical and subject to FFRMS, FEMA cannot provide a full adjudication of whether an action is a critical action without context. FEMA makes the determination of whether an action is a critical action as part of the 8-step process on a case-by-case basis with input from the applicant. FEMA's definition of "critical action" is consistent with Executive Order 11988, as amended, through the Implementing Guidelines and further

clarified in the Revised Guidelines. The Revised Guidelines provide further details on what constitutes a critical action. FEMA will leverage the information in the Revised Guidelines when providing additional guidance to stakeholders.

As explained throughout this final rule, FEMA will publish additional resources for the public and SLTT partners identifying what the FFRMS is, and how the agency will implement the Executive Orders to help applicants of FEMA-funded assistance programs. FEMA's regional offices will also provide technical assistance in support of FFRMS implementation.

Comment: The same commenter also had several other recommendations for FEMA's FFRMS policy. The commenter recommended FEMA add an emphasis on specific codes and standards that might be applicable to specific FEMA programs, limit the dry floodproofing design to 3 feet for any new construction as recommended by NFIP Technical Bulletin 3, and cap elevation costs at the current NFIP ceiling for building coverage or the current replacement value. The commenter also suggested FEMA add information related to relocation regarding nature-based solutions, stating that instead of elevating or reconstructing in place the preference should be to relocate an action.

FEMA Response: The FFRMS policy provides information on FEMA's Building Codes Strategy and refers to specific codes and standards the agency leverages through specific program policies. FEMA does not believe additional emphasis on specific codes and standards is required in the FFRMS policy, as these are detailed in each specific program's policies. FEMA will distribute additional resources for the public and SLTT partners identifying what the FFRMS is, and how the agency will implement the Executive Orders to assist applicants of FEMA-funded assistance programs. FEMA will also provide technical assistance through the agency's regional offices in support of FFRMS implementation.

FEMA's FFRMS policy states "[e]levation and floodproofing requirements must be consistent with NFIP criteria or any more restrictive local standard."¹⁸⁴ Rather than direct quotation of a specific requirement for floodproofing design as the commenter requested, section G.1.d of the FFRMS policy addresses the use of other FEMA publications, including NFIP Technical Bulletins to assist readers.

FEMA believes the commenter's suggested funding limitations to cap elevation costs are outside the scope of this rulemaking. Applicants seeking FEMA program funding will be required to comply with that program's eligibility requirements, which may consider cost effectiveness of the proposed action.

Regarding the commenter's request to add information regarding relocation, FEMA notes this policy does not change the current requirement of step 3 of the 8-step process: "If a practicable alternative exists outside of the floodplain or wetland FEMA must locate the action at the alternative site."

Comment: Another commenter asked if Approach 2 was only for critical actions.

FEMA Response: Approach 2 (the FVA) may be used for both critical and non-critical actions where CISA is not available and actionable. FEMA's FFRMS policy requires FEMA to determine the FFRMS floodplain according to the CISA for all locations where the best-available, actionable hydrologic and hydraulic data methods that integrate current and future changes in flooding based on climate science exist. When CISA is not available for a critical action, the FFRMS policy requires FEMA to determine the FFRMS floodplain as the area that would be inundated by the higher of the 0.2 percent annual chance flood and 3 feet of freeboard above the BFE for that location (the Freeboard Value Approach or FVA). When CISA is not available for a non-critical action, the FFRMS policy requires FEMA to determine the FFRMS floodplain as the area that would be inundated by the lower of the 0.2 percent annual chance flood and 2 feet of freeboard above the BFE for that location (the FVA). In coastal areas where CISA is unavailable, the FFRMS policy requires the FVA be used if the available 0.2 percent annual chance flood elevation does not account for wave action.

Comment: One commenter stated several links in the policy document did not appear to be active.

FEMA Response: FEMA appreciates the commenter's review of the policy document links and has confirmed the links are updated and active in the attached FFRMS policy.

I. The FFRMS and Floodplain/Wetland Determination Data

1. Data Availability

Comments: Four commenters discussed the availability of the CISA data to implement the FFRMS and some of the commenters requested maps or other resources depicting the FFRMS

¹⁸³ Hazard Mitigation Assistance Program and Policy Guide, pg. 85 available at <https://www.fema.gov/grants/mitigation/guide> (last accessed Mar. 20, 2024).

¹⁸⁴ FFRMS policy, pg.8.

floodplain. A commenter stated there were no consistently accurate resources depicting the floodplain, floodway, the 100-year floodplain, the 500-year floodplain, or the FFRMS floodplain. The commenter stated that the floodplain determination triggered whether a proposed action was required to complete the 8-step decision-making process and the lack of FFRMS floodplain maps would create difficulty for stakeholders seeking Federal funding from FEMA for projects. The commenter stated that FEMA's work with other agencies to develop FFRMS tools and resources would help situations involving existing development but would not deter new development because the FFRMS floodplain determination would come only after the initial investments were made. The commenter added that FEMA's regulatory maps for the NFIP help stakeholders determine whether a property is located in a regulated floodplain within a short period of time and with a high degree of certainty and that the FFRMS establishes a moving, undocumented, and unmapped target that would be used haphazardly to determine the floodplain status of any given property.

Further, the commenter stated FEMA had not provided enough information on how FEMA would implement the preferred CISA approach and had not defined when data might be considered to be "available" or "actionable." The commenter stated the regulatory text lacked information on the CISA data and FEMA's request for comment on how the CISA could be implemented using a publicly accessible, standardized, predictable, flexible, and cost-effective methodology indicated the agency was uncertain of how to apply the CISA to any given project. The commenter stated the lack of maps and other resources depicting the FFRMS floodplain made the floodplain determination susceptible to confusion, error, and potential abuse. The commenter stated FEMA rejected the use of the 0.2PFA based on data availability, costs, and certainty for stakeholders and stated concern with FEMA moving forward with the CISA, stating that approach was supported by even less data.

Conversely, a second commenter stated the necessary data and modeling capabilities underpinning CISA have continued to expand in recent years, making CISA an increasingly practicable methodology for more accurately determining the extent of the FFRMS floodplain. The commenter wrote that FEMA should emphasize developing and deploying the necessary data to

support the use of the CISA more broadly and specifically consider and address how regional data limitations could result in inequitable outcomes if the CISA is routinely unavailable in low income, rural, Tribal, or otherwise underserved communities.

Two other commenters requested that FEMA provide mapping depicting the FFRMS floodplain. One commenter specifically requested mapping reflecting the CISA. One of the commenters noted the importance of mapping to identify all 3.5 million miles of floodplains associated with streams, rivers, and coastlines. This commenter recommended FEMA create maps with as much coverage as possible by considering incorporating data from areas with Base Level Engineering (BLE) in additional areas with detailed flood studies, when possible. The commenter stated this was the best way to ensure consistent, accurate CISA use.

FEMA Response: FEMA disagrees with the commenter that there are not sufficient resources depicting the floodplain, floodway, the 1 percent annual chance floodplain, or the 0.2 percent annual chance floodplain for all regions of the country. The commenter acknowledges further in their own comment that such resources currently exist for the 1 percent annual chance floodplain when stating the wide availability and certainty of FEMA's FIRMS. While regulatory mapping products may not exist depicting all of the areas referenced by the commenter, floodplain determinations under part 9 are not solely predicated on existing FIRMS. Rather, FEMA will use best available information, which may include information that is non-regulatory or FEMA preliminary flood hazard data. To be designated as the best available information, the information must be at least as restrictive as information provided by effective FIRMS per FEMA's best available information policy.¹⁸⁵ Given this policy, the agency will be continuously improving the data associated with the floodplain determination. FEMA's regulatory mapping products are a starting point for the floodplain determination under part 9 and any other flood information used should be at least as restrictive as those regulatory products.

Further, while there are no regulatory mapping products depicting the FFRMS floodplain, FEMA believes the

information provided in the public docket with this rulemaking is sufficient to establish the FFRMS floodplain. Specifically, the FFRMS CISA State of the Science Report and the FFRMS Job Aid are resources to determine the FFRMS floodplain. Using the FFRMS Job Aid, FEMA can determine the FFRMS floodplain relevant to a particular location within approximately 23 minutes.

While FEMA appreciates that the commenter seeks to make the floodplain determinations, the agency has historically made and will continue to make floodplain determinations under part 9 by partnering with applicants in the 8-step decision-making process. FEMA will make the floodplain determination leveraging the FFRMS Job Aid published on the agency's website and in the public docket of this rulemaking. The FFRMS Job Aid is a resource for FEMA and applicants that details the methodology and process by which the FFRMS floodplain can be determined for the CISA, FVA, and 0.2PFA. FEMA further notes that the commenter's concerns regarding the floodplain determination are only a part of the analysis at Step 1 of the 8-step process. The determination in Step 1 is not just whether or not an action is located within a floodplain or wetland but is also whether the action would impact the floodplain or wetland.

FEMA will continue to rely on 44 CFR 9.7, FEMA Policy 104-008-2: Guidance on the Use of Available Flood Hazard Information,¹⁸⁶ and the Revised Guidelines in determining whether CISA and flood hazard data is available and actionable. The FFRMS CISA State of the Science Report is based on the Revised Guidelines and further refines the initial framework from Appendix H to define two specific workflows for applying CISA. The FFRMS CISA State of the Science Report identifies the latest sea level rise projections from the National Climate Assessment as available and actionable data for CISA.¹⁸⁷ FEMA understands the commenter's concerns in seeking a simplified resource that depicts the FFRMS floodplain and is coordinating across the federal government to develop additional tools beyond the FFRMS Job Aid to assist agencies and stakeholders in determining the appropriate vertical flood elevation and corresponding horizontal FFRMS floodplain. FEMA will continue to

¹⁸⁵ See FEMA Policy 104-008-2: Guidance on the Use of Available Flood Hazard Information, available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 20, 2024).

¹⁸⁶ Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Jan. 24, 2024).

¹⁸⁷ FFRMS CISA State of the Science Report, pgs. 22-23.

collaborate across the Federal government to develop tools to facilitate the implementation of CISA and the FFRMS. The IWG recently released a beta version of the Federal Flood Standard Support Tool (FFSST), a novel, interactive, map-based tool that incorporates new data to help users identify if a Federally funded project is in the FFRMS floodplain, for comment.¹⁸⁸ However, FEMA will initially rely on the FFRMS Job Aid methodology to determine the FFRMS floodplain.

The commenter incorrectly characterizes FEMA's request for comment as an indication that the agency is unable to apply the CISA. As explained above and throughout this final rule, FEMA is leveraging the resources provided in the public docket of this rulemaking to implement the FFRMS. As part of the NPRM, FEMA sought public comment to gauge the public's understanding of CISA and implementation of the FFRMS using the CISA, including locally available CISA data and methods. FEMA is collaborating across the Federal government to develop resources to further assist with FFRMS implementation beyond the FFRMS Job Aid provided in the rulemaking docket, the public comments requested will help the agency through work with the IWG to enhance the Job Aid and other interagency resources. Additionally, FEMA sought public comment to engage more dialogue on data availability and actionability beyond Federal interagency resources for FFRMS implementation.

FEMA further disagrees with the first commenter that the CISA is supported by even less data than the 0.2PFA. FEMA's policy addresses concerns regarding the availability and actionability of CISA data by offering a flexible approach to implement either the FVA or 0.2PFA where CISA data is not available and/or actionable. Further, as the policy explains, the use of both CISA and 0.2PFA are subject to data availability. While CISA is preferred, where CISA data is not available and/or actionable, the agency will rely on the alternative approaches as detailed in the FFRMS policy.

FEMA agrees with the second commenter that since the introduction of the CISA in 2015, additional data has become available to better inform the CISA.¹⁸⁹ FEMA believes data

availability and actionability will continue to advance for the CISA in the future. Specifically, FEMA expects more data will be developed supporting broader-based application of the CISA as agencies implement the FFRMS, and this data will be considered and incorporated into future updates of the FFRMS and FEMA's implementation thereof. FEMA's policy approach is to use the CISA where available and actionable, recognizing that the data is still not available and not actionable in every location. FEMA also recognized equity concerns in the policy approach, specifically considering over- and under-building concerns for locations where the CISA may be unavailable as explained in the NPRM preamble. The Revised Guidelines recognize the importance of consideration of impacts to vulnerable populations, including those at risk to impacts of flooding due to their location or because they are overburdened, lack resources, or have less access to resources.¹⁹⁰ Consistent with these concerns, FEMA's FFRMS policy would require the lower of the FVA floodplain or the 0.2PFA floodplain for non-critical actions. FEMA believes the lower approach would help reduce the burden on communities by addressing concerns related to overbuilding, particularly in underserved communities seeking to rebound quickly and effectively from a disaster. Selecting the lower approach for non-critical actions will still result in a higher level of resilience than the current requirements under part 9, while also taking equity and cost-effectiveness considerations into account.

FEMA appreciates the concerns of the remaining commenters requesting maps that depict the FFRMS floodplain and the importance of providing maps with as much coverage as possible. FEMA understands the commenter's concerns in seeking a simplified resource such as a map depicting the FFRMS floodplain and is coordinating across the federal government to develop additional tools beyond the FFRMS Job Aid to assist agencies and stakeholders in determining the appropriate vertical flood elevation and corresponding horizontal FFRMS floodplain. The IWG recently released a beta version of the

Federal Flood Standard Support Tool (FFSST), a novel, interactive, map-based tool that incorporates new data to help users identify if a Federally funded project is in the FFRMS floodplain, for comment.¹⁹¹ However, FEMA will initially rely on the FFRMS Job Aid methodology to determine the FFRMS floodplain.

2. Methodology

Comments: FEMA received questions regarding the CISA floodplain determination methodology. Commenters stated the NPRM did not specify how FEMA would determine the best-available, actionable climate science data and methods for the CISA, stating the agency also did not explain how it would select, evaluate, and update the data and methods that inform the CISA. One commenter asked what sources of data and methods FEMA would use; how FEMA would account for uncertainty and variability in climate projections; and how often FEMA would update the data and methods to reflect new scientific findings. One commenter requested information on the methods FEMA would use prior to selecting data and asked whether state agencies, floodplain managers, and other stakeholders would have an opportunity to inform what best aligned with on-the-ground realities. Both of these commenters asked how FEMA would communicate the data and methods to stakeholders and the public.

One commenter raised concerns that the CISA was still emerging and stated the overall approach would be overly conservative. Similar to other comments described earlier in this summary, this commenter asked who would make the determination to accept the science used for CISA and which projections would be applicable for design life and risk aversion of the structure. This commenter noted the FFRMS did not mention how recent the local climate study needed to be for the CISA and stated that regulatory agencies choose to enforce the most extreme flood events. The commenter recommended FEMA provide guidance for how to use climate projection data for development of unsteady hydraulic models which would be required to determine rate of rise of floodwater and durations.

Another commenter provided several specific recommendations regarding actionable model criteria for the CISA including that the models be well-established in practice; not extrapolate results; display information on uncertainty; are well-calibrated; provide outputs that are understandable; and be

2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁹⁰ See Revised Guidelines, pg. 67.

¹⁹¹ 89 FR 25674 (Apr. 11, 2024).

¹⁸⁸ 89 FR 25674 (Apr. 11, 2024).

¹⁸⁹ See "Federal Flood Risk Management Standard Climate-Informed Science Approach (CISA) State of the Science Report," available at <https://www.whitehouse.gov/wp-content/uploads/>

evaluated via peer-review. The commenter recommended that FEMA provide additional clarity as to what standard of peer review would be considered efficacious when producing future flood risk models, and that FEMA follow up with entities peer reviewing models to confirm that this standard has actually been met. This commenter encouraged the use of a consistent and accurate methodology for determining the FFRMS floodplain across the Federal government. The commenter stated that where CISA data was not available, utilizing the 1 percent annual chance floodplain and the 0.2 percent annual chance floodplain would be appropriate, as those are well understood and adopted for regulatory purposes under the NFIP, as well as the mortgage and insurance industries broadly.

Another commenter stated the lack of transparency in the FFRMS floodplain determination data raised concerns similar to concerns raised regarding proprietary tools used in the implementation of FEMA's Risk Rating 2.0. The same commenter stated proprietary tools would make it difficult to assess whether a CISA floodplain determination was appropriate for local conditions for a specific action and stated national-scale, one-size-fits-all tools would not be readily applicable to project sites in every location, including rural states. The commenter requested FEMA commit to bringing in State and local stakeholders to provide their perspectives.

FEMA Response: FEMA believes the information provided in the rulemaking docket addresses the commenters' concerns regarding how the agency will select, evaluate, and update the data and methods that inform the CISA and account for uncertainty and variability in climate projections. As explained above, the FFRMS CISA State of the Science Report and FFRMS Job Aid provide the public with information on the best available and actionable data for the CISA and the methodology the agency intends to initially use to determine the FFRMS floodplain using the CISA. The FFRMS CISA State of the Science Report and the Revised Guidelines provides details on how the agency will determine the availability and actionability of data for the CISA. The FFRMS Job Aid provides the methodology and process FEMA will use, based on those resources, to determine the FFRMS floodplain.

As explained above, FEMA makes the determination for Step 1 of the 8-step process, in coordination with applicants, and will work with State agencies, floodplain managers, and

other stakeholders during this process to best understand the on-the-ground realities. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used in lieu of the FFRMS. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data result in a more restrictive standard. FEMA notes that the agency did communicate information on the data and methodology to determine the FFRMS floodplain to stakeholders and the public with this rulemaking by providing the FFRMS CISA State of the Science Report and FFRMS Job Aid in the public docket. FEMA will provide additional resources to SLTTs and the public and will offer technical assistance regarding the FFRMS floodplain determination as part of the FFRMS implementation. FEMA disagrees with the commenter that agencies choose to enforce the most extreme flood events; the CISA is based on the best available and actionable data, not the most extreme scenarios.

With respect to the comment suggesting that FEMA support a consistent and accurate methodology for determining the FFRMS floodplain across the Federal government, FEMA supports the development of interagency tools because such tools enhance predictability and mitigate transaction costs associated with floodplain determinations. FEMA has prioritized the use of such tools in its policy approach and will initially implement the CISA using the FFRMS Job Aid. FEMA's interagency consultative role in the broader implementation of the FFRMS across the Federal government, through the agency's participation in the Flood Resilience IWG and the FIFM-TF, helps ensure consistent and effective implementation. FEMA's FFRMS policy further provides details on how FEMA will coordinate with other agencies when implementing actions in the same area as another Federal agency. See Section H, page 9. At the same time, there is no requirement in the FFRMS or the Revised Guidelines for all Federal agencies to select the same approach or to implement the CISA with the same tools; the FFRMS is a resilience standard and is meant to be flexible.¹⁹² Regarding the commenter's question regarding which projections would be applicable for design life and risk aversion of the structure, the FFRMS Job Aid Section 2.4.1 discusses service life including in the context of critical

actions.¹⁹³ This information should resolve the commenter's question. FEMA notes that the agency's proposed implementation of the CISA does not include incorporating climate projection data into hydraulic models (steady or unsteady).

FEMA appreciates the recommendations provided by another commenter on the actionable model criteria for the CISA. FEMA is not relying on models for the CISA implementation beyond the models already utilized to produce the agency's regulatory and non-regulatory products for the NFIP. Appendix H of the Revised Guidelines¹⁹⁴ and the FFRMS CISA State of the Science Report¹⁹⁵ provide an overall framework for assessment of data and models to determine available and actionable climate science.

FEMA agrees with this commenter that, where CISA data is not available and not actionable, the agency will rely on the alternative approaches as detailed in FEMA's FFRMS policy. Section C.3 of FEMA's FFRMS policy states that FEMA will determine the FFRMS elevation and the FFRMS floodplain depending on the criticality of the action. For non-critical actions, the FFRMS floodplain is the area that would be inundated by the lower of the 0.2 percent annual chance flood or 2 feet of freeboard above the BFE. For critical actions, the FFRMS floodplain is the area that would be inundated by the higher of the 0.2 percent annual chance flood or 3 feet of freeboard above the BFE. For locations where information about the elevation and/or extent of the 0.2 percent annual chance floodplain is not available, the FFRMS floodplain is 3 feet of freeboard above the BFE. To clarify, the FVA relies on the 1 percent annual chance floodplain but incorporates an additional measure of safety beyond the 1 percent annual chance floodplain. If available 0.2 percent annual chance floodplain data is not available, FEMA will utilize the appropriate FVA to determine the FFRMS floodplain and elevation.

Finally, FEMA believes the interagency tools used for FFRMS implementation have been transparent in nature. The tools FEMA will utilize to implement the FFRMS are not proprietary. FEMA, as a co-chair of the Flood Resilience IWG, under the National Climate Task Force, facilitated the publication of both the FFRMS Job

¹⁹³ See FFRMS Job Aid, pg. 14.

¹⁹⁴ See Revised Guidelines, pgs. 16–17, 50–52.

¹⁹⁵ See FFRMS CISA State of the Science Report, pgs. 7–8.

¹⁹² See Revised Guidelines, pg. 57.

Aid¹⁹⁶ and FFRMS CISA State of the Science Report.¹⁹⁷ The FFRMS Job Aid helps federal agencies and their non-federal partners (including potential federal financial aid recipients) conduct a screening to determine if a proposed federally funded action will be located within an FFRMS floodplain, based on any of the three approaches in accordance with Sec. 2(a)(1) of Executive Order 11988, as amended. FEMA will initially utilize the FFRMS Job Aid to make these determinations, and this resource was posted in the public docket of this rulemaking for transparency to the public. As explained above, FEMA makes the determination for Step 1 of the 8-step process, in coordination with applicants, and will work with State and local communities during the 8-step process. FEMA will accept local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data result in a more restrictive standard and will help further ensure local needs are met.

Comment: One commenter requested FEMA specify which NOAA sea level rise (SLR) scenario the agency would consider as the minimum standard to apply the CISA to HMA grant project benefit-cost analysis (BCA) and designs. The commenter also requested FEMA specify under what conditions it would allow higher SLR scenarios to be used, stating the lack of clarity would result in slowdowns and inconsistency in application reviews across FEMA regions and projects. The commenter requested FEMA clarify whether the agency would defer to applicant or State policies that may incorporate higher projections and otherwise meet the criteria for the CISA.

FEMA Response: FEMA is not codifying the specific climate scenarios to be used as part of the CISA analysis. As explained above, FEMA is relying on interagency processes to select and evaluate the data and methods used to implement the FFRMS. In the proposed rule, FEMA referred readers to the

FFRMS Job Aid and the FFRMS CISA State of the Science Report, which were posted to the public docket associated with this rulemaking.¹⁹⁸ FEMA has also posted the FFRMS Job Aid on its website¹⁹⁹ and will leverage this tool when implementing the FFRMS. Consistent with the FFRMS Job Aid, FEMA will use the intermediate scenarios for non-critical actions and intermediate-high scenarios for critical actions using the SLR data from NOAA.²⁰⁰

In response to the commenter's concerns regarding the use of higher SLR scenarios and whether FEMA would accept higher standards, 44 CFR 9.11(d)(6) provides that a more restrictive Federal, State, or local standard will be used in lieu of the FFRMS. Thus, if a more restrictive State or local standard relied on a higher SLR scenario, that more restrictive standard would be used. FEMA notes the determination on the information the applicant is using under part 9 has always been made by the agency and thus, FEMA does not anticipate delays with projects as a result of the FFRMS implementation.

Comment: A commenter stated that FEMA's policy approach was not straightforward, as the boundaries and elevations for both the FVA and 0.2PFA must be identified for each project and then compared to establish the final floodplain but stated there was little information on how those boundaries and elevations would be determined. Similar to other commenters above, the commenter asked who would conduct the analysis, what data would be used, and what ground-truthing if any would be performed. The commenter stated this must be determined prior to FFRMS implementation. This commenter stated CISA's application was not understood nor was it likely to be consistent given the significant leeway provided to the Regional Administrators. The commenter requested FEMA explain how the agency would choose the FFRMS approach it would take, what data the agency would rely on, and provide publicly available maps depicting the regulated floodplain (whether that floodplain was determined based on the 1 percent annual chance floodplain, the 0.2 percent annual chance floodplain, or using the CISA, FVA, or any other

methodology). The commenter stated the FFRMS was otherwise premature, and FEMA should cease implementation until these efforts were complete.

FEMA Response: FEMA understands the commenter's concern that both the FVA and 0.2PFA will be identified where the CISA is not available and/or actionable. However, FEMA does not believe this analysis will be overly burdensome to the agency or to applicants. FEMA has made, and will continue to make, floodplain determinations partnering with applicants in the 8-step decision-making process. The FFRMS Job Aid provides the methodology and process by which the FVA and 0.2PFA can be determined. This document is publicly available on FEMA's website and was posted to the public docket with this rulemaking. Using the FFRMS Job Aid, FEMA can determine the FFRMS floodplain relevant to a particular location within approximately 23 minutes.

FEMA disagrees with the commenter that the CISA's application is not understood nor likely to be consistent given the resources provided with this rulemaking as detailed above. The FFRMS CISA State of the Science Report and the FFRMS Job Aid help Federal agencies and the public better understand the CISA, the availability and actionability of the CISA data, and how to determine the FFRMS floodplain using the CISA, FVA, and the 0.2PFA. FEMA does not agree with the commenter that FFRMS implementation, including the CISA, will result in inconsistency. FEMA does not believe Regional Administrators are provided with a level of discretion to result in inconsistent FFRMS implementation. Regional Administrators have historically had the authority provided in 44 CFR 9.7, and FEMA is not changing their authority with this rule.

FEMA notes that the agency explains how it will choose the FFRMS approach to be taken in the FFRMS policy. Section C.3 of the FFRMS policy states FEMA will determine the FFRMS elevation and the FFRMS floodplain depending on the criticality of the action. For non-critical actions, where the CISA is not available, the FFRMS floodplain is the area that would be inundated by the lower of the 0.2 percent annual chance flood or 2 feet of freeboard above the BFE. For critical actions, where the CISA is not available, the FFRMS floodplain is the area that would be inundated by the higher of the 0.2 percent annual chance flood or 3 feet of freeboard above the BFE. For locations where information about the

¹⁹⁶ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024) and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁹⁷ Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

¹⁹⁸ See <https://www.regulations.gov/document/FEMA-2023-0026-0004>.

¹⁹⁹ See https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024).

²⁰⁰ FFRMS Job Aid, pgs. 20–21. NOAA viewer available at <https://coast.noaa.gov/slr/> (last accessed Mar. 28, 2024).

elevation and/or extent of the 0.2 percent annual chance floodplain is not available, the FFRMS floodplain is 3 feet of freeboard above the BFE. To clarify, the FVA relies on the 1 percent annual chance floodplain but incorporates an additional measure of safety beyond the 1 percent annual chance floodplain. If available 0.2 percent annual chance floodplain data is not available, FEMA will utilize the appropriate FVA to determine the FFRMS floodplain and elevation.

As explained above, FEMA will initially rely on the FFRMS CISA State of the Science Report and the FFRMS Job Aid to implement the FFRMS. FEMA appreciates the desire to have maps depicting the FFRMS floodplain and is coordinating across the Federal government to develop additional tools beyond the FFRMS Job Aid to assist agencies and stakeholders in determining the appropriate vertical flood elevation and corresponding horizontal FFRMS floodplain. However, FEMA will initially rely on the FFRMS Job Aid methodology to determine the FFRMS floodplain. Given the agency made resources publicly available on this rulemaking docket to determine the FFRMS floodplain, FEMA does not believe delaying the FFRMS implementation is needed. Flood risk is not static and will evolve over time due to changing conditions. Particularly in the context of Federal grantmaking, FEMA does not believe it would be appropriate to delay FFRMS implementation pending a comprehensive FFRMS floodplain mapping of the United States. The decision to proceed in this matter is also consistent with FEMA's historical practice of using best available information in the 8-step process, which also resulted in some degree of uncertainty as part of the project planning and application process.

Comment: A commenter noted the key language of "best available" and "actionable" in the definition of the CISA as determining the reliability, usability, and overall credibility of the final floodplain identification. The commenter noted FEMA's consistent use of the terminology and the definitions found in Appendix H of the Revised Guidelines. The commenter agreed with the terminology but recommended the inclusion of granularity, stating that climate-informed flood risk granular data is property-specific data. The commenter stated granular data has three significant characteristics: structure specific identifications, first floor height assessments, and high-resolution digital elevation model (DEM) data. To reliably

assess future flood risk, the commenter stated FEMA must be able to both identify the property itself and the specific structure(s) on that property that require separate assessments. The commenter wrote that the identification requires geospatial data that can reliably assess the geographical boundaries of a property and its structure(s), and without this, risk assessments would not reflect the true risk to the structure. The commenter went on to explain how these assessments involved models based on underlying data inputs that reliably determine the first floor height elevation relative to sea level and ground level and require the use of DEM. The commenter stated the key to reliability is the use of high-resolution DEM, the level of granularity necessary to permit reliable assessment of first floor height elevation and related footprint data. The commenter recommended FEMA advocate for the addition of "granular" as a necessary characteristic for "best available, actionable science."

The same commenter stated that FEMA's flexible approach would likely facilitate the uptake of critical forward-looking climate and flood assessment methodologies and where those techniques and solutions needed time to develop, still accurately account for flood risk through proven approaches. The commenter stated that while a forward looking, climate-informed approach would be the best framework for understanding flood and other natural hazard risk in the future, not every community, builder, or developer is currently equipped to understand and account for that risk. As building the knowledge base would take time, the commenter recommended use of the waterfall approach proposed by FEMA's policy allowing the FFRMS floodplain to be determined using the FVA or 0.2PFA. The commenter encouraged FEMA to depict the 0.2 percent annual chance floodplain on maps consistent with the requirements of the Biggert Waters Flood Insurance Reform Act of 2012 (BW-12).

FEMA Response: FEMA appreciates the commenter's emphasis on the importance of best available, actionable science to the CISA. FEMA agrees that a determination of the location of an action and site-specific details of the action that are needed for the floodplain determination and minimization of impacts requires a variety of granular data. However, all of the science and data used to define the floodplain does not necessarily need to be granular to be actionable. For example, regional sea level rise data is considered actionable best available science in the FFRMS

CISA State of the Science Report but would not satisfy the definition of granular data provided by the commenter. FEMA will continue to use granular data, where appropriate, such as detailed digital elevation models to determine floodplain extents and first floor elevations for structures that are part of Federal actions. FEMA will further consider the commenter's request to incorporate granularity through the use of structure-specific identifications, first floor height assessments, and high-resolution digital elevation model (DEM) data as part of the agency's role in the IWG.

FEMA agrees with the commenter that, given that the best available data is not available and/or actionable in all locations, both FVA and 0.2PFA should be leveraged to determine the FFRMS floodplain. FEMA also agrees it is important to depict the 0.2 percent annual chance floodplain on community maps consistent with the requirements of BW-12.

Comment: A commenter asked whether the approaches in the FFRMS policy should be used to develop FIRMs or FIS. The commenter stated the methods listed to develop the floodplain should only apply to those actions listed in the Applicability section of the FFRMS policy.

FEMA Response: The approaches listed in section C of FEMA's FFRMS policy document for determining the FFRMS floodplain are not used to develop FIRMs or FIS. FIRMs and FIS are a starting point for the floodplain determination under the 8-step process. The approaches listed in section C of the policy are only applicable to the actions detailed in the applicability section of FEMA's FFRMS policy.

Comment: Two commenters stated that FEMA's 2016 proposed rule indicated the use of CISA was not appropriate and stated FEMA's current reliance on CISA was unsubstantiated. The commenters noted an article that expressed concerns with climate science²⁰¹ and cited statements in the FFRMS CISA State of the Science Report as evidence that attempts to apply the CISA to set flood risk management standards would be subjective. Both commenters requested transparency and adherence to the principles of replicability and independent peer review if FEMA utilizes the CISA. One of the commenters stated FEMA must adhere to a specific set of criteria to clarify the

²⁰¹ See Jesse M. Kennan, "A climate intelligence arms race in financial markets," *Science* 365 (6459), pp. 1240-1243, abstract available at <https://www.science.org/doi/10.1126/science.aay8442> (last accessed Mar. 21, 2024).

standard and that there must be metrics. The commenters stated that the other approaches provided numerical targets that define what success shall be. Both commenters stated that if FEMA could not provide decision criteria to be applied in the CISA approach, the agency should eliminate it as a standard.

FEMA Response: Since the introduction of the CISA in 2015, additional data has become available to better inform CISA. The FFRMS CISA State of the Science Report provides a recommendation on available and actionable CISA data.²⁰² Many of the concerns expressed by the commenters are further addressed in that report and explain why the CISA data is not actionable in all locations. FEMA disagrees with the commenters' suggestion that certain statements in the FFRMS CISA State of the Science Report regarding multiple scenarios and hybrid approaches that could be used to determine the CISA serve as evidence that the CISA is too subjective. The CISA guidance in Appendix H of the Revised Guidelines and the FFRMS CISA State of the Science Report provide broad guidance for where the CISA might be available and actionable with sufficient expertise, local data, and project-specific analysis. However, FEMA prioritized the type and criticality of the action involved, the availability and actionability of the data, and equity concerns, and determined that applying the CISA through complex expert project-specific modeling was not appropriate for FEMA given the agency's role in helping people recover from disasters in an expedited manner and to reduce the subjectivity concerns of the commenters stated above. FEMA instead decided to use consensus interagency approaches that were readily accessible and do not require

²⁰² The FFRMS CISA State of the Science Report identifies the latest interagency Federal guidance for regionally-based SLR projections as available and actionable by recommending that all agencies should use these data as part of a CISA approach. At pg. 22, the Report states "Federal agencies should apply this latest interagency Federal guidance for regionally-based SLR projections. Scenarios and time horizons should use a consistent national approach based on risk tolerance and criticality." However, the Report also warns against using the simplified approach with SLR in areas subject to runup and overtopping on pg. 28 "Notably, areas subject to runup and overtopping can be very sensitive to changes in water level (including due to SLR) and the variability of the slope—so within a CISA implementation, these areas should be treated with appropriate analysis and not simple linear addition of flooding components." Based on these guidelines, the FFRMS Job Aid establishes the use of simplified CISA in specific areas, namely in some coastal environments, specifically along low-lying coastal shorelines on the Atlantic and Gulf Coasts. See FFRMS Job Aid, pg. 10.

project specific CISA modeling found in the FFRMS Job Aid.

The FFRMS Job Aid details the underlying methodology used to determine the FFRMS floodplain, including using the CISA, and FEMA believes that resource provides sufficient transparency and replicability to stakeholders and the public. FEMA will initially use the FFRMS Job Aid to make the FFRMS floodplain determination. FEMA is coordinating across the federal government to develop additional tools beyond the FFRMS Job Aid to assist agencies and stakeholders in determining the appropriate vertical flood elevation and corresponding horizontal FFRMS floodplain.

FEMA does not believe that the use of CISA results in uncertainty in the 8-step process. The FFRMS Job Aid details the underlying methodology used to determine the FFRMS floodplain, including using the CISA, and FEMA believes that resource provides sufficient transparency and replicability to stakeholders and the public. The FFRMS CISA State of the Science Report, upon which the FFRMS Job Aid is based, was reviewed by subject-matter experts across the members of the Flood Resilience IWG, including staff from NOAA's National Weather Service, the USGS's Water Resources Mission Area and Coastal/Marine Hazards and Resources Program, FEMA's National Flood Hazard Mapping Program, and other members of the FFRMS Science Subgroup.²⁰³

FEMA agrees with one of the commenters that the FVA and 0.2PFA provide some additional clarity to stakeholders because the 1 percent annual chance and 0.2 annual chance floodplains are more commonly used and depicted on FEMA regulatory and non-regulatory mapping products. FEMA's FFRMS policy provides for the use of these approaches where the CISA data is not available or not actionable. However, FEMA does not believe that the CISA must be eliminated simply because the FVA and 0.2PFA are more commonly understood. The FFRMS CISA State of the Science Report and the FFRMS Job Aid are resources the public can use to better understand the CISA and how FEMA will implement it. These resources provide the requisite decision criteria for how the CISA will be determined by FEMA in the initial FFRMS implementation. FEMA will provide additional resources and technical assistance to SLTTs and the public regarding the FFRMS floodplain

²⁰³ See FFRMS CISA State of the Science Report at i.

determination as part of the FFRMS implementation to help further educate stakeholders.

3. Use of State and/or Local CISA Data

Several commenters requested FEMA consider local CISA data in making the CISA floodplain determination.

Comments: Some commenters requested the use of specific State and/or local data. One commenter stated the use of locally available CISA data and methods would provide opportunities for underserved communities to provide critical local input. One commenter recommended FEMA develop a framework for evaluating whether local CISA data is technically credible and appropriate. One commenter stated if State, Tribal, territorial, or local data resulted in CISA-based elevation standards that met or exceeded standards developed using Federal data, then FEMA should apply the higher, locally available standards, if reasonable. The commenter stated Federal data should act as a floor for CISA calculation under the FFRMS.

Another commenter stated FEMA should accept local data where it is accurate and sufficiently protective to maximize the effectiveness of the rule. The same commenter requested FEMA consider the potential inequities in access to CISA. Another commenter recommended FEMA develop a framework for evaluating whether local CISA data is technically credible and appropriate.

In addition to requesting FEMA accept local CISA data, one commenter sought additional details on the FEMA FFRMS CISA data development to avoid developing duplicative or conflicting data. The commenter stated FEMA's Federal floodplain management tools (*i.e.*, FIS and FIRMs) are used for applications beyond their originally intended purpose, including comprehensive planning and resilience planning. The commenter encouraged FEMA to consider how its CISA FFRMS data and tools could be used for comprehensive flood risk planning at multiple levels of government when developing the products. The commenter also encouraged FEMA to coordinate with stakeholders when developing its CISA data and methods. Two commenters agreed that FEMA should further engage with stakeholders regarding CISA data and methods.

FEMA Response: FEMA agrees with the commenter that Federal data should act as a floor for the CISA calculations under the FFRMS. SLTTs can provide input into the determination. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be

used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard.

FEMA notes the FFRMS Job Aid is a resource to help Federal agencies and their non-Federal partners (including potential federal financial aid recipients) conduct a screening to determine if a proposed federally funded action will be located within an FFRMS floodplain, based on the CISA, FVA, or 0.2PFA, in accordance with Sec. 2(a)(1) of Executive Order 11988, as amended. FEMA will continue to collaborate across the Federal government to develop tools to facilitate the implementation of CISA.

Regarding the framework for accepting local CISA data, FEMA will continue to rely on 44 CFR 9.7, FEMA Policy 104-008-2: Guidance on the Use of Available Flood Hazard Information,²⁰⁴ and the Revised Guidelines in determining whether CISA and flood hazard data is available and actionable. FEMA is coordinating across the federal government to develop additional tools to assist agencies and stakeholders in determining the appropriate vertical flood elevation and corresponding horizontal FFRMS floodplain.

FEMA's policy approach considers situations where CISA data is not available. Specifically, the policy approach detailed in the FFRMS Policy provides for the use of the FVA or 0.2PFA depending on the criticality of the action and data availability. FEMA believes the agency's policy approach will reduce concerns with underbuilding or overbuilding and thus provide a more cost-effective, equitable approach.

As previously explained, FEMA is relying on interagency processes to select and evaluate the data and methods used. Appendix H of the Revised Guidelines²⁰⁵ provides an overview of the available and actionable data for CISA, which is the basis for these interagency supporting tools. The FFRMS CISA State of the Science Report²⁰⁶ provides a review and update

²⁰⁴ Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Jan. 24, 2024).

²⁰⁵ Available at https://www.fema.gov/sites/default/files/documents/fema_implementing-guidelines-EO11988-13690_10082015.pdf (last accessed Jan. 24, 2024).

²⁰⁶ See https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Dec. 14, 20 last

of the best-available, actionable science that can support application of the Climate-Informed Science Approach (CISA), reflecting science and technology advancements made since Executive Order 13690 was issued in 2015.²⁰⁷ FEMA will rely on these and future interagency publications for CISA data. The Revised Guidelines also provide an explanation of how the FFRMS will be updated in the future.

FEMA appreciates the importance of comprehensive flood risk planning and is developing additional resources for communities and the public to better understand their current and future flood risks. For example, FEMA's Future of Flood Risk Data (FFRD) initiative will provide a more comprehensive picture of the country's flood hazards and risks by leveraging new technologies to include more efficient, accurate, and consistent flood risk information across the nation.²⁰⁸ These resources can be used by communities for planning purposes. FEMA will continue to engage with SLTTs and the public on the development and enhancement of flood risk resources, including FFRMS implementation resources for the CISA, FVA, and 0.2PFA.

Comment: One commenter requested FEMA provide training resources to help local communities, practitioners, and property owners understand the impact of the rule.

FEMA Response: FEMA values additional input from SLTT partners and the public in the 8-step process. FEMA will provide additional resources to SLTTs and the public as part of the FFRMS implementation, and FEMA's regional offices will provide technical assistance to applicants for FEMA programs.

4. Other Data Concerns

Comment: One commenter stated concerns with the language in proposed § 9.7(b)(1), which stated that FEMA shall obtain enough information so that it can fulfill the requirements in part 9 to (i) avoid Federal action in floodplain and wetland locations unless they are the only practicable alternatives and (ii) Minimize harm to and within floodplains and wetlands). The commenter stated that the language was too vague to have any meaning, as "enough information" did not inform the agency or the public of the requirement. The commenter

accessed Jan. 24, 2024²³) and also posted to the public docket with this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

²⁰⁷ 80 FR 6425 (Feb. 4, 2015).

²⁰⁸ See <https://www.fema.gov/fact-sheet/future-flood-risk-data-ffrd> (last accessed Mar. 26, 2024).

recommended some identifiable minimum standard be provided.

FEMA Response: FEMA disagrees that the proposed language is unduly vague. In context, paragraph (b) provides that FEMA will make the determination as part of the 8-step process and provides a list of the types of information FEMA will use to make this determination including the current and future flooding characteristics detailed in paragraph (b)(3). Not all of this information is required, as the information needed to make the floodplain or wetland determination is action-specific and subject to data availability.

Comment: One commenter stated costs would increase for engineering and planning around Federally funded projects when implementing FFRMS, particularly in areas where the 0.2 percent floodplain is not currently mapped.

FEMA Response: FEMA appreciates the commenter's concerns regarding costs but disagrees that engineering and planning costs will necessarily increase for actions subject to the FFRMS and particularly for those in areas where the 0.2 percent annual chance floodplain is not currently mapped. FEMA will initially implement the FFRMS using the FFRMS Job Aid to determine the FFRMS floodplain and stakeholders can also leverage this tool to determine the CISA, FVA, and 0.2PFA where such data is available. As FEMA's FFRMS policy states, where the CISA data is not actionable and not available and information about the elevation and/or extent of the 0.2 percent annual chance floodplain is also not available, the FFRMS floodplain is the FVA. By considering data availability in the FFRMS floodplain determination and providing resources to help stakeholders understand the FFRMS floodplain determination, FEMA believes the commenter's concerns are addressed.

Further, FEMA considered the costs and benefits associated with this rule, including the overall increased costs of FEMA projects, in the regulatory impact analysis provided on the docket.²⁰⁹ FEMA believes that the benefits of preventing property damage, protecting Federal investments, and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from

²⁰⁹ See <https://www.regulations.gov/document/FEMA-2023-0026-0013>.

flood damage, and that the natural and beneficial values of floodplains are preserved. FEMA notes any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

FEMA's Regulatory Mapping Products

Comments: Some commenters requested clarification on the use of current FEMA regulatory products in the FFRMS floodplain determination. Commenters provided input asking FEMA to improve those maps for the FFRMS floodplain determination and other purposes. One commenter requested FEMA update the agency's floodplain mapping techniques and incorporate future risk into the mapping. The commenter recommended FEMA incorporate the recommendations by the TMAC for significant changes to FEMA's floodplain mapping techniques. The commenter requested all agencies collaborate and align around definitions for floodplain mapping and share expertise to develop CISA floodplain definition methods that are consistent with one another. Such consistency would be easier and assist applicants in adhering to agency regulations. The commenter further recommended the MitFLG work toward common definitions and delineation of floodplains to enable better interagency collaboration and coordination on issues related to flood risk reduction. The commenter also stated the need to improve and update FEMA's regulatory mapping products, indicating these products were essential for community-level planning, yielding enhanced resilience. The commenter stated flood maps were essential underpinning to drive wise land use decisions, including where not to develop and where to conserve lands that might aid in flood risk reduction.

Another commenter stated the FFRMS did not consider FIRM effective dates in communities where FIRMs are currently being updated and requested clarification for applying the CISA to those communities or applicable use of effective flood maps. One commenter noted FEMA's policy approach to leverage the 0.2PFA or FVA where CISA data is not available and not actionable and stated that approach was not without challenges given FEMA's regulatory and other mapping products used in the analysis of those approaches were outdated and likely to remain so for the foreseeable future.

A commenter recommended Federal agencies continue relying on FEMA flood risk data and tools for future implementation of a climate-informed

floodplain. The commenter noted FEMA's investment on flood engineering studies and flood mapping over the past half century and that States and localities nationwide adopted FEMA flood map data for flood mitigation, community development, and many other purposes. The commenter stated that abandoning current Federal efforts on flood mapping and adopting an alternative flood map dataset would waste Federal investments on flood engineering studies and flood inundation mapping. Another commenter stated FEMA would have the primary responsibility to prepare the data to support the CISA through its existing mapping activities. The commenter noted other FEMA mapping priorities through the agency's RiskMAP program and encouraged FEMA to secure and allocate sufficient resources and fully utilize the Cooperating Technical Partners program to support the CISA and related mapping activities.

FEMA Response: FEMA appreciates the commenters' interest in the agency's flood risk mapping efforts. FEMA is considering the TMAC recommendations associated with future flood conditions mapping and intends to incorporate future flood conditions into mapping products as practicable.²¹⁰ FEMA's interagency consultative role in the broader implementation of the FFRMS across the Federal government, through the agency's participation in the IWG and the FIFM-TF helps ensure consistent and effective implementation. FEMA will continue to work in an interagency manner in conjunction with the Water Resources Council, the MitFLG, and the FIFM-TF to develop tools to facilitate the implementation of CISA. FEMA agrees that the agency's regulatory mapping products support community-level planning that enhances resilience and help drive wise land use decisions.

FEMA understand other commenters' concerns regarding FIRM effective dates and the age of FIRMs in some communities that may no longer reflect current flood risk. FEMA plans to continue updating regulatory mapping products to help address the commenter's concerns regarding stale maps. However, floodplain determinations under part 9 are not solely predicated on existing FIRMs and commenters' concerns about potential challenges with the FVA and 0.2PFA based on the age of existing FIRMs is

²¹⁰ See TMAC 2021 Annual Report, Chapter 3 Future Conditions available at https://www.fema.gov/sites/default/files/documents/fema_2021-technical-mapping-advisory-annual-report.pdf (last accessed Apr. 1, 2024).

thus unwarranted. As explained in the NPRM, FEMA will use best available information which may include information that is non-regulatory or FEMA preliminary flood hazard data. To be designated as the best available information, it must be at least as restrictive as information provided by effective FIRMs. Given the best available information policy FEMA adopted,²¹¹ the agency will be continuously improving the data associated with the floodplain determination. FEMA notes pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used in lieu of the FFRMS. Communities can leverage their own data, including the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard. FEMA believes these flexibilities address the second commenter's concerns to ensure the best available flood risk information is being considered in the 8-step analysis.

FEMA notes that, as explained above, the agency is not abandoning current efforts on flood mapping but rather is continuing to update regulatory maps. FEMA is not adopting an alternative flood map dataset as part of this rulemaking. Regulatory mapping products are part of the NFIP's regulatory process and not impacted by this rulemaking. The agency's investments in regulatory mapping products are not being wasted by this effort and will continue in support of the NFIP's regulatory process, as well as to inform the public on flood risk. FEMA further appreciates the commenter's concern regarding sufficient resources and will continue to utilize the Cooperating Technical Partners program to support the agency's mapping efforts.

Comment: A commenter wrote their support for modernizing the data and approaches used to understand and anticipate flood risks, stating the use of best available data, technology, and modeling would yield better baseline data to account for climate-induced increases in precipitation and inundation. The commenter noted that data from FIRMs in some areas can be 40 years old. The commenter noted that FEMA predicted more accurate maps would expand the floodplain but stated adjustments were needed to ensure the expanded mapping does not further hinder Federal, State, and local efforts

²¹¹ FEMA Policy 104-0008-2: Guidance on the use of available flood hazard information, available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Mar. 27, 2024).

to restore natural and beneficial floodplain functions.

FEMA Response: FEMA does not anticipate that more accurate mapping of current flood risks will necessarily expand the floodplain. FEMA's experience when revising existing regulatory floodplains is that the overall floodplain area does not generally increase, as more accurate maps can also mean areas are no longer designated as being within the floodplain. While revised maps reflect updated data on inland hydrology, coastal storms, and sea levels, they focus on current conditions and do not include projections of future changes. FEMA does anticipate the FFRMS, when implemented, will generally expand the floodplain area for actions subject to the FFRMS under part 9. FEMA agrees with the commenter that leveraging the best available information in making the floodplain determination can assist in accounting for climate-induced increases in precipitation and inundation. As explained above, FEMA plans to continue updating regulatory mapping products to address the commenter's concerns with dated data; however, floodplain determinations under part 9 are not solely predicated on existing FIRMs. FEMA will use best available information which may include information that is non-regulatory or FEMA preliminary flood hazard data. To be designated as the best available information, it must be at least as restrictive as information provided by effective FIRMs. FEMA does not believe implementation of the FFRMS will hinder restoration of natural and beneficial floodplain functions. Rather, it is also the policy of FEMA to restore and preserve the natural and beneficial values served by floodplains in part 9.

Comment: One commenter requested clarification on how allowing the use of other data beyond the data found in FIRMs or FIS would affect the CLOMR, LOMR, No Adverse Effect, No Rise processes.

FEMA Response: This rulemaking does not have any impact on the current CLOMR, LOMR, or no rise processes. FEMA does not have a no adverse effect process.

Interagency Tools

Comments: Some commenters requested additional information regarding the interagency tools FEMA will utilize to depict the FFRMS floodplain. A commenter wrote in support of developing a decision support tool to facilitate the implementation of the FFRMS, requesting the tool be narrowly focused,

integrating and avoiding duplication of existing Federal tools and data portals. The commenter also requested the tool incorporate local data wherever possible and that FEMA use the tool to highlight data gaps preventing the wider use of CISA to encourage development of such data in those areas. Another commenter wrote requesting FEMA work closely with NOAA, the White House Office of Science and Technology Policy, and other appropriate departments to ensure that States, communities, and the public can readily access information about what data sources meet the criteria for climate-informed science and are considered current and credible at a point in time. Two commenters noted appreciation for FEMA's work with the Flood Resilience IWG on developing an online mapping tool to assist in determining the FFRMS floodplain, including the CISA and requested prioritizing these efforts.

FEMA Response: FEMA appreciates the commenters' support of the agency's interagency collaboration and is continuing to work with IWG to support the FFRMS and CISA implementation. FEMA also appreciates the commenters' statements on developing additional tools to support the FFRMS implementation across the Federal government. FEMA agrees with the commenter that a tool to facilitate FFRMS implementation is an important component to the success of the FFRMS, and the agency published on the public docket with this rulemaking the FFRMS Job Aid as an initial resource. FEMA anticipates leveraging the FFRMS Job Aid for determining the FFRMS floodplain when the final rule is implemented. FEMA will continue to collaborate across the Federal government to develop tools to facilitate the implementation of CISA and the FFRMS. The IWG recently released a beta version of the Federal Flood Standard Support Tool (FFSST), a novel interactive, map-based tool that incorporates new data to help users identify if a Federally funded project is in the FFRMS floodplain, for comment.²¹² FEMA will also continue to rely on 44 CFR 9.7, FEMA Policy 104-008-2: Guidance on the Use of Available Flood Hazard Information,²¹³ and the Revised Guidelines in determining whether CISA and flood hazard data is available and actionable.

²¹² 89 FR 25674 (Apr. 11, 2024).

²¹³ Available at https://www.fema.gov/sites/default/files/2020-04/Available_Flood_Hazard_Information_Policy_104-008-2.pdf (last accessed Jan. 24, 2024).

Flooding Characteristics

Comment: One commenter requested FEMA retain the requirement that Regional Administrators identify additional flooding characteristics in the locations of proposed actions. The commenter noted FEMA's changes in 44 CFR 9.7(b)(3) from "shall" to "may" identify such flooding characteristics, "as appropriate" and requested "shall" be retained, as the flooding characteristics identified included important factors to consider when minimizing harm to floodplains and wetlands. The commenter stated there was no adequate rationale for allowing the Regional Administrator to ignore any or all of the flooding characteristics. The commenter also requested FEMA include "evacuation and migration corridors for wildlife, including threatened and endangered wildlife" in the list of flooding characteristics.

FEMA Response: FEMA appreciates the commenter's concerns but does not believe this language change is a change impacting how FEMA will review the flooding characteristics. Rather, the edit from "shall" to "may" is a clarifying edit. As explained in the preamble to the NPRM, the term "shall" suggests a mandatory requirement for the Regional Administrator to identify all of the additional flooding characteristics listed, yet the current qualifying "as appropriate" language suggests the identification was not mandatory. FEMA's current practices do not mandate a review of each of the flooding characteristics but rather only those that are appropriate. FEMA updated this language to reflect the Regional Administrator's discretion in identifying the appropriate flooding characteristics consistent with current practices.

FEMA also appreciates the importance of wildlife and the commenter's concerns about their habitats and evacuation and migration corridors; however, wildlife concerns are currently part of the flooding characteristics considered when determining the floodplain. The definition of "natural and beneficial values of floodplains and wetlands" addresses wildlife considerations, and FEMA does not believe the additional language proposed by the commenter is required to ensure this analysis.

Comment: Another commenter requested FEMA give local communities a voice in the method used to determine the appropriate vertical flood elevation stating Federal agencies may not be familiar with the local conditions. The commenter gave an example of areas with flash floods requiring an appropriately short rainfall interval be

evaluated to avoid missing the storm peak.

FEMA Response: FEMA has and will continue to consider flooding characteristics such as those listed by the commenter consistent with § 9.7. FEMA notes that communities provide input into the floodplain determination for part 9 and the agency coordinates with applicants and State and local officials as appropriate throughout the 8-step process. As explained above, pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard. Projects subject to the FFRMS will continue to be designed to meet local needs as appropriate.

Best Available Information

Comment: Four commenters requested FEMA recognize the value of Indigenous Knowledge and Tribal resources in the 8-step process. One commenter supported the proposed range of data sources to ensure FEMA relies on the best available information when determining flood risk but requested FEMA incorporate Indigenous Knowledge when considering best available information for determining flood risk. The commenter noted the Biden Administration's guidance to Federal agencies to increase reliance on Indigenous Knowledge to inform Federal decision-making and recommended FEMA incorporate the use of such information in the final rule. Specifically, the commenter requested FEMA revise § 9.7(c)(3)(ix) to read "State, Regional, and Tribal Agencies or governing bodies," add a new § 9.7(c)(3)(xi) to identify Indigenous Knowledge as another source of high-quality information and seek opportunities for engagement and promotion of best practices to include Indigenous Knowledge in FEMA decision making. A second commenter provided similar feedback, supporting the expanded inclusion of diverse data sources and requesting FEMA integrate Indigenous Knowledge into the final rule while also continuing to collaborate with Tribal Nations and Indigenous Peoples to incorporate Indigenous Knowledge into FEMA policies. A third commenter supportive of incorporating Indigenous Knowledge into the 8-step process recommended the final rule direct FEMA to seek input from local Indigenous communities when developing alternatives to an action and assessing impacts. This commenter noted that these communities may have

unique, proven methods for reducing flood risk and incorporating this knowledge would recognize Indigenous connections to the land and help produce better-informed decisions.

Another commenter requested FEMA align with States and Tribes on data practices. Consistent with other commenters above, this commenter requested FEMA consider State, Tribal, territorial, or local CISA-based elevation standards data that met or exceeded standards developed using Federal data. The commenter stated FEMA should apply the higher, locally-available standards if reasonable. The commenter provided an example of State SLR guidance using State data, requesting that FEMA allow us of this data so long as it met or exceeded the Federal data. The commenter stated that Federal data should act as a floor for CISA calculation under the FFRMS and that if reasonable, locally available data meets or exceeds the floor set by Federal data, then it should be accepted for implementation consistent with FEMA's proposed approach to leverage the best available data to inform flood risk. The commenter noted the incorporation of local data and methods can provide opportunities to achieve higher resolution data and in-depth understanding of contextual climate impacts. The commenter requested FEMA encourage intergovernmental and interstate collaboration to share and improve best practices for underlying local data collection, including agency guidance on expanding locally available data.

FEMA Response: As one commenter stated, President Biden issued Federal government-wide guidance on recognizing and including Indigenous Knowledge in Federal research, policy, and decision making.²¹⁴ FEMA agrees with the commenters on the importance of Indigenous Knowledge in the 8-step process. FEMA agrees with the commenter to ensure Tribes are specifically incorporated into § 9.7(c)(3)(ix) and is updating this final rule to state, "Agencies of State, Regional, and Indian Tribal Governments." This edit will ensure consideration of Indian Tribal government data in the floodplain determination. FEMA believes the current language in § 9.7(c)(3)(x) regarding local sources covers those Tribes that are not considered to be an

²¹⁴ See "Implementation of Guidance for Federal Departments and Agencies on Indigenous Knowledge," Nov. 30, 2022, found at <https://www.whitehouse.gov/ceq/news-updates/2022/12/01/white-house-releases-first-of-a-kind-indigenous-knowledge-guidance-for-federal-agencies/> (last accessed Jan. 24, 2024).

Indian Tribal government under 42 U.S.C. 5122(6).

FEMA supports the inclusion of Tribal and Indigenous knowledge into the FFRMS process. As requested by the second commenter, FEMA is integrating Indigenous Knowledge into the FFRMS policy accompanying this rule. The agency will collaborate with Tribal Nations and Indigenous Peoples to incorporate Indigenous Knowledge into FEMA policies consistent with the guidance referenced above. FEMA further agrees with the third commenter that local Indigenous communities may have methods for reducing flood risk that recognize Indigenous connections to the land and help produce better-informed decisions. To ensure input from local communities, FEMA follows the process for early and final public notices in the 8-step process. See §§ 9.8(c)(4) and 9.12. The current regulatory text incorporates notice to Tribes when effects may occur on Tribal lands in the early public notice process. See § 9.8(c)(4)(ii). The final public notice includes notification to any entity that received early public notice. See § 9.12(a). These notifications give Tribal communities the ability to provide input on alternatives and impacts in the 8-step process. This ensures consideration of Tribal and Indigenous Peoples throughout the 8-step process.

Finally, FEMA agrees with the fourth commenter that Federal data should act as a floor for CISA calculations under the FFRMS. FEMA will apply higher, locally available standards consistent with § 9.11(d)(6) that requires a more restrictive Federal, State, or local standard be used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard. FEMA agrees with the commenter that locally available data can provide valuable input into the area's climate impacts and will leverage those higher standards adopted by communities. FEMA values additional input from SLTT partners and the public in the 8-step process and will continue to engage by providing additional resources and technical assistance as the FFRMS is implemented.

Comment: One commenter requested FEMA include examples of "other sources" in § 9.7(c)(iii).

FEMA Response: FEMA provides a list of other sources in § 9.7(c)(3)(i)-(x) of this final rule. As explained above, the agency will provide additional resources and technical assistance to

SLTTs and the public as part of the FFRMS implementation.

Other Data Concerns

Comment: One commenter requested FEMA provide additional guidance on how to identify the appropriate lifecycle for a proposed action that uses CISA to determine the FFRMS floodplain. The commenter noted that FEMA used a default 50-year lifecycle analysis (in the regulatory impact analysis) and stated that would not be appropriate for all actions. The commenter requested FEMA provide information on how the 50-year lifecycle timeline was determined, as well as guidelines on how to determine the appropriate lifecycle on a case-by-case basis.

FEMA Response: FEMA's regulatory impact analysis was based on a report defaulting to a 50-year lifecycle, but FEMA intends to determine the appropriate service life on a case-by-case basis for each action. The FFRMS Job Aid provides additional information on service life and how FEMA will make those individual determinations.²¹⁵

J. FFRMS Implementation

FEMA received several comments regarding implementation of the FFRMS. Commenters raised general process concerns with compliance with and enforcement of the FFRMS, and costs and delays with implementing the FFRMS. Commenters also inquired as to how FEMA would coordinate with other Federal agencies when implementing the FFRMS, how FEMA would effectively complete outreach to ensure effective implementation of the FFRMS, and how FEMA would resolve environmental justice concerns.

1. Generally

Comment: A commenter stated raising individual properties or a group of properties could not be done without considering potential for impounding water on neighboring properties and roadways. The commenter recommended a holistic approach with local land use agencies, municipalities, and DOTs that identify the best path forward for a roadway corridor.

FEMA Response: FEMA appreciates the commenter's concerns regarding the impact of elevation on neighboring properties and roadways. FEMA takes a holistic approach through the 8-step process as the agency considers the impacts within or affecting floodplains and wetlands. FEMA applicants propose actions based on their needs and planning efforts to protect life and

property. Where FEMA provides funding for applicable actions, the FFRMS will help ensure resilience to structures and facilities against both current and future flood risks, including roadway corridors referenced by the commenter. Section G.2 of the FFRMS policy provides additional details on the application of the FFRMS resilience standard to facilities such as roadway corridors.

Comment: A commenter stated that FEMA's framework, while seeking to retain flexibility and be easily understood and consistently applied, would complicate understanding and implementation on the ground, as the framework created a confusing inundation of floodplain definitions—each of which could be used differently depending on the program and/or situation for which it is being used and/or applied.

This commenter noted the majority of structures and facilities impacted by the rulemaking were not residential in nature but stated concerns about implementation and difficulties of confusing and burdensome requirements. The commenter stated FEMA's proposed FFRMS floodplain definition and the vagueness of its depiction would generate countless unique floodplain definitions for programs. The commenter stated concern that once adopted and implemented for a very small number of Federally-funded residential projects, the Federal government would seek to expand the FFRMS applicability to all structures and that such a move would significantly impact housing affordability across the country.

The commenter noted the 1 percent annual exceedance probability (AEP) was set as the basis for the NFIP in the 1960s, and the 1 percent AEP was considered a fair balance between protecting the public and overly stringent regulation. The commenter stated that Executive Order 11988 has been historically and purposely tied to the 1 percent annual chance floodplain and that the Federal government had relied on the 1 percent annual chance floodplain when determining the extent of its authority and reach for most of its related programs, including the NFIP, FIRMs, and the mandatory flood insurance purchase requirements. The commenter stated this was no longer the case under the proposed rule.

The commenter stated that during the 1978 Guidelines drafting, concerns were raised about the need to provide a higher degree of protection for certain activities, and the 1978 Guidelines bifurcated the definition of floodplain for critical and non-critical actions. The

commenter noted that FEMA was taking a similar approach for the FFRMS floodplain per the Revised Guidelines, separating the definition further depending on the type of action and data availability. The commenter stated that unlike the revision made in the 1978 Guidelines where the 1 percent annual chance floodplain and the 0.2 percent annual chance floodplain were relatively well-known recurrence intervals and elevation levels that could be calculated, while the FFRMS floodplain is a "mystery." The commenter stated that with the FFRMS floodplain, the public would be faced with another set of regulatory definitions, creating inconsistencies and further confusing the various programs and their applicability and requirements. The commenter provided an example stating the higher flood risk standard for certain applications generated inconsistencies with the NFIP and the countless State and local regulations tied to the 1 percent annual chance floodplain. With what the commenter categorized as competing floodplain definitions, the commenter stated that Federal agencies, SLTTs, and the public would be left wondering which definition was the "real" definition—the climate-informed science definition, the freeboard definition, or the 0.2 annual chance floodplain definition. The commenter stated it would not always be clear which definition to follow under different circumstances and that while it may be beneficial for more people to understand their flood risk, the regulatory uncertainty and unpredictability of so many floodplain definitions would only multiply.

FEMA Response: FEMA disagrees that the framework to implement the FFRMS will create a confusing inundation of floodplain definitions—each of which could be used differently depending on the program and/or situation for which it is being used and/or applied. Consistent with current practice, FEMA will continue to make the floodplain determination as part of the action taken, reducing the burden on applicants in the process. As outlined in the FFRMS Policy, FFRMS requirements are consistent across FEMA's programs for those actions that are subject to the FFRMS. FEMA does not anticipate countless inconsistent floodplain determinations resulting from the implementation of this rulemaking for FEMA's programs as the appropriate floodplain definition is clearly outlined in the FFRMS Policy. FEMA notes that while other Federal agencies have their own implementing procedures for the

²¹⁵ See FFRMS Job Aid, pg. 14.

FFRMS, FEMA will coordinate with other agencies to avoid applying conflicting standards on the same action pursuant to Section H of the FFRMS policy.

FEMA agrees with the commenter that the majority of structures and facilities subject to FEMA's FFRMS implementation will not be residential in nature. FEMA does not believe the commenter's concerns are warranted regarding expansion of the FFRMS's applicability. As explained above, FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility" in this rulemaking, and the FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA's grant programs and does not extend to all structures. FEMA's final rule is clear that FFRMS is limited in applicability to those Federally-funded actions.

Rather than bolstering the arguments against utilizing the FFRMS, FEMA believes the commenter's statements regarding the 1 percent AEP demonstrate a need to update the agency's floodplain determinations under part 9 to meet changing conditions and better ensure Federal investments are protected from flood damage, and that the natural values of floodplains are preserved. More than 45 years have passed since Executive Order 11988 and flooding continues to increase²¹⁶ and impact Federal investments.²¹⁷ FEMA believes the updates made to part 9 in this final rule are an important step forward to improve resilience and better protect Federal investments from flood damage than the standards set over almost a half a century ago. FEMA disagrees with the commenter that the FFRMS approaches result in confusion for Federal agencies, SLTTs, or the public. The FFRMS Job Aid provides the methodology and process for FEMA to determine the FFRMS floodplain under each approach, and FEMA's FFRMS policy explains how each approach will be

²¹⁶ As a result of climate change, flood events are on the rise. Climate change is increasing flood risk through (1) more "extreme" rainfall events," caused by a warmer atmosphere holding more water vapor and changes in regional precipitation patterns; and (2) sea-level rise. See Rob Bailey, Claudio Saffioti, and Sumer Drall, Sunk Costs: The Socioeconomic Impacts of Flooding 3 and 8, Marsh McLennan (2021).

²¹⁷ Federal Budget Exposure to Climate Risk. OMB Assessment found https://www.whitehouse.gov/wp-content/uploads/2022/04/ap_21_climate_risk_fy2023.pdf (last accessed Jan. 24, 2024).

applied to specific actions based on the type and criticality of the action involved, the availability and actionability of data, and equity concerns. FEMA believes these resources provide sufficient clarity for implementation. To the extent stakeholders have questions after reviewing these resources, FEMA intends to provide SLTT partners and the public with additional resources to assist them in applying for FEMA-funded assistance programs.

FEMA further disagrees with the commenter that the agency's FFRMS policy approach is inconsistent with the NFIP minimum standards and other Federal, State, local, Tribal, and territorial standards. Rather, the FFRMS is generally a higher standard. Further, § 9.11(d)(6) of the final rule states a more restrictive Federal, State, or local floodplain management standard will be applied if higher than the FFRMS. FEMA believes the commenter's concerns regarding confusion between different floodplain approaches are unwarranted. The floodplain determination in part 9 has always been distinct from the NFIP minimum floodplain management standards. While FEMA understands that the FFRMS approaches provide additional optionality, the FFRMS policy helps clarify which approach is applicable to those actions subject to the FFRMS.

Comment: Another commenter stated the application of the FFRMS should be in progressive and adaptive fashion and requested additional guidance on how the FFRMS would be applied.

FEMA Response: As explained in § 9.5(a)(3), FEMA will apply the FFRMS only to new FEMA-funded actions involving new construction, substantial damage, or substantial improvement for which assistance is made available pursuant to declarations under the Stafford Act that are commenced on or after the effective date of the final rule, and new FEMA-funded actions involving new construction, substantial damage, or substantial improvement for which assistance is made available, pursuant to notices of funding opportunity that publish on or after the effective date of the final rule. Ongoing projects will not be impacted by this final rule.²¹⁸ FEMA will continue to

²¹⁸ Note that FEMA first partially implemented the FFRMS by policy with respect to covered projects in existing floodplains in its Public Assistance and Hazard Mitigation Assistance programs. See FEMA Policy 104-22-003, "Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim)," June 3, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implementation-ffrms-pa-interim.pdf (last accessed Jan. 24, 2024) and FEMA

analyze the effectiveness of the agency's FFRMS policy as part of the FFRMS implementation, and the policy will be reviewed, revised, extended, and/or rescinded within four years of the issue date.

Comment: The same commenter inquired as to how the final rule would impact the current way FEMA-regulated floodplains were handled during the NEPA process.

FEMA Response: FEMA's integrated reviews under E.O. 11988 and NEPA are unchanged by the final rule.

Compliance/Enforcement

Comments: Two commenters sought clarification on how FEMA would ensure compliance with the rule. One commenter stated the rule did not address how FEMA would ensure compliance and enforcement of the FFRMS. The commenter noted FEMA would monitor and evaluate the implementation of the FFRMS by Federal agencies and recipients of Federal funds but did not specify how FEMA would do so. The commenter asked FEMA to provide more information and procedures on what mechanisms FEMA would use to verify that Federal actions complied with the FFRMS, what consequences FEMA would impose for non-compliance, and how FEMA would handle disputes or appeals regarding compliance. Another commenter also stated the rule did not include monitoring, evaluating, or compliance.

FEMA Response: FEMA currently leverages the 8-step process detailed in 44 CFR part 9 as the mechanism to implement Executive Order 11988, as amended and will continue to use the 8-step process to monitor and verify compliance with the FFRMS. To monitor and evaluate the implementation of the FFRMS, FEMA will continue to rely on step 8 of the 8-step process. Step 8 of the process found at 44 CFR 9.6(b)(8) requires FEMA to review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in § 9.11 are fully implemented. Oversight responsibility is integrated into existing processes for each grant program. For each approved action, grant assistance is generally conditioned to follow the requirements determined

Policy 206-21-003-0001, "Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Program," Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024). Some current FEMA actions may be subject to these partial implementation policies; however, those actions would not be subject to this final rule or policy.

during the 8-step process. FEMA is not making changes to paragraph (b)(8) of § 9.6 in the final rule and will continue to use the current process to ensure compliance with the FFRMS. To address commenters' concerns regarding how the agency would address non-compliance, FEMA will rely on the provisions of 2 CFR part 200. 2 CFR 200.339 also allows FEMA to take action to remedy a recipient's noncompliance with federal requirements, including those required by 44 CFR part 9, such as imposing new conditions on the award or deobligating funding for the award if a recipient does not adhere to the requirements set forth during the part 9 review process. Disputes regarding compliance would follow the specific grant program's appeals process.²¹⁹

Costs and Delays

Comments: Some commenters had questions regarding the costs associated with FFRMS implementation and whether or not implementation would result in delaying actions subject to the FFRMS. Some of these commenters raised specific concerns about increased costs. One commenter stated there would be a significantly increased cost of compliance for Federally funded projects as a result of the rule and stated the Federal government should bear the full cost of FFRMS implementation. The commenter also asked whether the FFRMS would be adopted for FEMA funding only or for all Federal agencies and whether the FFRMS would apply to Federally funded projects that are focused on flood damage reduction projects. Another commenter stated the FFRMS implementation, through higher vertical elevation or floodproofing, or other mitigation mandates, could significantly alter and raise the cost of water resource projects and ongoing operations and maintenance for water resources infrastructure systems, which were paid for by the local taxpayers. The commenter asked how the FFRMS would interface with other Federal agencies and impact non-Federal sponsor responsibilities for projects. A third commenter stated concern for the increased costs of meeting heightened standards and recommended FEMA identify opportunities to expand the agency's grants and otherwise reduce local costs to help ensure the new resilience standard did not prevent projects from going forward.

Two commenters raised concerns regarding equity and costs. One

commenter stated the rule would increase the costs of Federally-funded projects and that while the higher standards would help decrease costs to the community and residents in the long term, the higher short-term costs could have the unintended effect of making needed projects infeasible, especially for communities of low-to middle-class incomes and taxbases. This commenter recommended FEMA work to increase funding to implement FFRMS through increasing grant funding cap ceilings, expanding funding opportunities, and lowering cost share requirements. Another commenter stated both the rule and FFRMS policy would potentially raise costs associated with Federal actions and implement ambiguous standards ill-suited to rural areas. The commenter stated the rule and FFRMS policy raised design standards for Federal actions, which would affect mitigation and public assistance projects for post-disaster recovery. The commenter stated the elevated design standards would increase project costs and these increased costs would be absorbed into applications and proposals for these projects. The commenter wrote that these projects already had limited available funding and were often prohibitively competitive for rural communities, creating an additional burden on these applicants.

FEMA Response: FEMA appreciates the commenters' concerns on the increased costs of projects and the commenter's requests to expand grant funding and grant funding caps, as well as lowering cost-share requirements. The cost of compliance with the FFRMS will be included in the total project costs and will be funded at each program's applicable cost-share. Some FEMA programs are capped in funding each year, thus, the additional costs of FFRMS requirements would not add to the total funding for these programs. The effects of the FFRMS requirements would be distributional within the existing funding caps and would not constitute new spending by FEMA. For disaster programs where funding is not capped, the application of the FFRMS will increase the total amount of funding provided under the program, and each project will be subject to the applicable cost-share. Cost-share requirements are determined consistent with specific grant program requirements.

As explained above, the FFRMS is only applicable to actions involving the use of Federal funds for new construction, substantial improvement or to address substantial damage to a structure or facility. This rulemaking is

applicable only to FEMA-funded projects for FEMA programs such as IA, PA, and HMA, and grants processed by FEMA's GPD. This includes some flood damage reduction projects.

FEMA has always incorporated social concerns and economic aspects into the 8-step process as part of the practicability analysis. FEMA's revisions to part 9 reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it.²²⁰ FEMA reviews all proposed FEMA-funded actions for potential disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process.

FEMA disagrees with the commenter's suggestion that the FFRMS is ill-suited to rural areas, as disasters impact all areas and flooding continues to increase across the United States, including in rural areas.²²¹ Rather, these areas can benefit from Federal investments that are more resilient to flooding. FEMA believes the FFRMS will ensure that Federal funding will result in more resilient rural communities, without overly burdening these communities as they seek to recover. While FEMA acknowledges some of the agency's grant programs have cost share requirements and that competition exists for FEMA funding, the agency has programs in place to assist rural and other disadvantaged communities.²²²

²²⁰ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

²²¹ Information on FEMA disaster and other declarations, see <https://www.fema.gov/disaster/declarations> (last accessed Mar. 27, 2024). For FEMA disaster and other declarations specific to the commenter, see https://www.fema.gov/disaster/declarations?field_dv2_declaration_date_value%5Bmin%5D=2019&field_dv2_declaration_date_value%5Bmax%5D=2024&field_dv2_declaration_type_value=All&field_dv2_incident_type_target_id_selective=All&field_dv2_state_territory_tribal_value%5B%5D=MT (last accessed Mar. 27, 2024).

²²² For example, see FEMA, Press Release, Biden-Harris Administration Announces Nearly \$2 Billion in Available Funding to Increase Climate Resilience Nationwide, <https://www.fema.gov/press-release/20231012/biden-harris-administration-announces-nearly-2-billion-available-funding> (last accessed Mar. 27, 2024) ("As part of the Administration's Justice40 initiative, the BRIC and FMA programs aim to deliver 40 percent of their overall benefits

²¹⁹ FEMA's appeals and arbitrations process for PA can be found at 44 CFR 206.206 and HMGP's appeals process can be found at 44 CFR 206.440.

Comment: Two commenters stated concerns with delays. One commenter stated concerns with project delays regarding FEMA making the final decision on the information the applicant would use and making the final decision on how permitting agencies were processing and permitting federal actions. Another commenter raised similar concerns regarding permitting, stating the proposed rule and policy would create separate permitting standards for some Federal and non-Federal actions, adding complexity that necessitated additional expertise when administering local floodplain programs and disproportionately impacting rural communities that already lacked sufficient staffing and funding to administer these programs. This commenter also stated the proposed rule and policy would also lengthen project timelines for Federal actions. The commenter stated that FEMA making the decisions on both the information the applicant is using and how permitting agencies would process and permit Federal actions. The commenter stated this would add time, documentation, and coordination between local communities, project proponents, stakeholders, and even FEMA, for critical mitigation projects and urgent post-disaster recovery efforts that required expedience. The commenter requested that FEMA minimize red tape and expense for communities seeking to implement projects, as the proposed rule adds bureaucracy and increases the resources required to successfully implement meaningful projects.

Another commenter raised concerns regarding both costs and delays, requesting further clarification on whether the FFRMS allowed for FEMA funding to cover expenses associated with making necessary improvements and enhancements to roadways, bridges, and culverts or if the funding was only for the in-kind replacement of

to disadvantaged communities that are marginalized, overburdened by pollution, and underserved. . . . FEMA is providing up to 90 percent federal cost share for FMA in disadvantaged communities, relative to a standard cost share of 75 percent. Designated Community Disaster Resilience Zones (CDRZs) are eligible for up to 90 percent federal cost share for BRIC, relative to a standard cost share of 75 percent. . . . FEMA continues to not require a Benefit-Cost Analysis as a condition to apply for an Economically Disadvantaged Rural Community, federally recognized tribal government, or a subapplicant with a hazard mitigation project within or primarily benefiting a Community Disaster Resilience Zone. FEMA will review the hazard mitigation project subapplications that are eligible for selection and may assist such communities with developing a BCA.”).

structures. The commenter stated additional funding should be considered for the delay in project delivery due to the application of the FFRMS.

FEMA Response: FEMA appreciates the commenters’ concerns regarding project delays and costs. FEMA notes the determination on the information the applicant is using under part 9 has always been made by the agency and thus, FEMA does not anticipate administrative delays with projects as a result of that aspect of FFRMS implementation. The time taken to complete the 8-step process will be project specific. Additional time, documentation, and coordination may be necessary for projects subject to the FFRMS (*i.e.*, actions that involve new construction, substantial damage, or substantial improvement as they are typically the most complex types of actions that FEMA funds). As part of the final rule, FEMA adjusted for inflation certain thresholds that determine which actions are exempt from, or subject to, an abbreviated 8-step process. FEMA will also establish a procedure for future annual adjustments of these thresholds. The thresholds enable FEMA to exempt or expedite the requirements of 44 CFR part 9 by streamlining the process for those actions that offer little opportunity for alternate locations or actions, or minimization, due to practicability. These changes may mitigate, as to smaller projects, timing concerns raised by the commenters.

Regarding permitting actions, FEMA will provide additional guidance for the public and SLTT partners identifying what the FFRMS is, and how the agency will implement the updates to part 9 to assist applicants for FEMA-funded assistance programs. FEMA’s regional offices will also provide technical assistance as part of the rule’s implementation. For those SLTT entities that may be permitting actions, as explained above, FEMA’s role under 44 CFR part 9 has not changed with this rule. The changes made in this final rule are to implement updates to Executive Order 11988, as amended, and to otherwise update the 8-step process. Changes related to the floodplain determination implementing the FFRMS will only be applicable to those actions subject to the FFRMS as defined in the rule. FEMA notes this final rule does not apply to a local community’s permitting processes under the NFIP’s floodplain management regulations. Those regulations are found at 44 CFR part 59 *et seq.*

FEMA understands the final commenter’s concerns regarding applicability of this rulemaking to

improvements and enhancements to roadways, bridges, and culverts, as well as in-kind replacement of structures. In each scenario presented by the commenter, FEMA’s funding is based on actual project costs for any FEMA-funded project. FEMA understands that any project may be delayed due to a variety of factors, and increased costs associated with those delays are generally part of the actual project costs. Additional costs incurred to comply with FFRMS would be eligible for FEMA funding.

Timing

Comment: Two commenters commented on the timing for implementing the rule. One commenter stated concern that the proposed changes could significantly restrict ongoing work. The commenter stated the proposed rule and policy did not identify when it would become effective, or how it would affect projects related to ongoing recovery efforts. The commenter requested the effective date be clarified and implemented so as to not disrupt ongoing recovery efforts. The other commenter requested FEMA consider “grandfathering” clause similar to the one provided in Executive Order 11988.

FEMA Response: FEMA is issuing this final rule with an effective date of September 9, 2024. As explained in § 9.5(a)(3), FEMA will apply the FFRMS only to new actions for which assistance is made available pursuant to declarations under the Stafford Act that are commenced on or after the effective date of the final rule, and new actions for which assistance is made available pursuant to notices of funding opportunity that publish on or after the effective date of the final rule. Ongoing projects will not be impacted by this final rule.²²³ FEMA does not believe a grandfathering clause is needed for this rulemaking.

²²³ Note that FEMA first partially implemented the FFRMS by policy with respect to covered projects in existing floodplains in its Public Assistance and Hazard Mitigation Assistance programs. See FEMA Policy 104–22–003, “Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim),” June 3, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implemetnation-ffrms-pa-interim.pdf (last accessed Jan. 24, 2024) and FEMA Policy 206–21–003–0001, “Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Program,” Dec. 7, 2022 found at https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf (last accessed Jan. 24, 2024). Some current FEMA actions may be subject to these partial implementation policies; however, those actions would not be subject to this final rule or policy.

Metrics

Comments: Two commenters requested FEMA develop metrics for the rule and policy implementation. One commenter stated that creating metrics was essential. The commenter noted that the proposed policy outlined objectives but lacked specific metrics to gauge progress towards achieving them. The commenter stated the absence of suitable metrics guaranteed a transition into subjective assessments, making it impossible to balance trade-offs among objectives. The commenter recommended that FEMA establish appropriate metrics to ensure objective evaluation and avoid subjective interpretations. The commenter requested that FEMA include measurable metrics in the policy statement, allowing for a quantifiable assessment of advancement toward achieving well-defined and substantiated objectives.

Another commenter agreed that the policy statement establishes objectives without setting metrics for measuring progress towards those objectives. The commenter wrote the proposal was unbalanced, as it was confined almost exclusively to restrictions on floodplain occupancy and use, with no policy objective promoting economic development or even economic development rationally constrained by other considerations. The commenter stated that it is difficult to understand how the proposed regulation would be useful given the proposal's narrow focus on constraints and restrictions. The commenter wrote that although FEMA stated that the FFRMS would promote resilience, the NPRM apparently reflected FEMA's perspective that economic development had no place in resilience. The commenter recommended that the proposal be modified to establish the objective of economic efficiency in floodplain use and occupancy, while giving appropriate weight to the constraints on efficiency and development already inherent in the policy statement. Similar to the other commenter, this commenter stated that the proposal should be modified to express the metrics that would be used in establishing quantifiable progress toward clear and supported objectives. The commenter wrote that failing to establish appropriate metrics assured the effort would devolve into subjective evaluations where trade-offs among objectives became impossible.

FEMA Response: FEMA understands the commenters' concerns regarding measuring the effectiveness of the rule and policy; however, the agency

disagrees that measurable metrics must be included in the regulation or policy to do so. FEMA disagrees that the absence of such metrics will result in subjective interpretations for the effectiveness of the rule and policy, as well as the FFRMS implementation for each action. FEMA's 8-step process and the results of the process are documented, and each applicant receives this information as part of the agency's compliance process.²²⁴ FEMA will evaluate the effectiveness of the rule and policy as part of the agency's role in the IWG to reassess the FFRMS.

FEMA disagrees with the commenter that the rule and policy do not consider economic development. Consistent with Executive Order 14030,²²⁵ the FFRMS will prioritize Federal investment and conduct prudent financial management of Federal government resources to mitigate climate-related financial risk, while accounting for and addressing equity considerations and economic impacts. For individual actions, FEMA identifies and evaluates practicable alternatives to carrying out a proposed action in floodplains or wetlands. In determining the practicability of the alternatives, social concerns and economic aspects are considered in § 9.9. These requirements ensure that FEMA's approach to floodplain use entails consideration of specific community needs.

Finally, FEMA disagrees with the commenter that the agency does not consider economic development, as the 8-step process requires a practicability analysis that considers factors including economic aspects. FEMA thus does not believe the agency needs to revise the FFRMS policy's principles or the rule's policy statements to ensure economic aspects are considered.

Appeals Process

Comments: Three commenters requested FEMA provide an appeals process. Two commenters wrote there was no viable process available to non-Federal entities to seek a review and adjudication of decisions made under the FFRMS. The commenters stated the impacts of the FFRMS would not be confined to the Federal government but would have far-reaching impacts on non-Federal public entities and the private sector. The commenters noted that Federal taxpayers should be protected from a Federal standard likely

to impose costs without being subject to a benefits justification. The commenters recommended an appeals process be made available to non-Federal entities to review and adjudicate decisions made under the FFRMS. The third commenter requested an appeals process for communities that disagreed with a determination using the FFRMS. The commenters stated an appeals process would provide transparency and enable communities to have a voice in these important decisions that significantly impact them.

FEMA Response: FEMA does not believe a separate appeals process is required under part 9. FEMA conducts the 8-step process collaboratively with participation from applicants and grant program staff, with applicants having responsibility to provide information and participate in the process.²²⁶ This collaborative process allows for resolution of disagreements and for FEMA to provide technical assistance on the requirements of 44 CFR part 9. FEMA hopes to be able to resolve disagreements during this process so that a project may be made eligible. However, if a grant applicant disagrees with the application of the FFRMS and is subsequently denied funding for the project, the applicant should be able to avail itself of FEMA's existing appeals processes for its grant programs.²²⁷ FEMA understands the commenter's concern regarding community participation but believes the current 8-step process sufficiently engages the public. FEMA will continue to notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland and involve the affected and interested public in the decision-making process, as detailed further in § 9.8. Further, communities provide input into the floodplain determination for part 9. Pursuant to 44 CFR 9.11(d)(6), if there is a more restrictive Federal, State, or local standard, it will be used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more

²²⁶ See 44 CFR 9.16, 9.17.

²²⁷ See, e.g., 2 CFR 200.339 and 200.342; see also 44 CFR 206.206 (appeals and arbitration process for PA), 44 CFR 206.115 (appeals process for IA), 44 CFR 206.440 (HMGP and HMGP Post-Fire's appeals process); and "Hazard Mitigation Assistance Program and Policy Guide," pg. 211–216, 229–234, 240–241, and 247 available at https://www.fema.gov/sites/default/files/documents/fema_hma_guide_08232023_v1.pdf (last accessed April 2, 2024) (appeals process for HMGP, HMGP Post-Fire, BRIC, and FMA), "Public Assistance Program and Policy Guide," pgs. 39–41 available at https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf (last accessed Mar. 12, 2024).

²²⁴ See Environmental Planning and Historic Preservation Responsibilities and Program Requirements, available at https://www.fema.gov/sites/default/files/2020-07/fema_ehp_requirements_2018.pdf (last accessed Mar. 27, 2024).

²²⁵ "Climate-Related Financial Risk," 86 FR 27967 (May 20, 2021).

restrictive standard. FEMA values additional input from SLTT partners and the public in the 8-step process.

Regarding cost concerns, FEMA completed an analysis of the economic impact of this rulemaking, and the agency believes that the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and that the natural values of floodplains are preserved.

Other Implementation Concerns

Comments: One commenter requested the rule require consideration of ways to prevent groundwater contamination when managing floodwater for use in water supply storage. The commenter suggested that the rule include provisions to pretreat or avoid the injection of "the first flush of stormwater runoff (generally the first runoff from 1.5 inches of rainfall), which can contain potential pollutants. The commenter also requested the rule acknowledge that MAR-related activities could be subject to other State and/or Federal regulations. Another commenter stated certain requirements for minimum conveyance, storage, and design criteria would be needed for all regional projects and watershed projects to ensure Federal funding eligibility with FFRMS implementation.

FEMA Response: FEMA understands the commenters' concerns but disagrees that any changes to the rule are required to ensure consideration of these issues. As previously explained, impacts are considered during the 8-step process including those referenced by the commenters. These considerations are not changing as part of this final rule and will continue to be utilized by FEMA when completing the analysis.

Further, Part 9 applies only to FEMA actions, and the FFRMS applies only to those actions where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility for FEMA programs such as IA, PA, and HMA, and grants processed by FEMA's GPD. Where applicants seek FEMA funding through these programs for the actions the commenters reference, part 9 applies.

Regarding a need to adapt design criteria, the FFRMS is a resilience standard that is applicable to structures and facilities. When considering design criteria, and particularly in cases where

elevation as a minimization measure may not be feasible or appropriate for facilities, the FFRMS floodplain, determined according to the process described in section C of the FFRMS policy, establishes the level to which a structure or facility must be resilient. Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand and rapidly recover from a flood event. To the extent practicable and in accordance with applicable grant program requirements, projects for facilities located within a FFRMS floodplain must be designed to help ensure resilience against flooding up to the flood elevation of the FFRMS floodplain.

Comment: A commenter requested the exception process for the FFRMS allow for appropriate balancing of the community's overall public health and safety priorities in project decisions. The commenter gave an example of a hospital being limited in making critical improvements because of the cost to incorporate the FFRMS as an example of where the community's overall well-being might be impacted.

FEMA Response: FEMA disagrees that a separate exception process is needed given the flexibility of the 8-step process. For individual actions, FEMA identifies and evaluates practicable alternatives to carrying out a proposed action in floodplains or wetlands. In determining the practicability of the alternatives, social concerns and economic aspects such as those raised by the commenter are considered in § 9.9.

FEMA will continue to notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland and involve the affected and interested public in the decision-making process, as detailed further in § 9.8. FEMA values additional input from SLTT partners and the public in the 8-step process to help ensure FEMA actions meet community needs. FEMA notes any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

2. Coordination With Other Federal Agencies

Commenters had questions about how FEMA would coordinate with other Federal agencies when implementing the FFRMS. Commenters raised questions and concerns with how FEMA would work with other Federal agencies to implement the FFRMS and the

interaction between the FFRMS and other programs such as the NFIP.

Comments: Commenters requested FEMA provide more information on how FEMA would complete coordination with other Federal agencies. A commenter requested clarification on how the agency would coordinate with other Federal agencies, and State and local governments to ensure consistent implementation of the FFRMS. One commenter asked how the primary agency would be determined and stated that many local agencies would not have the capability and capacity to navigate through different federal agencies with differing requirements for FFRMS implementation. Another commenter requested the proposed rule reconcile which agency's FFRMS procedures would be applied for projects with more than one Federal funding source. This commenter stated the NPRM did not provide a process to reconcile difference in requirements from different agencies and stated the differences between agencies that have already published FFRMS proposals. The commenter requested FEMA assure harmonization in the FFRMS criteria application across the Federal government. One commenter stated FEMA must also account for the central role that SLTT governments play in floodplain management, including designing climate resilience actions and implementing regulations. The commenter wrote consistent that expectations and procedures would benefit all sides by expediting interagency coordination and reducing confusion, delays, and accidental noncompliance.

FEMA Response: FEMA understands the concerns associated with consistent application of the FFRMS, and FEMA's FFRMS policy provides details on how FEMA will coordinate with other agencies when implementing actions in the same area as another Federal agency. See Section H, page 9. Specifically, FEMA's FFRMS policy states that when coordinating with other Federal agencies, FEMA will generally default to the FFRMS policy approach in FEMA's FFRMS policy, as appropriate. In addition, per 44 CFR 9.11(d)(6), actions must be consistent with the NFIP, as well as any more restrictive Federal, State, or local floodplain management standards. Those floodplain management standards may include a more restrictive application of another Federal agency's FFRMS approach.

Additionally, FEMA's interagency consultative role in the broader implementation of the FFRMS across the Federal government, through the

agency's participation in the Interagency Working Groups and the FIFM-TF helps ensure consistent and effective implementation across the Federal government. FEMA's work in that context is intended to address the types of concerns raised in the comment regarding harmonizing application of the FFRMS criteria across the Federal government. Executive Order 11988, as amended, further establishes the process by which the FFRMS will be reassessed in an interagency manner in conjunction with the WRC, the MitFLG, and the FIFM-TF. See Section 4(a) and (b).

FEMA understands the concerns raised by the commenters regarding local capability and capacity, and the agency will distribute additional resources to SLTT partners and the public identifying what the FFRMS is, and how the agency will implement the Executive Orders to assist applicants of FEMA-funded assistance programs. FEMA will also provide technical assistance through the agency's regional offices to support the FFRMS implementation. Additionally, FEMA notes the agency does consider the central role that SLTTs play in floodplain management. FEMA conducts the 8-step process collaboratively with participation from SLTT partners and grant program staff, with responsibilities and requirements for applicant participation in the 8-step process outlined in the long-standing requirements of 44 CFR 9.17. FEMA also recognizes the role played by SLTTs in setting floodplain management standards for their communities. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used. FEMA believes the final rule and FFRMS policy outline consistent expectations and procedures for application of the 8-step process, minimizing confusion, delays, and accidental noncompliance.

Coordination With Specific Agencies

Comments: Some commenters encouraged FEMA to engage with specific agencies when implementing FFRMS. One commenter encouraged FEMA to coordinate with other Federal agencies, such as HUD, SBA, USDA, DOE, DoD, to improve application and effectiveness of national floodplain standards. Another commenter suggested Federal agencies, including FEMA, NRCS, FWS, and others examine the efforts of Federal agencies to restore floodplains. The commenter stated their understanding that even for Federal agencies responsible for addressing water, soil, and habitat concerns, floodplain regulations are a significant

barrier to restoration. The commenter stated the review of floodplain restoration efforts should not only cover the multi-million-dollar projects, but also include smaller-scale projects, as there are plenty of opportunities for small scale, impactful restoration projects that become too costly when implemented consistent with a regulatory process.

Another commenter requested that FEMA take a leadership role in tracking floodplain development on a national scale. The commenter stated there was no meaningful Federal commitment to track gains or losses in floodplain functions in the same way wetlands are tracked through the National Wetlands Inventory. The commenter referenced an estimate that 70 percent of the nation's floodplains had poor integrity due to development and alterations that limited floodplain functionality. The commenter noted this estimate provides a snapshot, but that it is essential to have nationwide statistics that allowed decision makers to understand and communicate floodplain loss. The commenter stated that floodplains are not broadly recognized by the public or decision makers for the valuable benefits they provide, and the lack of comprehensive, nationally-led data and analysis for floodplain functions has resulted in disjointed and unstable efforts focused on policy, funding, and communication in support of protecting and restoring floodplains in the United States, as well as a lack of data that allows an analysis of the impact that Executive Order 11988 has played. The commenter requested that FEMA, as the lead Federal agency charged with implementing a national floodplain management strategy, take a leadership role in tracking loss of functional floodplains as a component of the 8-step process when implementing Executive Orders 11988 and 13690. The commenter encouraged FEMA to work with HUD, the United States Geological Survey, the USACE, and other Federal agencies to track and quantify the effectiveness of the Executive Orders in avoiding floodplain development and preserving and restoring the natural and beneficial values of functional floodplains.

FEMA Response: FEMA's interagency consultative role in the broader implementation of the FFRMS across the Federal government, through the agency's participation in the Interagency Working Groups and the FIFM-TF helps ensure consistent and effective implementation. In this role, FEMA has coordinated, and will continue to coordinate, with other Federal agencies, including those listed by the

commenters, on the FFRMS. Executive Order 11988, as amended, further establishes the process by which the FFRMS will be reassessed in an interagency manner in conjunction with the WRC, the MitFLG, and the FIFM-TF.²²⁸ See Section 4(a) and (b).

For individual actions subject to the FFRMS, FEMA will continue to coordinate with other agencies to expedite and unify the floodplain management review process, as detailed in the FFRMS policy. FEMA appreciates the commenter's concerns regarding floodplain restoration, but notes that the commenter's request for multiple Federal agencies to do a retrospective review of their efforts to restore floodplains is beyond the scope of this rulemaking, which involves updates to FEMA floodplain management regulations to implement the FFRMS. FEMA's regulations at part 9 address the commenter's concerns regarding the need to protect floodplains. Specifically, § 9.2 discusses the agency's policy to "restore and preserve the natural and beneficial values served by floodplains." The final rule strengthens this policy by requiring the use of nature-based solutions when identified as a practicable alternative during the 8-step process as outlined in 44 CFR 9.9(b)(2). Further, § 9.11(b) discusses how FEMA will take action to restore and preserve floodplains and wetlands. FEMA understands the need to include smaller-scale projects and the commenter's concerns regarding costs when complying with regulatory requirements but believes the rule and FFRMS policy helps address these considerations. The rule and FFRMS policy require FEMA to consider the type of criticality of the action involved, the availability and actionability of data, and equity concerns. Actions are only subject to the FFRMS if FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility.

FEMA understands the commenter's concerns regarding tracking floodplain development and the lack of a national inventory for floodplains similar to the National Wetlands Inventory. FEMA agrees that nationwide statistics could better support decision makers and encourages other Federal agencies to look across the spectrum of floodplain impacts for their own agency activities. However, FEMA has no statutory authority to mandate the more structured tracking system the commenter requests across the Federal government.

²²⁸ 80 FR 6425 (Feb. 4, 2015).

FEMA completed that analysis for the FFRMS consistent with its requirements under OMB Circular A-4. FEMA considered the costs and benefits associated with this rule, including the overall increased costs of FEMA projects, in the regulatory impact analysis provided on the public docket for this rulemaking.²²⁹ FEMA believes that the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and that the natural values of floodplains are preserved.

Pursuant to OMB Circular A-4, agencies are required to monetize quantitative estimates whenever possible; however, if monetization is impossible, the agency must explain why and present all available quantitative information. An agency should also provide a description of the unquantified effects and the strengths and limitations of the qualitative information. FEMA requested public comments throughout the RIA because it was aware of the limitations of the data used to estimate the costs and benefits of the rule. FEMA's intention was to give the public the opportunity to submit data that was not available to FEMA at the time of publication of the NPRM but could help improve the estimates made for the final rule.

FEMA recognized in both its NPRM and RIA that there was a lack of actionable climate data for the FFRMS. FEMA expects that more data will be available as agencies implement the FFRMS, and that will be incorporated into interagency tools. FEMA further recognized that there was a limited amount of data available on the monetized benefits of freeboard that would be affected by the rule and requested comments from the public about whether there was available data that could be used for such estimates. FEMA conducted a quantitative benefits analysis for PA. Due to the limited quantitative analysis, FEMA also completed a qualitative analysis to meet its obligations under OMB Circular A-4 with respect to benefits by including the following: (1) literature reviews on the benefits of flood mitigation activities; (2) reports which analyzed potential savings from damage avoidance associated with including

freeboard in the construction of new residential structures in coastal areas at various freeboard levels; and (3) a description of qualitative benefits which included the potential for lives saved, savings in time and money from a reduced recovery period after a flood, increased safety of individuals, increased public safety, reduced personal and community impacts, and reduction in future health issues related to flooding.

With respect to the overall costs for the rule, FEMA met its obligations under OMB Circular A-4 by producing qualitative and quantitative measurements of the cost of the application of the FFRMS by each grant program. FEMA notes any increased costs for FEMA actions are generally eligible for funding under FEMA's assistance programs subject to cost share requirements.

Comment: One commenter raised several questions about the implementation of FFRMS for roadways, bridges, and culverts and how FEMA would engage with other Federal and non-Federal agencies. The commenter raised several questions about how the FHWA and the Department of Transportation (DOT) regulations would interact with FEMA's FFRMS implementation and requested FHWA regulations apply to these actions. The commenter raised questions on the use of State regulations and asked how the FFRMS would impact scour calculations and designs. The commenter asked how FEMA would determine when a nature-based approach would be used, stating that FHWA and many States had their own guidance for the use of nature-based approaches. The commenter also stated all of the FFRMS approaches indicated higher vertical flood elevations and an expanded horizontal floodplain and inquired as to whether elevating a structure would also include potential roadway grade changes and raising a bridge structure if viable for resilience as some locations.

FEMA Response: As explained previously, this rulemaking only applies to actions where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD. FEMA does not fund repairs or improvements to Federal-aid roads, and this rulemaking would not be applicable to those roads. Rather, as the commenter states, the FHWA regulations would govern those actions. Where FEMA may provide funding, FEMA's FFRMS policy provides details

on how FEMA will coordinate with other agencies when implementing actions in the same area as another Federal agency. See Section H, page 9. When coordinating with other Federal agencies, FEMA will generally default to the FFRMS policy approach in FEMA's FFRMS policy, as appropriate. Where FEMA provides funding for these activities, FFRMS applies to improve resilience to facilities against both current and future flood risks.

Section 9.11(d)(6) of the final rule states that even when FEMA is providing funding, a more restrictive Federal, State, or local floodplain management standard will be applied. States with more restrictive standards continue to govern these actions. Section G.2 of FEMA's FFRMS policy further discusses flood risk minimization for facilities and clarifies that FEMA would allow any specific method to be used to help ensure resilience against flooding up to the flood elevation of the FFRMS floodplain in conjunction with any other applicable codes and standards.

In response to the commenter's concerns regarding nature-based approaches and conflicts with other Federal and State requirements, Section A.2 of FEMA's FFRMS policy states "Applicability: The Natural Features and Nature-Based Solutions requirements of this policy apply to all Actions subject to the full 8-step decision-making process." As explained in Section F, it should be used where possible.²³⁰

To address the commenters inquiry on whether roadway grade changes and raising a bridge structure would be required, FEMA begins any analysis by confirming applicability. As defined in § 9.4, a "structure" means walled and roofed buildings, including a temporary housing unit (manufactured housing) or a gas or liquid storage tank. The example provided by the commenter is not a structure under part 9 but rather a facility. As section G.2 of FEMA's FFRMS policy states, "[t]he FFRMS is a resilience standard. Particularly in cases where elevation may not be feasible or appropriate for facilities, the FFRMS floodplain, determined according to the process described in section C of this policy, establishes the level to which a structure or facility must be resilient. Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate,

²²⁹ See <https://www.regulations.gov/document/FEMA-2023-0026-0013>.

²³⁰ See Section F of the FFRMS Policy, "Where possible, the Agency shall use natural systems, ecosystem processes, and nature-based solutions."

designing it to adapt to, withstand and rapidly recover from a flood event.”²³¹

Coordination With Non-Federal Agencies

Comments: A commenter recommended FEMA engage through comprehensive consultations with local governments, non-Federal stakeholders, and regional experts to gather insights and refine the currently proposed national approach to ensure that policies aligned with regional differences and addressed specific challenges identified by stakeholders. The commenter also recommended FEMA develop a robust communication strategy to clarify the integration of local government systems and policy implementation with non-Federal stakeholders, while also creating a means of providing feedback throughout the FFRMS implementation process.

The commenter further stated that the roles, responsibilities, and authorities of non-Federal sponsors of actions might not align with FEMA’s FFRMS proposed policy and requested FEMA clarify how non-Federal sponsors and other stakeholders would engage with and be affected by the rule. The commenter noted collaboration between non-Federal sponsors, communities, the USACE, and FEMA can yield significant benefits, but stated the collaboration was contingent on a clear, justified, and achievable delineation of agency and stakeholder roles and responsibilities. The commenter stated the FFRMS proposed rule and policy failed to address the roles of non-Federal stakeholders, which could significantly hinder non-Federal stakeholders’ understanding of their responsibilities within the FFRMS framework. The commenter stated the FFRMS lacked an explanation of how the policy aligns with other floodplain-related policies. The commenter stated that this oversight might burden local non-Federal sponsors with additional responsibilities related to addressing property damage and new construction, potentially creating confusion and additional workload, and importantly, likely forcing non-Federal sponsors to assume duties outside their legal authorities and core competencies, and expose them to potential liability.

The commenter recommended that FEMA provide greater clarity on the roles of State and local government and other non-Federal stakeholders. The commenter requested that FEMA consider and accommodate the resource and legal boundaries of non-Federal

stakeholders, ensuring that policies and directives were realistic and compatible with their authorities and available resources and tailoring requirements that align with the authorities of non-Federal stakeholders. The commenter stated this entailed revising policies to avoid mandating actions that fall outside the legal jurisdiction of non-Federal stakeholders.

FEMA Response: FEMA disagrees with the commenter that additional engagement to refine the FFRMS is required. In addition to the comment period in 2023, FEMA completed outreach regarding FFRMS in 2015 as part of the development and publication of the Revised Guidelines, as well as the agency’s prior NPRM in 2016.²³²

FEMA understands the commenter’s concern regarding the role of non-Federal partners, but that role in the 8-step process remains unchanged as a result of this rulemaking. FEMA values the collaboration and coordination with SLTT and other non-Federal partners in the 8-step process and will continue to engage with stakeholders and the public throughout the 8-step process to meet the needs of communities and stakeholders impacted by FEMA actions subject to this rulemaking. Specifically for applicants for federal financial assistance, 44 CFR 9.17 outlines the specific roles and responsibilities that exist for them in the 8-step process.

Comment: The same commenter stated the rule lacked clarity on integration with local government systems and communications regarding policy implementation with non-

Federal stakeholders. The commenter stated this oversight raised doubts about adaptability and alignment with existing regional policies, potentially leading to conflicts and inefficiencies in implementation. The commenter raised concerns regarding the removal of Flood Hazard Boundary Maps (FHBM) stating that the removal resulted in a lack of clear alternatives or specific evaluation methodologies tailored to different regions and thus failed to ensure region-specific evaluations and risks in applying standards uniformly across diverse regions. The commenter stated a “one-size-fits-all approach” overlooked the complexity of regional flood dynamics and other variabilities, leaving critical questions unanswered. The commenter stated a tailored, regionally sensitive strategy was imperative to ensure diverse regional needs and variations were appropriately considered and integrated into any proposed policies.

FEMA Response: FEMA understands the commenter’s interest in ensuring effective integration with local government systems and communications with non-Federal stakeholders but disagrees that the agency’s rulemaking and FFRMS policy are lacking. Rather, the rule at § 9.11(d)(6) ensures the use of any local standard that may be higher than that required under part 9 allowing for local differences to be considered and implemented. The commenter further misunderstands FEMA’s edits to remove the term FHBM from the regulatory text. FEMA is not eliminating FHBMs from the 8-step process. As explained in the preamble to the NPRM, FEMA offers a range of flood risk products under the NFIP and categorizes these products as “regulatory” or “non-regulatory.” Regulatory flood risk products are created subject to procedural due process requirements, contain basic flood information, and are used for official actions such as identifying properties subject to mandatory flood insurance purchase requirements, or enforcing minimum building standards for construction in a floodplain in NFIP participating communities. Non-regulatory flood risk products are not tied to mandatory enforcement or compliance requirements for the NFIP and expand upon basic flood hazard information. References to FEMA’s regulatory products under the NFIP, such as the FHBM, FIRM, and FIS are being eliminated in the regulatory text to allow flexibility to encompass the full range of NFIP products (both regulatory and non-regulatory) available for use with the 8-step process. For example,

²³¹ See <https://www.regulations.gov/document/FEMA-2023-0026-0005>.

²³² Established by the 2013 Climate Action Plan, the Climate Task Force met with stakeholders from State, local, Tribal, and territorial governments; private businesses; trade associations; academic organizations; civil society; and other stakeholders to develop and provide recommendations in November 2014. President’s State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President*, (2014), available at https://obamawhitehouse.archives.gov/sites/default/files/docs/task_force_report_0.pdf at 7 (last accessed Jan. 24, 2024). FEMA, acting on behalf of the MitFLG and consistent with Executive Order 13690, published a draft of the Revised Guidelines for notice and comment on February 5, 2015 at 80 FR 6530. During the public comment period, over 25 meetings were held across the country with State, local, and Tribal officials and interested stakeholders to discuss the Revised Guidelines. There were also 9 public listening sessions across the country that were attended by over 700 participants from State, local, and Tribal governments, and other stakeholder organizations to discuss the Revised Guidelines. The final Revised Guidelines were published on October 22, 2015 at 80 FR 64008. FEMA published a notice of proposed rulemaking to implement FFRMS initially in 2016 at 81 FR 57402 (Aug. 22, 2016) along with a notice of availability and request for comment on a FFRMS policy at 81 FR 56558 (Aug. 22, 2016) and a notice of availability regarding a draft report at 81 FR 64403 (Sept. 20, 2016).

the existing § 9.7(c) prescribes a sequence of steps to obtain the floodplain, flood elevation, and other information needed.

FEMA has made, and will continue to make, floodplain determinations partnering with applicants in the 8-step decision-making process. As explained in the NPRM, FEMA will use best available information, which may include information that is non-regulatory or FEMA preliminary flood hazard data. To be designated as the best available information, the information must be at least as restrictive as the information provided by effective FIRMs. FEMA published the FFRMS Job Aid to further explain how the agency will make these determinations with the implementation of FFRMS.

Further, as previously explained, SLTTs can provide input into the determination. As explained above, FEMA will use a more restrictive Federal, State, or local standard for actions under part 9. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard. Allowing the use of local data helps resolve the commenter's concerns that FEMA is not considering regional flood dynamics and other variabilities.

3. Outreach

Comments: Two commenters discussed outreach associated with the rulemaking process. One of the commenters expressed support for the extensive public outreach completed between 2015 and 2021 on the FFRMS. The other commenter requested FEMA reengage with States and local communities on the FFRMS proposed rule and policy. The commenter noted the floodplain program is administered at the local level and stated FEMA failed to conduct sufficient outreach or even hold a single public meeting to help explain the elaborate and expansive changes. The commenter stated local administrators and community officials deserved sufficient time to understand the proposed rule and policy changes and develop informed comments on how it might affect their programs. The commenter asked that FEMA perform additional outreach to educate local floodplain administrators, elected officials, and emergency managers on the proposed rule and policy.

Some commenters requested FEMA provide additional outreach, training, technical assistance, and community engagement as part of the FFRMS implementation. One commenter requested training, outreach, and

coordination at the program, departmental, interagency, and intergovernmental levels for successful implementation of FFRMS. The commenter requested FEMA provide technical resources including comprehensive guidance, maps and resources, and technical assistance. Another commenter requested FEMA provide guidance and training materials to stakeholders to ensure a comprehensive understanding and consistent application of the FFRMS. One commenter requested FEMA develop accessible guidance and tools to facilitate and improve the benefit-cost analysis for both nature-based solutions and hybrid green-gray infrastructure approaches. Another commenter recommended FEMA conduct virtual and in-person workshops and listening sessions to explain the FFRMS, changes to 44 CFR part 9 (including the 8-step process), including applications for FEMA grants under HMGP, FMA and BRIC. Another commenter stated appreciation for FEMA's plans to assist applicants with FFRMS and the 8-step process and encouraged the agency to seek sufficient funding to adequately staff such an effort.

FEMA Response: As one commenter noted, FEMA completed significant outreach and stakeholder engagement during the course of the FFRMS development and rulemaking processes. FEMA believes those outreach efforts were sufficient and additional public meetings for this rulemaking were not required.²³³ FEMA disagrees with one commenter requesting the agency

²³³ Established by the 2013 Climate Action Plan, the Climate Task Force met with stakeholders from State, local, Tribal, and territorial governments; private businesses; trade associations; academic organizations; civil society; and other stakeholders to develop and provide recommendations in November 2014. President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President*, (2014), available at https://obamawhitehouse.archives.gov/sites/default/files/docs/task_force_report_0.pdf at 7 (last accessed Jan. 24, 2024). FEMA, acting on behalf of the MitFLG and consistent with Executive Order 13690, published a draft of the Revised Guidelines for notice and comment on February 5, 2015 at 80 FR 6530. During the public comment period, over 25 meetings were held across the country with State, local, and Tribal officials and interested stakeholders to discuss the Revised Guidelines. There were also 9 public listening sessions across the country that were attended by over 700 participants from State, local, and Tribal governments, and other stakeholder organizations to discuss the Revised Guidelines. The final Revised Guidelines were published on October 22, 2015 at 80 FR 64008. FEMA published a notice of proposed rulemaking to implement FFRMS initially in 2016 at 81 FR 57402 (Aug. 22, 2016) along with a notice of availability and request for comment on a supplementary policy at 81 FR 56558 (Aug. 22, 2016) and a notice of availability regarding a draft report at 81 FR 64403 (Sept. 20, 2016).

complete additional outreach to allow for public comment. Local administrators and community officials had an opportunity to submit comments on the proposed rule and policy changes, and FEMA notes some communities did submit comments on this rulemaking. FEMA will perform additional outreach to SLTT partners, stakeholders, and the public, including distribution of additional resources to assist in FFRMS implementation.

FEMA agrees that successful implementation will require training, outreach and interagency coordination and appreciates the commenters' suggestions on ways to achieve effective outreach. FEMA participated in the IWG on Flood Resilience to support the implementation of the FFRMS. FEMA continues to collaborate with the IWG and other interagency groups consistent with Executive Order 11988, as amended, and the Revised Guidelines. FEMA will distribute additional resources to the public and SLTT partners identifying what the FFRMS is, and how the agency will implement the Executive Orders, and these resources will help applicants as they apply for FEMA-funded assistance programs. FEMA will also provide technical assistance through the agency's regional offices in support of FFRMS implementation. FEMA will also further consider the outreach options shared by the commenters as the agency begins FFRMS implementation after this rulemaking.

4. Equity and Environmental Justice

Comments: Commenters provided feedback on incorporating equity and environmental justice into the 8-step process. While commenters indicated support for FEMA's rule and FFRMS policy as a means of bolstering the agency's commitment to addressing equity and environmental justice when addressing flood risks, others requested additional clarification or provided recommendations on ways FEMA could further advance equity and environmental justice in the rule and FFRMS policy. Commenters requested the agency incorporate social, economic, and environmental concerns into the 8-step process. These commenters also requested more outreach to underserved communities and ways to address the increased costs of actions subject to the FFRMS.

One commenter stated that flood impacts are not experienced equally across communities in the United States, referencing policies such as redlining and lower tax rates as forcing underserved populations into flood-prone areas and resulting in those

communities facing disproportionately high risk from flooding. The commenter stated these communities have also been disproportionately impacted by the environmental degradation resulting from floodplain development, underscoring the relationship between floodplain management and environmental justice. The commenter stated underserved communities have faced inequities in the distribution of flood risk reduction resources, partially because of reduced capacity and opportunity to respond to flood hazards compared to more well-resourced communities. The commenter stated that, based on these inequities, any proposal to update floodplain management standards would have an outsized effect on underserved communities. The commenter requested that FEMA consider the implicit connections between the FFRMS and environmental justice and the potential impact on Federally-protected treaty rights to floodplain resources. The commenter also requested FEMA consider the long-term benefits—including economic benefits—that can result from stricter floodplain management standards and upfront investments to ensure more resilient development projects.

This commenter further recommended a regular environmental justice and Tribal treaty rights assessment to review unforeseen burdens or missed opportunities with environmental justice communities and Tribal treaty rights-holders, consistent with Justice40 after the rule takes effect. The commenter requested FEMA include a structure to ensure that Tribal, low-income, and frontline communities and communities of color would be elevated in refining how the FFRMS is used and updated over time. The commenter requested FEMA explore technical assistance opportunities to ensure support for low-capacity communities. The commenter requested FEMA incorporate FFRMS into the agency's Justice40 efforts and prioritize funding to Tribes and underserved communities to increase flood resilience, stating this prioritization was particularly important in places where a more protective standard for the floodplain could raise upfront project costs and impact affordability for low-income communities, taxpayers, and rate payers. Another commenter raised similar concerns regarding equity, environmental justice, and community engagement. The commenter stated that FEMA has the opportunity to explicitly advance and promote environmental justice within the rule and, consistent

with Executive Order 14096, FEMA should provide opportunities for the meaningful engagement of persons and communities with environmental justice concerns who are potentially affected by Federal activities. Quoting Executive Order 14096, the commenter requested FEMA provide timely opportunities for members of the public to share information or concerns and participate in the decision-making processes; fully consider public input provided as part of the decision making processes; seek out and encourage the involvement of persons and communities potentially affected by Federal activities; and provide technical assistance, tools, and resources to assist in facilitating meaningful and informed public participation. The commenter recognized FEMA's actions to incorporate meaningful engagement with environmental justice communities, but requested FEMA recommit to that engagement through this rulemaking.

Two commenters recommended FEMA revise the rule to ensure it explicitly addresses environmental justice concerns. One of these commenters stated that despite FEMA's statement that the proposed rule would not have adverse impacts on communities with environmental justice concerns, experience along with scientific and policy analysis found that Federal policies such as the FFRMS would have distributional impacts across sectors and communities, especially overburdened and underserved communities. The commenter cited to specific studies reflecting the level of flood risk increase for some disadvantaged communities and stated FEMA should ensure the final rule advanced environmental justice by requiring the consideration of disproportionate and adverse effects on communities with environmental justice concerns. Another commenter stated similar concerns with FEMA's statement in the proposed rule that the agency did not expect the rule to have a disproportionate and adverse human health or environmental effect on communities with environmental justice concerns and requested FEMA explicitly advance and promote environmental justice considerations in the final rule. The commenter stated that equity and environmental justice concerns must be acknowledged and weighed in the analysis of all FEMA-funded projects. This commenter requested guidance, tools, and resources to ensure best practices are used in project planning and design. The commenter stated flood-prone land

tended to be cheaper, disregarding hidden long-term costs and recommended FEMA strengthen transparency in the public's awareness of flooding risks in any community development and prioritize long-term safety over initial cost savings. Another commenter shared the concern raised by these commenters that FEMA did not consider environmental justice issues when drafting the rule and recommended FEMA actively promote environmental justice in the final rule. This commenter also referenced Executive Order 14096 and stated that climate-driven flood hazards were expected to disproportionately impact Black communities in the South. The commenter further stated some estimates indicated the Southeast stood to suffer the most economic damage due to climate change with incalculable social costs. The commenter provided additional statistics regarding flood risks and referenced a specific seawall project as an example of common failures to adequately consider environmental justice concerns in the context of floodplain adaptation.

FEMA Response: FEMA appreciates the commenters' concerns on the increased costs of projects, equity, environmental justice, and community engagement. FEMA is committed to meaningful engagement on environmental justice and understands that flood impacts are not always experienced equally across communities in the United States. The agency has always incorporated natural environment, social concerns, and economic aspects into the 8-step process as part of the practicability analysis, and this rulemaking will not change that practice. FEMA's revisions to part 9 reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it.²³⁴

FEMA reviews all proposed FEMA-funded actions for potential disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process. This final rule will not

²³⁴ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

change that process. As an environmental justice review takes place on all FEMA proposed actions, FEMA does not believe an additional assessment is needed in conjunction solely with this final rule. Further, FEMA and the applicant may consider potential impacts on Tribal treaty rights, where applicable, when evaluating the practicability of alternatives in the 8-step process. As this would occur for all actions that potentially impact Tribal treaty rights, FEMA does not believe an additional assessment is needed in conjunction with this final rule.

Regarding the commenter's request that FEMA provide a way for these communities to engage on updates to the FFRMS, FEMA notes the agency is not solely responsible for revisions to the FFRMS or the Revised Guidelines. The MitFLG in consultation with the FIFM-TF will reassess the FFRMS annually, after seeking stakeholder input, and provide recommendations to the WRC to update the FFRMS, if warranted based on accurate and actionable science that takes into account changes to climate and other changes in flood risk. The WRC shall issue an update to the FFRMS at least every 5 years.²³⁵ Consistent with the requirements of Executive Order 11988, as amended, the interagency will engage with SLTTs and the public, including Tribal communities for any updates to the FFRMS.

As noted by the commenter, there are connections between the FFRMS and environmental justice. The FFRMS seeks to continue to improve the resilience of communities, including communities with environmental justice concerns, and help preserve the natural values of floodplains. Likewise, under the 8-step process, FEMA and the applicant may consider potential impacts on Tribal treaty rights, where applicable, when evaluating the practicability of alternatives. FEMA appreciates the commenter's request to consider economic benefits from stricter floodplain management standards and upfront investments, and the agency did consider the costs and benefits associated with this rule, including the overall increased costs of FEMA projects,²³⁶ in the regulatory impact

analysis provided on the public docket for this rulemaking.²³⁷ FEMA believes that the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and that the natural values of floodplains are preserved.

Regarding the commenters' concerns that FEMA provide opportunities for engagement and participation in the decision-making process, FEMA completed significant outreach in 2015 as part of the development and publication of the Revised Guidelines. That outreach included over 25 meetings across the country with State, local, and Tribal officials and interested stakeholders to discuss the Revised Guidelines and 9 public listening sessions that were attended by over 700 participants from State, local, and Tribal governments, and other stakeholder organizations to discuss the Revised Guidelines.²³⁸ FEMA believes those outreach efforts were sufficient.²³⁹ FEMA notes that, in addition to engagement on the FFRMS and rulemaking, FEMA's 8-step process incorporates community engagement

into the process. FEMA will continue to notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland and involve the affected and interested public in the decision-making process, as detailed further in § 9.8, as well as provide the public notice with a statement documenting the outcome of the 8-step process as detailed in § 9.12. Beyond all of the foregoing, FEMA also provides public notice for proposed actions under NEPA and other environmental planning and historic preservation laws and executive orders. This rulemaking will not change those requirements.

Additionally, to further engage with communities in the FFRMS implementation, FEMA will distribute resources identifying what the FFRMS is, and how the agency will implement the Executive Orders. These resources will help applicants as they apply for FEMA-funded assistance programs. FEMA's regional offices will also provide technical assistance in support of FFRMS implementation. FEMA anticipates these resources could be used in project planning and design, as requested by one of the commenters. Furthermore, FEMA has staff dedicated to assisting with implementation of environmental justice planning and compliance, and will develop further resources to assist in implementing environmental justice requirements.

FEMA agrees with the commenters that flood risk is not uniformly distributed. However, the agency does not believe changes to the regulatory text or policy are required to help ensure consideration of disproportionate and adverse effects on communities with environmental justice concerns. FEMA currently reviews all proposed actions in the 8-step process to identify and address any disproportionate and adverse human health or environmental effects on communities with environmental justice concerns to advance environmental justice. This process will not change as a result of this rulemaking.

Additionally, through the 8-step process, FEMA identifies impacts such as the flooding risks associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action. FEMA understands the commenter's concerns regarding potential hidden long-term costs of flood-prone land purchases. FEMA believes the agency's flood risk mapping efforts increase transparency in the public's awareness of flooding risks, and the agency's floodplain management

public docket of this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

²³⁸ Public meetings were held at a range of locations across the country at varied times to maximize participation. Meetings were held in Fairfax, VA; Seattle, WA; Dallas, TX; New York, NY; Ames, IA; Biloxi, MS; Sacramento, CA; and Hampton Roads, VA. See generally Guidelines for Implementing Executive Order 11988, Floodplain Management non-rulemaking docket available at <https://www.regulations.gov/docket/FEMA-2015-0006/document> for the public meeting notices and transcripts from the meetings.

²³⁹ Established by the 2013 Climate Action Plan, the Climate Task Force met with stakeholders from State, local, Tribal, and territorial governments; private businesses; trade associations; academic organizations; civil society; and other stakeholders to develop and provide recommendations in November 2014. President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President*, (2014), available at https://obamawhitehouse.archives.gov/sites/default/files/docs/task_force_report_0.pdf at 7 (last accessed Jan. 24, 2024). FEMA, acting on behalf of the MitFLG and consistent with Executive Order 13690, published a draft of the Revised Guidelines for notice and comment on February 5, 2015 at 80 FR 6530. The final Revised Guidelines were published on October 22, 2015 at 80 FR 64008. FEMA published a notice of proposed rulemaking to implement FFRMS initially in 2016 at 81 FR 57402 (Aug. 22, 2016) along with a notice of availability and request for comment on a supplementary policy at 81 FR 56558 (Aug. 22, 2016) and a notice of availability regarding a draft report at 81 FR 64403 (Sept. 20, 2016).

²³⁵ Revised Guidelines, pg. 20.

²³⁶ For example, FEMA found that for a project with a 75% FEMA/25% applicant cost share, the cost to an applicant to elevate a structure above the BFE to meet FEMA's FFRMS requirements using the FVA+2 (1.91 percent of construction cost) represented less than 0.5% of the total project cost, or an average of an additional \$4,775 in applicant cost share on an original total project cost of \$1,000,000. See A Benefit Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains, posted to the

programs further advance understanding of the impacts of development in floodplains.

FEMA appreciates the final commenter's information and example of challenges of failing to consider environmental justice concerns in Federal projects. FEMA acknowledges that the project described by the commenter was not a FEMA-funded project, but values the input provided by the commenter on the challenges faced when failing to consider environmental justice. FEMA is committed to meaningful engagement on environmental justice and seeking public input on proposed actions. As explained above, FEMA seeks input from the public as part of its reviews under Executive Orders 11988, 11990, 12898 and 14096, as well as NEPA, among other environmental planning and historic preservation laws and executive orders and has dedicated staff and a commitment to additional resources on environmental justice specifically.

Comment: Three commenters requested edits to the regulatory text to advance environmental justice with two suggesting specific edits. One commenter requested FEMA revise § 9.2(d) to identify environmental justice and avoid disproportionate effects to communities with environmental justice concerns as policy priorities. Another commenter requested FEMA revise § 9.6(b)(2) by adding language consistent with HUD's proposed rule to state that "when the proposed activity is located in or affects a community with environmental justice concerns under Executive Order 12898, public comment and decision making under this part shall be coordinated with consultation and decision making under HUD policies implementing 24 CFR 58.5(j) or 50.4(l)."²⁴⁰ The commenter also requested FEMA revise the principles in the proposed FFRMS policy to include a new principle on environmental justice to state that FEMA would work to reduce adverse impacts on communities with environmental justice concerns and engage communities in decision-making processes if the Federal action is a concern to these communities. This commenter requested FEMA revise § 9.11 to ensure FEMA would promote mitigation and minimization measures to address any disproportionate and adverse flood risks affecting these communities. Another commenter requested FEMA revise § 9.10 to require consideration of disproportionate and adverse effects on communities with environmental justice concerns, whether direct, indirect, or cumulative.

That commenter requested FEMA encourage proactive community engagement and community-led planning within the final rule and recommended FEMA reassess part 9 and incorporate language to codify the agency's commitments to environmental justice and community engagement.

FEMA Response: FEMA does not believe the proposed edits to the regulatory text or FFRMS policy are necessary to address the commenters' environmental justice concerns. As explained above, FEMA has always incorporated natural environment, social concerns, and economic aspects into the 8-step process as part of the practicability analysis. FEMA's revisions to part 9 in this rulemaking reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it.²⁴⁰ Further, as explained above, FEMA reviews all proposed FEMA-funded actions for potential disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process. This final rule will not change that process.

FEMA does not believe the specific changes requested to revise § 9.2(d) to identify environmental justice and avoid disproportionate effects to communities with environmental justice concerns as policy priorities are necessary, given the agency's consideration of natural environment, social concerns, and economic aspects in the 8-step process and the agency's review of all proposed FEMA-funded actions under Executive Order 12898 and 14096. FEMA further does not believe specific regulatory text is required to implement Executive Orders 12898 and 14096, as the agency already implements these requirements through other FEMA policies and processes.²⁴¹ As with the changes requested to

²⁴⁰ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

²⁴¹ See "Instructions on Implementation of the Environmental Planning and Historic Preservation Responsibilities and Program Requirements," pgs. 4 and 15, available at https://www.fema.gov/sites/default/files/2020-07/fema_ehp_instructions_implementation_2018.pdf (last accessed Apr. 22, 2024).

§ 9.2(d), FEMA does not believe that adding an additional principle to the FFRMS policy is necessary, given the agency's consideration of social concerns, which may include equity, and other factors under § 9.9(c), and environmental justice reviews conducted under Executive Orders 12898 and 14096 for proposed actions.

In § 9.11, FEMA details the requirements when actions must be located within or will affect a floodplain or wetland. The provisions of that section, as proposed, can be used to address flood risks affecting communities, including any disproportionate and adverse flood risks. FEMA is also required to address any disproportionate and adverse effects of actions on communities with environmental justice concerns, to the greatest extent practicable and permitted by law.

FEMA believes that the wording in § 9.10 is sufficient without further edits to enable the Agency to identify potential direct and indirect adverse impacts associated with the occupancy and modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action. In Step 4, FEMA considers a wide variety of factors in identifying potential impacts of an action that may be of relevance to communities with environmental justice concerns, including pollution, public health, safety, and welfare, and numerous others.

FEMA is not updating significant portions of the public notice process in this rulemaking with respect to public comment and community engagement, as FEMA does not believe the current notice process is inadequate. However, FEMA did update § 9.8(c)(4)(i) to incorporate notice through the internet or another comparable method. When notice is provided electronically, FEMA will also provide links to electronic versions of relevant maps. FEMA will continue to notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland and involve the affected and interested public in the decision-making process, as detailed further in § 9.8.

K. Emphasis on Nature-Based Approaches

1. General Support

Comments: Several commenters expressed specific support for FEMA's revisions to part 9 and the FFRMS policy to further incorporate nature-based solutions into the 8-step process.

Commenters stated that the emphasis on natural features and nature-based approaches was important as these were innovative, sustainable solutions and aligned with other Federal, State, and local goals. Commenters requested FEMA implement these changes as soon as possible. Some commenters also requested that FEMA develop additional resources for nature-based solutions. One commenter recommended that FEMA require consideration of nature and nature-based approaches early in the 8-step process. The commenter stated that doing so was critical to protecting floodplain values, minimizing impacts to natural areas, ESA-listed species, and Tribal treaty rights, and effectively building resilience to flood impacts. The commenter requested that FEMA consider nature-based solutions in step 2 during public notice and that FEMA continue to provide and publish the best examples of where nature-based approaches were applied and led to flood risk reduction benefits. A commenter, while supporting FEMA's requirement to use natural features and nature-based approaches where possible, recommended that FEMA clearly assert the criteria that would satisfy the use of natural features and nature-based approaches either in the final rule or additional guidance.

FEMA Response: FEMA appreciates the commenters' discussion of the importance of natural features and nature-based approaches and agrees that it is important to implement these changes with this final rule in a swift manner. FEMA's policy will be reassessed on a four-year cycle to ensure the approach continues to meet the goals of Executive Order 11988, as amended.

Regarding the commenter's request for consideration of nature-based solutions early in the 8-step process, FEMA's process at step 2 is to solicit any pertinent input from the public after the location determination for the proposed action and before the agency has made any decisions regarding practicable alternatives. Step 2 allows the public to provide information on potential alternatives, including nature-based solutions. FEMA notes the proposed action in step 1 may also incorporate nature-based approaches, which the public can comment on in step 2. FEMA does not believe the language of the regulatory text needs revision to address the concerns raised by the commenter as the agency's practice already incorporates the process outlined.

FEMA's FFRMS policy provides more information on the criteria to satisfy the use of natural features and nature-based

approaches. FEMA plans to provide resources that will incorporate additional examples of nature-based approaches and will coordinate with other Federal agencies regarding the use of nature-based solutions as part of the FFRMS implementation and beyond. FEMA will distribute these and other resources for the public and SLTT partners to help applicants for FEMA-funded assistance programs. FEMA's regional offices will also provide technical assistance in support of the final rule's implementation.

2. Implementation of Nature-Based Solutions

Comment: A commenter requested FEMA further amend part 9 to clarify that that nature-based solutions must be considered in all cases, and documentation should be provided where such approaches were ultimately found to be not practicable.

FEMA Response: FEMA believes that the final rule addresses the commenter's concerns as nature-based solutions must be considered in all instances where alternatives can be considered in the 8-step process. FEMA's procedures for review of its actions under part 9 include documenting the 8-step process and will incorporate documentation of nature-based solution consideration as part of that process.

Comments: Two commenters requested FEMA remove "where appropriate" under Step 5, proposed § 9.6(b)(5), which stated that FEMA would integrate natural systems, ecosystem services, and nature-based approaches "where appropriate." In contrast, two commenters requested FEMA recognize situations where nature-based solutions would not be appropriate. A commenter wrote because Executive Order 11988, as amended, recognized nature-based approaches were not always possible or practical, that FEMA's rule must recognize situations where nature-based approaches were infeasible. The commenter stated that while nature-based approaches might be preferred, they might not always provide the optimal or even the most cost-effective solutions and recommended that FEMA incorporate language into part 9 requiring the agency to recognize the role of State and local agencies in ultimately approving nature-based approaches for addressing impacts to wetlands and floodplains when determining the practicability of the alternatives set out. Another commenter stated while nature-based and hybrid approaches could be prioritized, they may not be feasible to protect all infrastructure.

FEMA Response: The language "where appropriate" is important, as not all actions can integrate natural systems, ecosystem services, and nature-based approaches. FEMA funds a range of actions, and not all of those actions can utilize nature-based approaches. For example, FEMA funds structure repairs, and those types of repairs generally could not utilize a nature-based approach as an alternative.

FEMA's regulation and policy require the incorporation of nature-based approaches into the development of alternative actions to the extent possible, consistent with Executive Order 11988, as amended. In addition, FEMA's FFRMS policy clarifies that nature-based approaches can also be incorporated as minimization measures where they are not possible as a practicable alternative. However, nature-based approaches will only be implemented where appropriate. Nature-based approaches are subject to the practicability analysis which relies on the factors identified in § 9.9(c). Those factors include legal constraints such as where state or local law is conflicting. For an alternative to be considered practicable, it must meet the need of the action FEMA is taking. Additionally, § 9.11(d)(6) requires FEMA to utilize any higher Federal, State, or local standards in the 8-step process.

Nature-based solutions apply to any FEMA-funded action that requires an analysis of alternatives, not just those that are subject to the FFRMS (new construction, substantial damage, or substantial improvement). The FFRMS applies to grants for certain projects under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD. All Federal agencies will utilize the Revised Guidelines for their own FFRMS implementation.

Additionally, FEMA disagrees that additional language is required in part 9 to recognize the role of State and local agencies in the process for determining when nature-based solutions may be practicable for a particular action. FEMA conducts the 8-step process collaboratively with participation from SLTT partners and grant program staff, with responsibilities and requirements for applicant participation in the 8-step process outlined in the long-standing requirements of 44 CFR 9.17. FEMA will work with SLTTs to determine what practicable alternatives may exist, including nature-based solutions.

Comment: A commenter recommended that FEMA apply nature-based approaches beyond the practicable alternatives analysis. The

commenter stated that the underlying assumption of the proposed rule was that nature-based approaches offered an alternative to reduce the effects of a traditional development project. While supporting the requirement to avoid floodplains and wetlands impacts, the commenter requested the rule also acknowledge that floodplains and wetlands restoration is an important flood risk reduction strategy in its own right. The commenter stated that Federal, State, and non-profit entities are focused on restoration efforts and that their investments are needed to accelerate the use of nature-based flood risk reduction strategies such as wetland and floodplain restoration. The commenter acknowledged that some of their comments may be outside the scope of the rulemaking, but stated that they submitted such comments because floodplain regulations and management are critical to whether we have more, less, or an indifferent amount of federal investments in nature-based approaches to floodplain restoration across the nation. The commenter stated that the nation desperately needs more floodplain restoration if we're going to move from reacting to disasters to being proactive and delivering on the multitude of co-benefits that healthy floodplains provide.

FEMA Response: FEMA appreciates the commenter's concerns but as explained in the preamble to the NPRM, 44 CFR part 9 only applies to FEMA actions. The FFRMS applies to grants for projects under FEMA programs such as IA, PA, and HMA, and grants processed by FEMA's GPD. All Federal agencies have their own requirements to implement the 8-step process and will utilize the Revised Guidelines for their own FFRMS implementation.

FEMA values the commenter's focus on the importance of nature-based approaches and will integrate these approaches where appropriate in actions under the 8-step process. FEMA-funded actions largely are identified by State and local applicants who design projects to meet their own communities' needs, which may include floodplain and wetland restoration. However, FEMA's mission extends beyond these actions, and the agency cannot eliminate the need to consider other types of actions such as the repair and replacement of public structures and facilities, such as schools and roadways. When evaluating such actions, FEMA will consider the practicability of nature-based approaches consistent with this rule.

Comment: One commenter also stated support for FEMA's use of nature-based solutions in the rule but stated the lack

of examples and lack of a clear hierarchy when choosing among available solutions could diminish the impact of the agency's requirement. The commenter recommended FEMA require that alternatives protect and/or restore natural features and ecosystem processes to the maximum extent possible before resorting to other means; that nature-based approaches be incorporated to the maximum extent possible after maximizing protection and/or restoration of natural features and ecosystem processes; and allowing use of grey infrastructure only after nature-based options were deployed to the maximum extent possible. Another commenter wrote that where avoidance was not possible, landscape-level resilient design including green infrastructure and nature-based solutions should be incorporated meaningfully, even for activities that may not adversely impact floodplain function, to benefit and improve the resilience of surrounding communities. A third commenter recommended FEMA encourage and incentivize higher functioning nature-based approaches on acquired properties, stating that mitigation project applicants were often encouraged to simply grade and seed a parcel leaving ongoing maintenance concerns with only a minimal natural benefit. This commenter also requested that FEMA require documentation on the nature-based approaches considered and justification for the inclusion or exclusion. Finally, another commenter recommended that FEMA incorporate more information on when and why nature-based solutions would be appropriate alternatives to consider in Steps 3 and 6 and highlight best practices, such as wetlands preservation. The commenter added that part 9 should more specifically and clearly promote these approaches to ensure that FEMA consistently identified and pursued opportunities to restore natural and beneficial floodplain functions within or near the project site as a part of potential risk mitigation strategies. The commenter recommended FEMA add a subsection to § 9.11 discussing the benefits of these measures and specifying approaches that could be incorporated into project plans.

Two commenters recommended FEMA revise § 9.9(b)(2) to specifically identify wetlands restoration and preservation as a uniquely valuable complement or alternative to grey infrastructure. Another commenter requested FEMA incorporate stronger language on when and how to apply nature-based solutions and to highlight

best practices, such as wetlands preservation.

FEMA Response: FEMA does not believe the final rule requires revision. FEMA's actions are focused on protection of life, safety, and improved property and FEMA does not typically fund actions that solely protect natural features and ecosystems. As such, FEMA is not necessarily taking actions where alternatives to protect natural features and ecosystem processes to the maximum extent possible are appropriate before resorting to other means. FEMA believes the commenter's concerns regarding wetlands preservation are already addressed in this final rule. Wetland conservation and restoration would be included under natural systems, ecosystem processes, and nature-based approaches provided in § 9.9(b)(2) as amended in this final rule. Additionally, the existing practicability factors set forth in § 9.9(c), including the natural environment factor, is sufficient to address the commenter's concerns.

FEMA prefers not to limit the regulatory text and instead provide additional information through FFRMS implementation resources to address the commenter's concerns. As explained above, the FFRMS policy does provide more information on the criteria to satisfy the use of natural features and nature-based approaches and FEMA plans to provide additional resources. These resources will incorporate additional examples of and information on nature-based approaches, such as the value of Indigenous knowledge and Traditional Ecological Knowledge (TEK). Where both a nature-based solution and a grey infrastructure solution are practicable, FEMA plans to generally prioritize the nature-based solution over a grey infrastructure solution as the commenter recommends. In addition, FEMA's FFRMS policy clarifies that nature-based approaches can also be incorporated as minimization measures where they are not possible as a practicable alternative. Further, as explained above, FEMA's procedures for review of its actions under part 9 include documenting the 8-step process and will incorporate documentation of nature-based solutions considered as part of that process. FEMA will distribute additional resources for the public and SLTTs as detailed above to further assist applicants when applying for FEMA programs.

Comment: Another commenter asked how FEMA would determine when nature-based solutions should be used. The commenter stated the FHWA and many State DOTs were developing or

had developed their own guidance for these items for riverine and tidal environments and that those agencies should be allowed to use their policies to fit specific projects.

FEMA Response: FEMA appreciates the commenter's concerns but as explained in the preamble to the NPRM, 44 CFR part 9 only applies to FEMA actions. The FFRMS applies to grants for projects under FEMA programs such as IA, PA, and HMA, and grants processed by FEMA's GPD. All Federal agencies have their own requirements to implement the 8-step process and will utilize the Revised Guidelines for their own FFRMS implementation.

FEMA's approach for facilities is meant to be flexible. As section G.2 of FEMA's FFRMS policy states "[t]he FFRMS is a resilience standard . . . Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand and rapidly recover from a flood event."²⁴²

Comment: A commenter wrote to commend FEMA for incorporating reduced discount rates in the cost-benefit analysis of nature-based solutions. The commenter requested FEMA continue bolstering accountability in the assessment process by requiring practitioners to clearly describe the nature-based alternatives that were considered, and in cases where they are ultimately deemed not practicable, to provide an explanation and analysis for their reasoning as part of the final rule.

FEMA Response: FEMA appreciates the commenter's support and will continue to provide guidance to help communities recognize and capture the long-term benefits of nature-based solutions and all resilience actions in evaluating practicable alternatives and analyzing projects for cost-effectiveness.

FEMA's regulation and policy require the incorporation of nature-based approaches to the extent possible. In addition, FEMA's FFRMS policy clarifies that nature-based approaches can also be incorporated as minimization measures where they are not possible as a practicable alternative. As explained above, FEMA's procedures for review of its actions under part 9 include documenting the 8-step process and will incorporate documentation of nature-based solution consideration as part of that process.

Comment: A commenter requested FEMA more explicitly emphasize the protection and restoration of floodplain functions and nature-based alternatives

when taking Federal actions in the floodplain by adopting rules that define the values of floodplains, the ecosystem processes or functions of floodplains that generate those values, and the attributes that are necessary for a floodplain to be "functional." The commenter stated FEMA's rule failed to adequately describe the bio-geomorphology of a functional floodplain and the physical attributes of the floodplain necessary to obtain those values.

FEMA Response: FEMA appreciates the commenter's suggestion to integrate bio-geomorphology and attributes of functional floodplains into the regulation but does not believe additional changes are appropriate to the final rule or FFRMS policy based on the commenter's concerns. FEMA's definition of the floodplain in this rule is generally consistent with the definition of floodplain in the NFIP and with FEMA and other agencies' historic approach to such definitions and is intentionally broad to help ensure the agency can meet the needs of the action and protecting floodplains and wetlands consistent with Executive Order 11988, as amended. For application of the FFRMS, FEMA defines specific floodplains in part 9 as using one of the approaches detailed in the FFRMS policy.

Concurrently, FEMA conducts other environmental and historic preservation reviews to determine whether proposed actions could have other impacts to or within floodplains and wetlands. FEMA is incorporating nature-based solutions into resilience efforts where appropriate and believes the final rule will help accomplish this goal. FEMA's regulation and policy do require the incorporation of nature-based approaches to the extent possible. In addition, FEMA's FFRMS policy clarifies that nature-based approaches can also be incorporated as minimization measures where they are not possible as a practicable alternative.

Comment: A commenter stated nature-based design elements and nature-based solutions allowed a structure to actively provide carbon sequestration, decrease the magnitude and frequency of maintenance leading to increased structural lifespan. The commenter recommended FEMA incorporate this alternative to traditional concrete as a nature-based solution to serve as a mitigation measure and design alternative.

FEMA Response: FEMA will use a range of nature-based solutions where possible and on a case-by-case basis depending on the project. Project location, including whether coastal or not, will be a factor in determining the

types of available nature-based solutions FEMA may implement.

L. Other 8-Step Process Comments

1. Generally

Comments: One commenter provided recommendations to encourage resilient design. The commenter supported FEMA's proposed changes to §§ 9.9 and 9.11, which in the commenter's view would increase climate resilience, but recommended FEMA require that the alternatives analysis process incorporate the consideration of an array of flood mitigation practices and feedback from state and local leaders. The commenter requested changes to §§ 9.9 and 9.11 to emphasize the effectiveness and benefits of landscape-level methods as effective alternatives to increase flood resilience and as mitigation for projects with no practical alternatives outside of the floodplain and incorporate landscape-level design strategies in developing alternatives. The commenter requested FEMA consider existing State, local, and non-governmental resilient design guidelines for the agency's own guidance and requested FEMA work with other Federal agencies to develop case studies and examples of projects that achieve appropriate resilience metrics in lieu of or in addition to elevation. Another commenter requested FEMA look for impacts beyond the project boundaries and requested FEMA consider off-site impacts and mitigation measures. The commenter recommended the rule's implementation and guidance emphasize the effectiveness and benefits of landscape-level practices that encompass the full property, not just the physical building site, to mitigate flood impacts for projects with no practical alternatives outside of the FFRMS floodplain. The commenter requested FEMA offer guidance to include development practices, such as No Adverse Impact or low-impact development, and landscape features and that any guidance should encourage projects to assess opportunities to restore the natural and beneficial functions of the floodplain and wetlands within or near the project site as a part of potential risk mitigation strategies.

FEMA Response: FEMA agrees that the rule will increase climate resilience. FEMA's current alternatives analysis process incorporates consideration of a range of flood mitigation practices. FEMA considers the following alternatives: (a) no action; (b) alternative locations; and (c) alternative actions, including alternative actions that use natural features or nature-based

²⁴² See FFRMS policy, pg. 8.

solutions. Where possible, nature-based solutions, including those at the landscape-level, shall be used. Where natural features and nature-based solutions are not practicable as an alternative on their own to meet the needs of FEMA applicants, natural features and nature-based solutions may be incorporated into actions as minimization measures.

As explained above, the flood minimization measures found in § 9.11 are reliable methods of providing resilience to structures. FFRMS flood resilience measures consider both current and future flood risks to better protect Federal investments. The elevation requirement in § 9.11(d)(3) applies to structures and also allows floodproofing for non-residential structures. The FFRMS policy provides further explanation that structures that must be located within the FFRMS floodplain must be elevated or floodproofed to the FFRMS flood elevation. Additionally, the policy clarifies further that facilities can use elevation or any other appropriate minimization measure to protect the facility against the FFRMS flood elevation.

FEMA does not believe the final rule requires edits to address the commenters' concerns. As the commenter notes, FEMA's policy provides more detail on how the agency will implement nature-based solutions, and FEMA believes this level of detail is best provided in policy and additional resources rather than directly in the regulatory text.

As explained above, communities provide input into the floodplain determination for part 9. Pursuant to 44 CFR 9.11(d)(6), a more restrictive Federal, State, or local standard will be used. This includes the use of local CISA data and methods that have been adopted by a community for use in floodplain management, as long as such data results in a more restrictive standard. FEMA values additional input from SLTT partners and the public in the 8-step process. Projects subject to FFRMS are frequently designed by such partners and will continue to be designed to meet local needs as appropriate.

FEMA will distribute additional resources for the public and SLTT partners identifying what the FFRMS is, and how the agency will implement the Executive Orders. These resources will help applicants as they apply for FEMA-funded assistance programs. FEMA will also provide technical assistance through the agency's regional offices in support of FFRMS implementation.

Comment: A commenter requested FEMA consider the life of the project when making flood risk protection decisions and emphasize the life of the project in the 8-step process, not just in the footprint of the project but its impact on the surrounding area. The commenter also requested the analysis of practicable alternatives result in an adequate assessment and documentation of the life cycle impacts of nature-based approaches and natural features.

FEMA Response: As explained further in the FFRMS Job Aid,²⁴³ service life is considered in the determination of the FFRMS floodplain using CISA. Additionally, in the 8-step decision-making process FEMA considers whether a proposed action would be located within and whether it would affect a floodplain or wetland; FEMA avoids Federal actions in floodplain and wetland locations unless they are the only practicable alternatives and are able to minimize harm to and within floodplains and wetlands.

Further, the service life of the project is considered as part of the practicability analysis, including consideration of maintenance requirements. FEMA's procedures for review of its actions under part 9 include documenting the 8-step process and will incorporate documentation of nature-based solution consideration as part of that process.

2. Wetlands Identification and Floodplain and Wetlands Preservation

Comments: Some commenters requested additional clarification or provided recommendations regarding how FEMA identifies and preserves wetlands as part of the 8-step process. Four commenters requested FEMA improve wetlands identification in the 8-step process. One commenter noted that FEMA reviewers currently consulted additional sources of information only if other listed sources provide inadequate information, which could mean a FEMA reviewer would stop the assessment after consulting the National Wetlands Inventory ("NWI"). The commenter stated the NWI was only one imperfect source and could not provide a definitive determination, as the NWI documented only the presumed presence of wetlands on a site and did not accurately capture the full delineation of wetlands at ground-scale. Two of the commenters requested FEMA update the regulatory text by

²⁴³ Available at <https://www.regulations.gov/document/FEMA-2023-0026-0004> and https://www.fema.gov/sites/default/files/documents/fema_ffrms-floodplain-determination-job-aid.pdf (last accessed Jan. 24, 2024).

directing reviewers to conclude the assessment of whether or not an action was in a wetland after consulting each of the four sources of information. Two other commenters agreed stating the determination of the presence or absence of a wetland in the project site should not be based solely on the NWI because of the NWI's tendency to underestimate actual wetland areas. Those commenters recommended FEMA encourage consulting various sources beyond NWI. One commenter noted that involving a trained wetland delineator to assess wetland indicators (soil, vegetation, hydrology) and delineate wetland boundaries was crucial to prevent the loss of critical wetlands, especially considering their role in flood water storage.

FEMA Response: FEMA did not change the existing regulation or process for identifying wetlands. FEMA relies on the NWI to identify wetlands for the purposes of applying the 8-step process under 44 CFR part 9 but will also accept other determinations as provided by regulatory agencies or applicants. FEMA does utilize information from on-site evaluations, including for locations not included in the NWI; however, requiring an on-site evaluation of the presence of wetlands for every potential action would severely delay the provision of disaster assistance to impacted communities.

FEMA is not changing the current process in step 4 in this rulemaking and the implementation of the FFRMS would only expand the floodplain of consideration in step 4 of the 8-step process. FEMA did not eliminate consultation with the edits made to § 9.10. The edits made to § 9.10 are to the factors used to identify the impacts to proposed actions. Those edits were made for consistency with other edits made in the rule. Specifically, FEMA defines "natural and beneficial values of floodplains and wetlands" to mean the features or resources that provide environmental and societal benefits. FEMA added additional clarification that water and biological resources are often referred to as "natural functions of floodplains and wetlands" and also incorporated additional clarifying examples of water resource values, living resource values, cultural resource values, and cultivated resource values for more consistency with the Revised Guidelines and Executive Order 11988, as amended. FEMA also edited paragraph § 9.10(d)(2) for consistency with edits made in § 9.4 defining the natural and beneficial values of floodplains and wetlands.

Comment: One commenter requested FEMA take action to preserve wetlands

in this rulemaking, requesting FEMA prioritize wetlands preservation and prevent harm to wetlands to the greatest extent of the agency's authorities. The commenter recommended FEMA prioritize policy solutions that incentivize and fund the preservation of all remaining wetlands and look to climate-smart wetland restoration to maximize benefits. Noting the recent Supreme Court decision in *Sackett v. EPA*,²⁴⁴ the commenter requested FEMA act through this rulemaking to provide whatever protection it can for wetlands. The commenter explained the permitting process under section 404 of the Clean Water Act prior to the Supreme Court decision for filling wetlands and stated the *Sackett v. EPA* decision²⁴⁵ limited the scope of section 404.

The commenter requested FEMA incorporate prohibitions on certain types of activities in wetlands similar to prohibitions on certain types of activities in floodplains and provided the example of prohibiting HMA funding for new construction or substantial improvements in a floodway or new construction in a coastal high hazard area unless the action constituted a functionally dependent use or facilitates an open space use. The commenter suggested FEMA add language to § 9.11(d)(1) to prohibit new construction and substantial improvement in a wetland, except for a functionally dependent use; or a structure or facility which facilitates an open space use and also requested FEMA amend the HMA and PA Policy and Program Guides to reflect these changes.

Two commenters requested FEMA add language to the regulatory text regarding the agency's requirement to restore and preserve both floodplains and wetlands. One commenter wrote this requirement was implemented in § 9.11(f), where FEMA established that if an action harmed or degraded a floodplain or wetland, the agency must implement measures to restore the natural and beneficial values; however, the commenter stated FEMA did not provide direction on the measures to be used and the extent to which the natural and beneficial values must be restored. The commenter recommended FEMA provide the criteria that would satisfy the restore and preserve requirement in the regulatory text or in associated guidance. The commenter also recommended FEMA require federal actions result, as fully as possible, in no net loss of both acreage and function for

floodplains and wetlands. The commenter recommended FEMA require the type and extent of mitigation that applicants must undertake to satisfy the "restore and preserve" language where floodplains and wetlands were known to be negatively impacted. Another commenter requested FEMA add "or restore" after "preserve" in all the appropriate places in the regulatory text.

FEMA Response: FEMA believes the commenters' regarding wetlands preservation concerns are addressed by the existing regulation. As stated in § 9.2(d) and § 9.11(e), FEMA's policy is to preserve and enhance the natural values of floodplains and wetlands when the agency has the opportunity to do so. FEMA's longstanding requirements in the final rule at 44 CFR 9.11(e) outline the agency's requirements to restore and preserve the natural and beneficial values served by floodplains and wetlands. FEMA does not believe additional changes to the regulatory text or FFRMS policy are needed to achieve the commenters' goal of wetlands preservation.

FEMA did not propose to change the way that the 8-step process is applied to wetlands, and is not doing so in this final rule. FEMA notes the definition of wetlands in 44 CFR 9.4 has always been much broader than that under the Clean Water Act (CWA). Thus, under current practice the 8-step process has been applied to wetlands regardless of their jurisdictional status under the CWA. FEMA believes this commenter's concerns are already addressed by the existing regulation.

Additionally, FEMA understand the first commenter's desire to prohibit certain actions in wetlands but again believes the current 8-step process adequately addresses the commenter's concerns. In the 8-step decision-making process, wetland sites are avoided where possible. FEMA takes no action in a wetland unless the importance of the wetland site clearly outweighs the requirements to²⁴⁶:

- (i) Avoid the destruction or modification of the wetlands;
- (ii) Avoid direct or indirect support of new construction in wetlands;
- (iii) Minimize the destruction, loss or degradation of wetlands; and
- (iv) Preserve and enhance the natural and beneficial values of wetlands.

FEMA notes the 8-step process governs FEMA actions and the *Sackett* case does not apply in this context. While FEMA does consider new construction in wetlands, to include the placement of fill, and will also consider

alternatives, the 8-step process is not an authorization or permitting process. Additionally, FEMA notes the process is only applicable to actions funded or performed by FEMA and not more broadly applicable to actions performed by SLTTs or individuals using non-Federal funding.

The revisions to part 9 in this final rule do not change FEMA's long-standing requirement as part of FEMA's implementation of Executive Order 11988, as amended, and Executive Order 11990 to only perform or fund actions within or affecting wetlands if those actions are the only practicable alternative. FEMA considers alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis and will only perform or fund the action when there are no practicable alternatives. FEMA will minimize any adverse impacts when doing so. FEMA believes the commenter's concerns requesting revisions to § 9.11(d)(1) to add prohibitions on specific actions in wetlands are unwarranted given the agency's long-standing process that is not changing as a result of the changes made in this final rule or FFRMS policy.

FEMA's mission is to help people before, during and after disasters. While this focus on saving life and property allows for the restoration and preservation of the natural and beneficial values served by floodplains and wetlands, that is not the primary mission of the agency. Accordingly, the majority of FEMA's actions within floodplain or wetlands for repairs, replacement, or mitigation of risk to existing structures and facilities. Requiring no net loss in area or function of floodplains or wetlands would limit the agency's ability to assist disaster-impacted communities, as well as reduce risk within those communities. Additionally, requiring mitigation from disaster-impacted communities may prolong or inhibit their recovery process. FEMA instead relies on the alternatives analysis required by 44 CFR part 9 and takes no action within floodplains or wetlands unless there is no practicable alternative.

FEMA recognizes the concerns of commenter seeking edits to the regulation and guidance to provide criteria to satisfy the restore and preserve requirement, but again disagrees that such edits are necessary in regulatory text or the FFRMS policy to achieve the goals of floodplain and wetlands restoration and preservation. FEMA notes that in this rulemaking the agency did not make changes to the restore and preserve requirements in former § 9.11(e) other than updating the

²⁴⁴ *Sackett v. EPA*, 598 U.S. 651 (2023).

²⁴⁵ *Sackett v. EPA*, 598 U.S. 651 (2023).

²⁴⁶ See 44 CFR 9.9(e)(3).

numbering (this rule moves former § 9.11(f) to § 9.11(e)). FEMA will provide additional information and implementation resources to SLTT partners, stakeholders, and the public as part of the FFRMS implementation and will consider the commenter's suggestions regarding additional information on the criteria to satisfy the requirements of new § 9.11(e) when finalizing those resources. FEMA will also consider issuing further guidance through the agency's grant programs on this point.

Regarding another commenter's request to add "or restore" after "preserve" throughout the regulatory text, FEMA notes that the regulatory text is consistent with the long-standing policy outlined in 44 CFR 9.2.

Specifically, it is the agency's policy to "restore and preserve the natural and beneficial values served by floodplains" and "preserve and enhance the natural values of wetlands." Where floodplains are addressed in the regulatory text, "restore and preserve" is used, whereas "preserve" is used for wetlands, except for § 9.11(e)(3), which combines the two priorities more broadly in relation to natural and beneficial values of floodplains and wetlands. This language is consistent with Executive Order 11988, as amended, which directs agencies to "restore and preserve the natural and beneficial values served by floodplains," and Executive Order 11990, which directs agencies to "preserve and enhance the natural and beneficial values of wetlands." FEMA notes that the language in Executive Order 11990 omits "restore" in connection to wetlands.

3. Public Notice

Comments: Some commenters requested additional edits to the public notice requirements of the 8-step process. One commenter requested more specific guidance about the types and amount of information the notice would provide and the extent to which impacts will be identified and explained to the public and recommended FEMA revise the regulation to require FEMA to make site maps electronically available with the rest of its public notice. Two commenters requested the rule encourage community engagement and community-led planning by requiring early engagement with affected communities to understand the parameters of risks and vulnerabilities with engagement extending into the project design and implementation. The commenter requested public engagement go beyond the existing notice requirements to mandate proactive and meaningful outreach to

affected communities, allowing communities to provide input that engineers and developers may not have and improving the overall flood risk knowledge of communities. A third commenter recommended FEMA incorporate language to § 9.6 and § 9.8 to codify an emphasis on environmental justice by providing notice to individuals with limited English proficiency and individuals with disabilities, as well as communities or groups of people who are potentially affected and who are not regular participants in Federal decision-making. Two other commenters agreed with the recommendation for access to individuals with limited English proficiency.

FEMA Response: FEMA is not updating significant portions of the public notice process in this rulemaking, as FEMA does not believe the current notice process is inadequate. However, FEMA did update § 9.8(c)(4)(i) to incorporate notice through the internet or another comparable method. During the public notice process, FEMA will also provide links to electronic versions of relevant maps.

FEMA does accept public comments on proposed actions during both the early and final public notice periods, addressed in §§ 9.8 and 9.12. Early public notice allows the public to provide initial input on alternatives to be considered and potential issues with a proposed action, which may include specific measures to minimize flood risk. The final public notice allows for the public to review the decision-making process conducted by the agency and provide any input before the action is taken. FEMA notes community planning, such as hazard mitigation planning, can inform the 8-step process.

FEMA notes this final rule does not apply to a local community's permitting processes under the NFIP's floodplain management regulations. Those regulations are found at 44 CFR part 59 *et seq.* FEMA defines "action subject to the FFRMS" as "any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility." The FFRMS applies to grants for projects funding the new construction, substantial improvement, or repair of substantial damage under FEMA programs such as IA, PA, and HMA programs, and grants processed by FEMA's GPD.

FEMA routinely translates agency materials into languages other than English as appropriate²⁴⁷ and consistent

²⁴⁷ FEMA's website has information and materials available in languages other than English, including

with FEMA's Language Access Policy.²⁴⁸ Specifically incorporating this policy into the rulemaking is not necessary, as FEMA's process is set forth in the Language Access Policy.²⁴⁹ That policy governs how the agency would handle written translations, as appropriate and consistent with Executive Order 13166, Improving Access to Services to Persons with Limited English Proficiency, the DHS Language Access Plan, and Section 308 of the Stafford Act, 42 U.S.C. 5151, as applicable. In accordance with those existing requirements, FEMA ensures appropriate translations of public notices for the 8-step process.²⁵⁰ FEMA also ensures individuals with disabilities have effective communication access to FEMA programs and activities, consistent with requirements under sections 504 and 508 of the Rehabilitation Act of 1973, 29 U.S.C. 794, 794d, and FEMA's Section 504 Implementation Plan.²⁵¹

Comment: One commenter requested FEMA implement a public tracking system of all FEMA actions that are subject to part 9. The commenter stated a tracking system would ensure the public could assess the cumulative impacts of a proposed action. The commenter also requested FEMA accept public comment on proposed actions.

FEMA Response: FEMA does accept public comments on proposed actions during both the early and final public notice periods, addressed in §§ 9.8 and 9.12. Early public notice allows the public to provide initial input on alternatives to be considered and potential issues with a proposed action.

Spanish, French, German, Arabic, Hausa, Vietnamese, Portuguese, Chinese, Japanese, Hindi, Myanmar (Burmese), Korean, Nepali, Somali, Swahili, Tagalog, Tongan, Creole, Fijian, and Russian. See <https://www.fema.gov/disaster/recover/languages> (last accessed Mar. 28, 2024).

²⁴⁸ FEMA Policy FP-256-23-001, available at https://www.fema.gov/sites/default/files/documents/fema_policy-language-access.pdf (last accessed Mar. 27, 2024).

²⁴⁹ FEMA's Language Access Policy requires the agency to have processes in place to regularly identify and assess the language assistance needs of the public and requires written translation of vital documents in languages other than English based on assessments of need and capacity. See Principles A. and C. of the policy available at https://www.fema.gov/sites/default/files/documents/fema_policy-language-access.pdf (last accessed Mar. 27, 2024).

²⁵⁰ See e.g. "FEMA Public Notice: 4618-DR-PA-Pennsylvania Individual Assistance, Public Assistance and HMGP" available at <https://www.fema.gov/disaster/4618/publicnotice> (last accessed June 11, 2024); "DR-4673-FL EHP Public Notice 001" available at <https://www.fema.gov/disaster-federal-register-notice/dr-4673-fl-ehp-public-notice-001> (last accessed June 11, 2024).

²⁵¹ FEMA Section 504 Implementation Plan, available at https://www.fema.gov/sites/default/files/2020-06/fema_section-504-implementation-plan.pdf (last accessed Mar. 27, 2024).

The final public notice allows for the public to review the decision-making process conducted by the agency and provide any input before the action is taken. The agency has updated the rule to allow for electronic notification of public notices to increase accessibility to the public.

FEMA appreciates the commenter's suggestion that the agency provide a public tracking system for part 9. FEMA provides data on actions taken by the agency through the OpenFEMA Data Sets.²⁵² FEMA is not proposing any additional systems of record with this rulemaking.

4. Impacts to Floodplains and/or Wetlands

Commenters provided feedback on FEMA's review of and requirements regarding impacts to floodplains and/or wetlands in part 9. While one commenter provided support for the rule's prohibition against locating a proposed action in a floodplain or wetland if a practicable alternative exists outside the floodplain or wetland in proposed §§ 9.6(b)(3) and 9.9(d)–(e) and agreed with FEMA's approach of first avoiding impacts, then minimizing any impacts that must occur, and restoring impacted areas, other commenters provided recommendations for additional edits to the regulatory text.

Comment: One commenter requested FEMA revise § 9.10 to require consideration of disproportionate and adverse effects on communities with environmental justice concerns, whether direct, indirect, or cumulative.

FEMA Response: FEMA appreciates the commenter's concerns regarding equity and environmental justice. The agency incorporates natural environment, social concerns, and economic aspects into the 8-step process as part of the practicability analysis (addressed in 44 CFR 9.9). FEMA's revisions to part 9 reflect consideration of the type and criticality of the action involved, the availability and actionability of the data, and equity concerns in the implementation of Executive Order 11988, as amended. FEMA also has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it.²⁵³

The impact analysis addressed in § 9.10 focuses on impacts to and from floodplains and wetlands associated with a proposed action. As part of the evaluation of impacts, FEMA considers the impacts addressed in § 9.10(d), which include factors that evaluate the impact of flooding on public health, safety, and welfare. In addition to this evaluation of flood hazard, FEMA reviews all proposed FEMA-funded actions for potential disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process. FEMA believes these current practices address the commenter's concern, and revisions to the final rule are not necessary.

Comment: One commenter requested FEMA identify both the impacts on the floodplain and also the watershed in Step 4. The commenter noted that the subsequent steps in the process described consideration of this. The commenter also requested FEMA articulate and follow a "no adverse impact" principle. The commenter requested FEMA specifically address cumulative impacts of an action, as this is especially important when assessing flood impacts, as development actions and land use changes in a watershed would alter the floodplain.

FEMA Response: FEMA is not changing the current process in step 4 in this rulemaking. The implementation of the FFRMS would only expand the floodplain of consideration in step 4 of the 8-step process. The changes made in § 9.10 are intended as clarifying edits for consistency with other FFRMS implementing edits and are not substantive policy changes. FEMA did not propose the policy changes suggested by the commenter, and FEMA may take them under consideration in the future. Note that under step 1, FEMA considers whether proposed actions can impact or be impacted by a floodplain or wetland, not just whether or not the proposed action is located in a floodplain or wetland. This provision addresses the commenter's concerns regarding actions in the watershed impacting floodplains and wetlands.

Comment: Another commenter requested FEMA retain the language in current § 9.10(c) stating that "Regional Offices of the U.S. Fish and Wildlife Service may be contacted to aid in the identification and evaluation of potential impacts of the proposed action on natural and beneficial floodplain and wetland values." The commenter stated that given USFWS's particular expertise in understanding coastal and wetland

ecosystems, and the importance of maintaining the natural beneficial values of these habitats, the commenter recommended retaining the consultation language "rather than merely stepping it down to guidance."

The commenter further recommended FEMA strengthen the language and require FEMA at least contact the USFWS when making any such evaluation in case the USFWS had concerns about or special understanding of the values of those habitats, including for threatened and endangered species.

FEMA Response: FEMA is not changing the current process in step 4 in this rulemaking and the implementation of the FFRMS would only expand the floodplain of consideration in step 4 of the 8-step process. This rule does not eliminate consultation with the edits made to § 9.10, as the existing regulatory text merely states the agency "may" contact the USFWS for impact identification on the natural and beneficial values of floodplains and wetlands. The edits made to § 9.10 removes this optional, internal U.S. government process from the regulation; the process will be further outlined in guidance. FEMA notes this section did not address FEMA's consultation requirements under the Endangered Species Act.

In this final rule, FEMA updates the definition of "natural and beneficial values of floodplains and wetlands" to include consideration of features or resources that provide environmental and societal benefits. The definition also includes examples of what "natural functions of floodplains and wetlands" means. FEMA does not believe additional edits to the final rule are required to address the commenter's concerns regarding coastal and wetland ecosystems and habitats for threatened and endangered species, because these concerns are addressed in the definition at 44 CFR 9.4. The definition provides some examples but is not all inclusive, and FEMA will consider providing additional examples in guidance to further clarify and address the commenter's concerns.

FEMA edited § 9.10(d)(2) for consistency with edits made in § 9.4 defining the natural and beneficial values of floodplains and wetlands. Specifically, the edits to § 9.10(d)(2) add providing habitats and enhancing biodiversity under the living resource values FEMA will consider in step 4 of the 8-step process. In step 4, FEMA determines impacts to the floodplain, which include changes to the hydraulics and hydrology of the floodplain which informs potential impacts to protected species and their critical habitats. FEMA

²⁵² See FEMA, OpenFEMA Data Sets, <https://www.fema.gov/about/openfema/data-sets> (last accessed Mar. 25, 2024).

²⁵³ See <https://www.fema.gov/emergency-managers/national-preparedness/equity> (last accessed Jan. 24, 2024).

will continue to perform Section 7 consultation under the Endangered Species Act as required. FEMA reviews all applicable actions under the Endangered Species Act, and such reviews are coordinated with the 8-step decision-making process.

Comment: While a commenter expressed appreciation of FEMA's recognition of the processes of storing floodwater and groundwater recharge, the commenter recommended the rule clarify that floodwater storage and groundwater recharge may have functions that extend beyond the time and area of a flood (such as the base flood). The commenter stated floodwater storage and groundwater infrastructure placed in the floodplain may result in continued inundation of floodplain areas. However, those types of infrastructure may be required to convey stored floodwater to groundwater recharge sites, minimizing impacts of flooding within the floodplain.

FEMA Response: Through the 8-step process, FEMA considers the impacts to and from the floodplain including the natural and beneficial functions of the floodplain and actions which may support development within the floodplain. Additional clarifications are not required in the regulatory text to address the commenter's concerns as the 8-step process resolves these concerns overall.

Avoidance

Comments: Some commenters requested FEMA prioritize avoidance of floodplains and wetlands as part of this rulemaking and FFRMS policy. Two commenters wrote a primary intent of Executive Orders 11988, as amended, and 11990 was avoidance of floodplains and wetlands development and stated avoidance was the most effective risk reduction strategy. Some commenters recommended FEMA issue guidance, with one comment recommending the guidance describe how regional offices should review projects post-*Sackett v. EPA*,²⁵⁴ and strengthen the practicable alternatives analysis. Another commenter requested that the agency incorporate FFRMS guidance into PA and HMA guidance.

One commenter wrote the FFRMS was a process to assess the siting and design of a proposed action, rather than a mere elevation standard and requested FEMA promote avoidance as the preferred alternative to actions that would modify or occupy floodplains or wetlands. The commenter stated FEMA must consider design alternatives in

Step 3 of the 8-step process at § 9.9. Three commenters wrote elevation and floodproofing were often prioritized instead and requested FEMA prioritize avoidance as the first alternative to actions that would modify or compromise floodplain function as the most effective risk reduction strategy, rather than using elevation or floodproofing as first design alternatives. Two commenters agreed that FEMA should strengthen Step 3 in § 9.9 to emphasize avoiding federal actions in floodplains and wetlands where practicable.

FEMA Response: While FEMA made edits to § 9.2(d) to reorder the agency's actions to prioritize minimizing the impact of floods on human health, safety, and welfare in this part, those edits do not change FEMA's long-standing requirement as part of implementation of Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains if those actions are the only practicable alternative. *See, e.g.,* new 44 CFR 9.9(d). Through the 8-step process, FEMA will consider alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis. If there is no practicable alternative, FEMA may perform or fund the action and will minimize any adverse impacts when doing so. FEMA believes the commenters' concerns are unwarranted given this long-standing process that is not changing as a result of the changes made in this final rule.

FEMA agrees with one of the commenters that FFRMS is not merely an elevation standard. As section G.2 of FEMA's FFRMS policy states "[t]he FFRMS is a resilience standard. Particularly in cases where elevation may not be feasible or appropriate for facilities, the FFRMS floodplain, determined according to the process described in section C of this policy, establishes the level to which a structure or facility must be resilient. Resilience measures include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand and rapidly recover from a flood event."²⁵⁵

As explained above, FEMA has not proposed changes to the way that the 8-step process is applied to wetlands. FEMA notes the definition of wetlands in 44 CFR 9.4 has always been much broader than that under the Clean Water Act (CWA). Thus, under current practice the 8-step process has been applied to wetlands regardless of their

jurisdictional status under the CWA. However, the 8-step process does not have the same requirements of Section 404 of the Clean Water Act. While FEMA does consider new construction in wetlands, to include the placement of fill, and consider alternatives, the 8-step process is not an authorization or permitting process.

As previously explained, FEMA will distribute resources for the public and SLTT partners and the public identifying what the FFRMS is, and how the agency will implement the Executive Orders to further assist applicants for FEMA-funded assistance programs. FEMA will also provide technical assistance through the agency's regional offices in support of FFRMS implementation. FEMA notes while the PA and HMA guidance documents are instructive to applicants, FEMA's regulations at 44 CFR part 9 control the agency's actions for all of FEMA's programs.

5. Zero/No Rise

Comments: Some commenters requested FEMA implement a "zero-rise" or "no rise" standard in the 8-step process. Four commenters stated that FEMA should require a "zero rise" standard for Federal actions where a regulatory floodway had not been designated. The commenters noted FEMA's edits to § 9.11 but recommended an additional edit to not permit any increase in flood levels when a regulatory floodway had not been designated.

Another commenter raised concerns about these requirements in the FFRMS policy. The commenter stated that the requirement for FEMA-regulated floodplains without a floodway in the FFRMS policy was unreasonable. The commenter wrote the requirement to include all anticipated development was challenging for applicants, as anticipated development might never happen or substantially change due to the project approval process and recommended limits be placed on what was included in the anticipated development to make the standard more reasonable.

FEMA Response: The changes made to § 9.11(d)(4) provide clarification that the agency will continue to require the NFIP's minimum standard (currently 1-foot rise) or, consistent with § 9.11(d)(6), a more restrictive standard adopted by a community. This has been a long-standing requirement of the NFIP.²⁵⁶ FEMA's edits help ensure consistency with the NFIP's minimum standard while allowing the flexibility to utilize

²⁵⁴ *Sackett v. EPA*, 598 U.S. 651 (2023).

²⁵⁵ *See* FFRMS policy, pg. 8.

²⁵⁶ 44 CFR 60.3(c)(10).

a community's own more restrictive standards.

FEMA did not propose to prohibit any increase in flood levels when a regulatory floodway has not been designated, and prefers not to make such a change at this stage of the rulemaking. The current process for determining increases in floodplains when a regulatory floodway has not been designated is consistent with the requirements of the NFIP and of many communities throughout the country. FEMA may take the commenter's suggestion under consideration in the future.

6. Prohibiting the Use of Fill

Comments: Some commenters also requested FEMA prohibit the use of fill for elevation in the 8-step process. Commenter requested FEMA consider the impacts of using fill to achieve elevation requirements. One commenter stated elevation could have damaging impacts if implemented without considering stormwater runoff and that using fill dirt to achieve floodplain elevation requirements could push stormwater onto surrounding areas and worsen or create flooding problems for adjacent properties. Another commenter stated that while intended to reduce flood risk, using fill dirt to achieve floodplain elevation requirements could exacerbate flooding in the surrounding area. This commenter also noted that placing fill in floodplains could severely impact floodplain and wetland ecosystems that are critical habitat for endangered species. Some commenters referenced a recent TMAC report that identified several concerns and perverse incentives from the use of fill to achieve elevation and recommended FEMA discourage the use of fill. Commenters requested FEMA revise § 9.11 to prohibit the use of fill to achieve elevation requirements in the FFRMS floodplain. Where fill is unavoidable, commenters requested FEMA require that a project retain the volume of water onsite that is equivalent to the volume of fill used or have adequate compensatory flood storage requirements. One commenter requested that in the Special Flood Hazard Area, FEMA require elevation to meet FFRMS requirements to be on an open foundation. Another commenter recommended that where the use of fill was necessary as a last resort, added measures should be required to replace the on-site ecosystem benefits of disturbed wetlands.

FEMA Response: FEMA appreciates the commenters' concerns regarding the use of fill and agrees that the impacts of its use must be considered. As part of

Step 4 where FEMA identifies impacts, the agency identifies any impacts to the floodplain which would include increasing flood risks to adjacent areas. In § 9.11(d)(4) and (d)(6), FEMA's minimization requirements ensure that fill within regulatory floodways or floodplains where no regulatory floodway is designated will generally not increase flood levels within the community. These minimization requirements ensure consistency with the NFIP or any more restrictive Federal, State, or local requirements. Until a regulatory floodway is designated, no fill is permitted within the base floodplain unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than the amount designated by the NFIP or the community, whichever is most restrictive.²⁵⁷ Under § 9.11(d)(4), fill is also prohibited within a designated regulatory floodway that would result in any increase in flood elevation within the community during the occurrence of the base flood discharge. FEMA prioritizes elevation on open works over elevation on fill in § 9.11(d)(7), requiring elevation on open works rather than on fill in coastal high hazard areas and elsewhere, as practicable.

The substance of the requirements in § 9.11(d) was not changed as part of this final rule. FEMA did not propose to prohibit elevation on fill as suggested by some of the commenters, and prefers not to implement such a change at this stage of the rulemaking. FEMA will remain cognizant of the potential impacts of use of fill as part of the project approval process as described above in the 8-step process, and may take the comments under consideration for further action at a future date.

The revisions to part 9 do not change FEMA's long-standing requirement as part of implementation of Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains and wetlands if those actions are the only practicable alternative. *See, e.g.,* new 44 CFR 9.9(d). No further edits are required to part 9 to address the commenter's concerns regarding fill in wetlands. As FEMA's current part 9 process currently prohibits actions in wetlands where there is a practicable alternative, fill and dredge practices to achieve elevation or to construct buildings/facilities in wetlands would only be allowed in those instances where there were no

alternatives and the need to perform the action outweighed agency's requirements outlined in 44 CFR 9.9(e)(2). New § 9.11(e) (current § 9.11(f)) requires restoration where applicable.

FEMA appreciates the commenters' reference to the recent TMAC recommendations on the use of fill. The TMAC recommended FEMA consolidate and clarify fill requirements for the NFIP in 44 CFR 60.3 and consider prohibiting the use of fill as an elevation technique for residential and commercial structures in the SFHA (both coastal and riverine); prohibiting fill as a floodproofing technique; and allowing a limited amount of fill for bridges, dams, and wastewater treatment facilities along with other uses functionally dependent on proximity to water. The TMAC also recommended that FEMA (1) require communities participating in the NFIP to quantify and put on file the impacts of proposed fill and other development on flood stages and the environment prior to issuing fill permits and (2) require notice to property owners and appropriate environmental agencies when increases in flood elevation or potential negative consequences were found and could not be mitigated.²⁵⁸ These recommendations are clearly focused on the NFIP, not the 8-step process in part 9 in this rulemaking. As described above, the 8-step process contains sufficient flexibility to allow FEMA to address concerns related to use of fill during Steps 4 and 5 of the process. While FEMA is considering these recommendations consistent with the NFIP requirements, the agency notes TMAC recommendations are not binding on FEMA.

Comment: One commenter wrote requesting that FEMA eliminate Letter of Map Change (LOMC) exceptions for sites. The commenter cited HUD's proposed rule and stated that an exception could incentivize adding fill in a floodplain, which could lead to a reduced floodplain function, as well as increased flood risk to surrounding properties.

FEMA Response: FEMA's regulation does not specifically except areas or sites where FEMA has issued a Letter of Map Change (LOMC) from the 8-step process. In their original regulation, HUD did have a specific exception for any non-wetland site in a floodplain for which FEMA had issued a final Letter of Map Amendment (LOMA), final

²⁵⁷ 44 CFR 9.11(d)(4).

²⁵⁸ See TMAC 2023 Interim Report, available at https://www.fema.gov/sites/default/files/documents/fema_rm-tmac-2023-interim-report-30OCT2023.pdf (last accessed Mar. 28, 2024).

Letter of Map Revision (LOMR), or a final Letter of Map Revision Based on Fill (LOMR-F) that removed the property from a FEMA-designated floodplain. The exception under HUD's original regulation also included conditional LOMAs, LOMRs, or LOMR-Fs if HUD or the responsible entity's approval was subject to the requirements and conditions of the conditional LOMA or LOMR.²⁵⁹ FEMA notes that HUD removed these exceptions from 24 CFR 55.12(c)(8)(i) and (ii) in recent updates to their regulation.²⁶⁰ As FEMA did not except those areas in the regulation, the FEMA rule does not require revision for the FFRMS floodplain to apply and for FEMA to conduct the 8-step process if those areas are determined to be within the expanded floodplain. FEMA notes the changes to part 9 in this final rule do not apply to the NFIP's regulations on mapping and changes to FEMA maps. Those regulations are found at 44 CFR part 70 *et seq.*

7. Practicability

Commenters also recommended changes to the practicability analysis in the 8-step process.

Comments: A commenter stated concern that actions in floodplains and wetlands would be allowed only as a last resort under the rule and recommended that FEMA revise the regulations to more strongly clarify to officials implementing the regulations that actions in floodplains, especially those on already urbanized lands, could be allowed, provided flood resilience measures were employed. Conversely, another commenter recommended that FEMA prioritize avoidance as the first alternative to actions that would modify or compromise floodplain function as the most effective risk reduction strategy. The commenter recommended that where avoidance cannot be achieved, resilient design should be incorporated meaningfully. A third commenter stated the feasibility analysis should consider whether right-of-way is not available and condemnation is required.

FEMA Response: The revisions to part 9 do not change FEMA's long-standing requirement as part of implementation of Executive Order 11988, as amended, to only perform or fund actions within or affecting floodplains if those actions are the only practicable alternative. *See, e.g.,* new 44 CFR 9.9(d). This rule does not alter the 8-step process requirement to evaluate practicable alternatives,

which includes consideration of locations outside of the floodplain or wetlands. Through the 8-step process, FEMA considers alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis. If there is no practicable alternative, FEMA will perform or fund the action and will minimize any adverse impacts when doing so. FEMA believes the commenters' concerns are unwarranted, given this long-standing process that is not changing as a result of the changes made in this final rule. Further, the practicability factors, which are outlined in 44 CFR 9.9(c), include the consideration of legal constraints, which would generally encompass the acquisition of right-of-way for proposed actions.

Comment: A commenter requested specific revisions to § 9.9 to include "the presence of threatened or endangered species or their critical habitat" as an example under "natural environment." The commenter also requested FEMA include "the presence, absence, and/or effectiveness of local or state land management plans to conserve natural values of the floodplains and wetlands at issue." Finally, this commenter requested FEMA include "participation of the impacted community or communities in the Community Rating System program" when analyzing the practicability of alternatives to proposed actions in floodplains or wetlands. The commenter requested FEMA edit § 9.9 to include examples of floodplain values, including "wildlife habitat and connectivity, including for threatened and endangered species" in § 9.9(e)(2)(iv) and § 9.9(e)(3)(iv).

FEMA Response: FEMA respectfully declines the commenter's request, as the agency believes many of these examples would be covered under the existing regulatory text, and no edits are required in this final rule to address these concerns. Specifically, the final rule lists "natural environment" and includes "habitat," which addresses the commenter's concerns about the inclusion of threatened and endangered species or their critical habitat. "Social concerns" includes "land patterns;" under these factors, FEMA does consider local or state land management plans when considering practicability. FEMA appreciates the commenter's interest in the agency's Community Rating System (CRS) program. FEMA notes that the commenter's concerns regarding threatened and endangered species and their critical habitats is addressed in the CRS program through credits for communities that protect

threatened and endangered species.²⁶¹ A community's participation in the CRS program does not impact an action's practicability under part 9. Updating part 9 to incorporate the CRS program is inappropriate, as the CRS program provides discounts to individual policyholders in NFIP participating communities and as explained above, part 9 applies only to Federally-funded actions.

Further, FEMA's regulatory text is consistent with the Revised Guidelines. Wildlife habitat and connectivity are already incorporated into the rule in the definition of "natural and beneficial values of floodplains and wetlands." Specifically, that definition references "Living Resource Values" as "providing habitats and enhancing biodiversity for fish, wildlife, and plant resources." This language encompasses the wildlife habitat and connectivity requested by the commenter, and no edits are required to the final rule.

M. Other Comments

Comments: Two comments offered alternatives to the 8-step process outlined in part 9. One commenter recommended retreating a mile from every coast, river, and flood area and making those areas public lands, swamps, or flood zones and that FEMA prohibit rebuilding when buildings are destroyed due to sea level rise and convert those areas into their suggested publicly owned buffer. Another commenter recommended using eminent domain to reclaim flood damaged structures and reclaim lands, wetlands, swamps, and other properties, allowing these areas to naturally buffer and absorb flooding. The commenter stated private property rebuilding should not take place in a flood zone using taxpayer dollars, subsidies, grants, or any form of tax revenue.

FEMA Response: FEMA did not propose, and does not believe it would be appropriate to implement, a standard that categorically prohibits rebuilding within one mile of every coast, river, and flood area.

Comment: Another commenter stated there would likely be instances where the cost of floodproofing or elevating Federal and non-Federal buildings with the new FFRMS floodplain would be found to be unreasonable. The commenter recommended against any kind of automatic seizure or destruction in those instances, but rather suggested developing a process in which factors

²⁵⁹ See 24 CFR 55.12(c)(8)(i) and (ii) as of March 28, 2024.

²⁶⁰ 89 FR 30850 (Apr. 23, 2024).

²⁶¹ See CRS Coordinator's Field Manual 2017 and 2021 Addendum, available at <https://www.fema.gov/floodplain-management/community-rating-system> (last accessed Apr. 4, 2024).

could be considered in determining the future disposition of such buildings and encouraged the ability to grandfather-in some buildings so they could maintain their functionality until such a time as they actually suffered flood damage.

FEMA Response: Part 9 only applies to FEMA actions and the FFRMS only applies to FEMA actions that are subject to the FFRMS. FEMA defines “action subject to the FFRMS” as “any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility.”

Where part 9 applies, FEMA has always incorporated natural environment, social concerns, and economic aspects into the 8-step process as part of the practicability analysis. Specifically, if the minimization measures for a proposed action were found to be “unreasonable,” that may fall under the economic aspect of the practicability analysis. In these instances, FEMA has not proposed automatic seizure or destruction procedures in the regulatory text or policy. FEMA also works with program applicants to consider the appropriate service life for the action during the 8-step decision-making process to better understand the flood risks and safety prioritization for individual actions.

Comment: A commenter asked if FFRMS would be used as a selection tool for grant projects. The commenter noted that FEMA has previously considered a project’s scope or service area for funding and stated the increase in floodplains from NOAA Atlas 14 revised flood maps would limit federal funding for some projects due to previous design criteria used on the downstream channels or development.

FEMA Response: FEMA will not use the FFRMS flood elevation as a selection tool for grant projects; rather, it is a design requirement for grant projects. Issues related to or impacting a project’s scope or service area remain unchanged. Finally, FEMA disagrees with the commenter’s statement that revised flood maps would limit federal funding for some projects. Revised flood maps where the floodplains increase would have no effect on project eligibility.

Comment: One commenter inquired whether the agency’s findings would be beneficial to the “central Arizona project” given the dangers of flooding to the canal.

FEMA Response: FEMA appreciates the commenter’s interest in this regulation. The FFRMS CISA State of the Science Report provides a review and update of the best-available, actionable science that can support

application of the Climate-Informed Science Approach (CISA).²⁶² FEMA respectfully refers the commenter to the State of the Science Report and other tools to determine whether the FFRMS policy initiative more broadly may have an impact on a local project of interest. FEMA’s part 9 controls the agency’s implementation of Executive Order 11988, as amended, and Executive Order 11990.

Comments: Some commenters requested FEMA consider implementing the FFRMS for the NFIP. Another commenter requested FEMA require disclosure of past flood damages for FEMA-funded residential projects.

FEMA Response: As explained above, FEMA cannot accommodate the commenter’s request to integrate the FFRMS into the minimum floodplain management standards for the NFIP because it is beyond the scope of this rulemaking. The NFIP is a program through which property owners in participating communities can purchase Federal flood insurance as a protection against flood losses. In exchange, a community must adopt and enforce floodplain management regulations that incorporate NFIP minimum floodplain management criteria developed by the Administrator. Further information regarding FEMA’s minimum floodplain management standards for the NFIP can be found at 44 CFR part 59 *et seq.* Any update to those standards would require a rulemaking to revise the appropriate regulatory sections of the CFR. By contrast, the FFRMS, as implemented by this rulemaking, only applies to actions where FEMA funds are used for new construction, substantial improvement, or repairs to address substantial damage to structures and facilities.

Requiring disclosure of past flood damage for FEMA-funded residential projects is beyond the scope of this rulemaking. However, FEMA notes disclosure of prior flood damage, flood claims or losses, and the status of repetitive loss properties is important, and FEMA is pursuing options to require such disclosure, as evidenced in FEMA’s 2023 legislative proposal submitted to the 118th Congress.²⁶³

²⁶² Available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed Jan. 24, 2024), <https://www.fema.gov/floodplain-management/intergovernmental/white-house-flood-resilience-interagency-working-group> (last accessed Jan. 24, 2024), and posted to the public docket for this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0007>.

²⁶³ See <https://www.fema.gov/flood-insurance/rules-legislation/congressional-reauthorization/legislative-proposals> (last accessed Jan. 24, 2024).

N. Accessibility

In the NPRM, FEMA requested specific comment on accessibility issues. FEMA sought public comments on the impact of the proposed elevation requirement on the accessibility of covered facilities under the Fair Housing Act, the Americans with Disabilities Act (ADA), the Architectural Barriers Act (ABA), and section 504 of the Rehabilitation Act of 1973. FEMA invited comments on strategies the agency could employ to ensure accessibility requirements were met for properties that would be impacted by the rule. Additionally, FEMA invited comments on the cost and benefits of such strategies, including data that supported the costs and benefits. FEMA received five comments on accessibility. Some commenters provided FEMA with recommendations on strategies regarding accessibility, while other expressed concerns with potential increased costs of accessibility and elevation along with potential conflicts regarding accessibility laws.

Comments: One commenter recommended FEMA consider accessibility concerns as a factor in favor of selecting alternatives that minimize residential and essential structures within the floodplain. The commenter also stated projects should be designed to maximize both access and resilience by practicing avoidance to the extent practicable, consistent with Executive Order 11988. Another commenter recommended FEMA issue design and regulatory guidance to address concerns or challenges over the effects of proposed elevations on accessibility of covered facilities, particularly those intended for use by disabled and elderly populations and stated guidance could ensure that floodproofing would not hinder accessibility. A third commenter noted that elevating structures was not always feasible, practical, or advisable and that seeking to meet both elevation and accessibility requirements created even more challenges and increased costs, sometimes rendering certain projects infeasible. Referencing HUD’s Fair Housing Act’s guidance on BFE challenges, the commenter recommended FEMA recognize the impracticability of requiring elevation in certain situations consistent with HUD’s guidance. The commenter cited increased cost concerns and unintended consequences on individuals who rely on accessible housing.

Some commenters stated FEMA’s request for comment on accessibility concerns indicated a conflict with implementation of the FFRMS and laws

governing accessibility. One commenter stated FEMA admitted the rule could potentially conflict with several acts aimed at protecting vulnerable populations such as the disabled and elderly. Another commenter stated the agency indicated the proposed rule threatened to violate the Fair Housing Act, the Americans with Disabilities Act, the Architectural Barriers Act, and section 504 of the Rehabilitation Act of 1973 and recommended FEMA identify and either exclude or limit these scenarios when applying the proposed standard.

FEMA Response: Through the final rule, FEMA seeks to prioritize minimizing the impact of floods on human health, safety, and welfare, including those of vulnerable populations. FEMA's request for comment in this area focused on ways the agency could further reduce or mitigate the impacts of the FFRMS implementation on these populations. Accessibility concerns would generally fall under social concerns and legal constraints in assessing practicability in the 8-step process. FEMA considers both the accessibility of a structure and the accessibility to community resources for those impacted. FEMA only takes action in the floodplain if there is no practicable alternative. Further, if an alternative would render a building inaccessible, it would not be a practicable alternative. FEMA agrees with one of the commenters that proper guidance can help reduce the impacts of elevation on accessibility. FEMA's existing guidance documents address concerns associated with the effects of elevation on accessibility. FEMA may address any additional specific concerns regarding FFRMS implementation as they arise on a case-by-case basis or via additional guidance.²⁶⁴

FEMA appreciates the importance of providing affordable, accessible housing. FEMA believes that the agency's policy approach provides flexibility to address these concerns. For example, construction of ADA-compliant access facilities or ramps is an eligible cost for FEMA's HMA structure elevation and mitigation reconstruction projects for homes. FEMA considered the costs and benefits associated with this rule, including the overall increased costs of FEMA

projects, in the regulatory impact analysis provided on the public docket for this rulemaking.²⁶⁵ FEMA believes that the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and that the natural values of floodplains are preserved. FEMA notes any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements, including accessibility needs.

Regarding other conflicting laws, the commenters do not accurately state FEMA's position. FEMA sought comment on how the implementation of FFRMS may interact with specific legislation and strategies FEMA could employ to ensure accessibility needs were met. FEMA's policy approach provides flexibility to accommodate the specific needs of the vulnerable populations the commenter references, and FEMA believes the 8-step process requirements, specifically in considering the practicability of an action and potential impacts from the action, detailed above help resolve accessibility concerns.

O. Regulatory Impact Analysis Comments

FEMA received several comments specific to the agency's RIA associated with the rulemaking.

1. Alternatives

Comment: Commenters requested additional clarification and recommended edits to the alternatives detailed in the RIA. Specifically, two commenters stated FEMA should consider alternatives to the proposed standard and the various FFRMS approaches. The commenters stated that analyzing alternatives would include identifying cases where imposing the standard would create new risks and costs greater than the risk the standard sought to mitigate. The commenters further requested FEMA delay the final rule until these analyses were completed.

FEMA Response: Executive Order 11988, as amended, directs agencies to perform or fund actions within or affecting floodplains only if those

actions are the only practicable alternative. Through the 8-step process for individual actions, FEMA considers alternative locations, alternative actions, nature-based solutions, and the no action alternative under the practicability analysis. If there is no practicable alternative, FEMA will perform or fund the action and will minimize any adverse impacts when doing so.

On a project basis, FEMA has consistently leveraged benefit-cost analysis in grant programs requiring evaluation of cost effectiveness, such as those programs under Hazard Mitigation Assistance, and will continue to do so along with minimum standards for floodplain management across the agency's programs to help ensure that Federally funded projects are both cost-effective and result in more resilient communities. Additionally, during the 8-step process, FEMA will also evaluate the impacts from the proposed action (in Step 4) when determining the appropriate resilience or minimization measures in Step 5. The flexibility of the 8-step process allows FEMA to work with SLTTs to select the appropriate minimization measure for the action. FEMA requires that only practicable means to minimize harm to or within the floodplain are required for compliance with 44 CFR 9.11, including consideration of economic aspects. If, in the course of implementation, FEMA identifies categories of projects for which the standard proves to be generally impracticable, FEMA may take appropriate action—such as issuing further guidance—at that time.

FEMA believes that the benefits of preventing property damage and potentially saving lives justify the costs of the rule. These benefits are a result of the improved protection of structures and facilities due to increased elevation and floodproofing standards in FEMA's implementation of the FFRMS. This rule will help to ensure that Federal investments are better protected from flood damage, and that the natural values of floodplains are preserved.

Comment: A commenter stated the RIA did not present information on the population at risk, or the residual risk to human life associated with each FFRMS approach. The commenter stated that FEMA should follow the requirements of the Principles and Requirements for Federal Investments in Water Resources (March 2013) and accompanying Interagency Guidelines²⁶⁶ to provide information to

²⁶⁴ See e.g. "Hazard Mitigation Assistance Guidance," pgs. 59–60 available at https://www.fema.gov/sites/default/files/documents/fema_hma_guide_08232023_v1.pdf (last accessed April 2, 2024), "Public Assistance Program and Policy Guide, pg. 151 available at https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf (last accessed Mar. 12, 2024).

²⁶⁵ See <https://www.regulations.gov/document/FEMA-2023-0026-0013>. Specifically, see section 7.11.5 "Elevation Requirement Impacts on THUs."

²⁶⁶ Available at https://obamawhitehouse.archives.gov/sites/default/files/final_principles_and_requirements_march_2013.pdf (last accessed

owners and residents of flood-prone property the residual flood risk and availability of flood insurance. The commenter recommended that FEMA provide an estimate of the population at risk by FFRMS approach and an estimate as to how this would change by approach.

The commenter also requested information on FEMA's statements in the RIA regarding potential for lives saved by the rulemaking. The commenter stated that FEMA provided statistics on the number of fatalities from flash and river flooding but was unable to estimate how many of those fatalities would be avoided if the rulemaking were implemented. The commenter also stated that FEMA did not provide a quantification that would allow for a comparison among the FFRMS approaches. The commenter wrote that FEMA did not clarify whether the CISA would be safer than the FVA or 0.2PFA or whether elevating and floodproofing properties were necessarily safer than the no action alternative. The commenter further stated that floodproofing and elevation could instill a false sense of security that encouraged people to not evacuate or delay their departure in a flood. The commenter recommended that FEMA provide additional information in the RIA on this topic and include non-quantified costs to acknowledge it was conceivable that elevation and floodproofing could result in an increase in lives lost if those efforts provide a false sense of safety to the public.

FEMA Response: FEMA is leveraging Executive Order 11988, as amended, and the Revised Guidelines for the FFRMS rulemaking and the FFRMS implementation. The Principles and Requirements for Federal Investments in Water Resources and the accompanying Interagency Guidelines (PR&G) do not generally apply to this rulemaking; rather, those requirements apply to actions associated with water development projects.²⁶⁷ FEMA will

Jan. 24, 2024) and https://obamawhitehouse.archives.gov/sites/default/files/docs/prg_interagency_guidelines_12_2014.pdf (last accessed Jan. 24, 2024).

²⁶⁷ See "Principles and Requirements for Federal Investments in Water Resources at pg. 1, (Mar. 2013) available at https://obamawhitehouse.archives.gov/sites/default/files/final_principles_and_requirements_march_2013.pdf (last accessed Apr. 29, 2024) ("It is intended that these Principles and the supporting Requirements and Guidelines be applied to a broad range of Federal investments that by purposes, either directly or indirectly, affect water quality or water quantity"); see also and "Interagency Guidelines," available at https://obamawhitehouse.archives.gov/sites/default/files/docs/prg_interagency_guidelines_12_2014.pdf (last accessed Apr. 29, 2024).

apply the PR&G requirements to those specific actions as applicable, namely those actions where FEMA is taking an action associated with a water development project. Although the PR&G does not generally apply to this rulemaking, FEMA notes that the 8-step process includes public notice requirements detailed for steps 2 and 7, as further detailed in part 9.

Regarding the commenter's comment about how FEMA did not provide a quantification that would allow for a comparison among the FFRMS approaches, FEMA showed the comparison in Tables ES-12 and ES-13 within the RIA. These tables present the cost, transfer payments, and benefit estimates by FFRMS approach—where available data allow—and also present estimates of costs, transfers, and benefits by grant program for CISA, FEMA's primary approach.

FEMA added more text to the qualitative analysis within the benefits section of the RIA accompanying this final rule to further address the commenter's concerns regarding risk to human life and whether elevating or floodproofing properties under any of the FFRMS approaches is safer than taking no action. FEMA included a description of qualitative benefits, which included the potential for lives saved, savings in time and money from a reduced recovery period after a flood, increased safety of individuals, increased public safety, reduced personal and community impacts, and reduction in future health issues related to flooding. FEMA does not believe that it would be appropriate to refrain from taking this action based on the commenter's suggestion that the rule could instill a false sense of security. The commenter provided no evidence on this point, and FEMA does not believe it would be appropriate to fund less resilient projects in an effort to avoid making people feel secure in the event of a flood.

As explained in the NPRM, the CISA is FEMA's preferred policy approach, as FEMA believes it has the potential to be the best and most well-informed approach to building resilience in an equitable manner and ensuring a reduction in disaster suffering. CISA is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity.

With regard to the commenter's recommendation that FEMA provide an estimate of the population at risk by FFRMS approach, FEMA cannot correlate population risk by floodplain expansion. FEMA could not use

Geographical Information System (GIS) data, as the database identifies whether a project was in the floodplain, but because it did not categorize projects according to their location, FEMA was not able to distinguish projects located in coastal areas from those located in non-coastal areas. Additionally, the dataset does not break out multiple project worksites.

FEMA notes the agency's current alternatives analysis process incorporates consideration of a range of flood mitigation practices. FEMA considers the following alternatives: (a) no action; (b) alternative locations; and (c) alternative actions, including alternative actions that use natural features or nature-based solutions. When practicable, FEMA avoids actions within the floodplain. The flood minimization measures found in § 9.11 are reliable methods of providing resilience to structures. FFRMS flood resilience measures consider both current and future flood risks to better protect Federal investments. The elevation requirement in § 9.11(d)(3) applies to structures and also allows floodproofing for non-residential structures. The FFRMS policy provides further explanation for structures that must be located within the FFRMS floodplain must be elevated or floodproofed to the FFRMS flood elevation. Additionally, the policy clarifies facilities can use elevation or any other appropriate minimization measure to protect the facility against the FFRMS flood elevation. Minimization can include measures such as ensuring the impacted public knows their flood risk and has awareness of flood evacuation procedures.

2. Discount Rates

Comment: Two commenters requested FEMA implement the revised 2 percent discount rate from OMB Circular A-4 for this rulemaking to represent future benefits more accurately. Another commenter requested clarification on the discount rates used in the RIA. That commenter recommended FEMA state that the analysis was conducted using the prescribed 7 percent discount rate and requested FEMA provide a sensitivity analysis using a 3 percent discount rate and a 10 percent discount rate if appropriate.

FEMA Response: The new OMB Circular A-4 discount rate is effective March 1, 2024, for regulatory analyses received by OMB in support of proposed rules, interim final rules, and direct final rules, and January 1, 2025, for regulatory analyses received by OMB in support of other final rules. The

FFRMS proposed rule was published on October 2, 2023. Given this timing, FEMA is using the previously established discount rate and is not applying the new OMB Circular A-4 discount rate to this final rule. For the RIA, FEMA provided discounted values using both 3 percent (social rate of time preference) and 7 percent (opportunity cost of capital) based on the version of OMB Circular A-4 that was in place at the time of publication of the NPRM.

Comment: A commenter requested several clarifications on the discount rates that were used within the RIA, including the discount rate used to generate the figures in Appendix E (Benefits). The commenter questioned why both the 3 and 7 percent discount rate for benefits were used within the analysis when the 50-year present value benefit uses a single 7 percent discount rate. And they sought clarification on how the 7 percent discount rate was used for benefits.

FEMA Response: FEMA utilizes a 7 percent discount rate for benefits, while the table(s) referenced uses both 3 and 7 percent discount rates. The benefits per structure consist of a 50-year stream of benefits, discounted to the year that the structure is constructed using a 7 percent discount rate. Since the RIA estimates 10 years' worth of projects, those benefits must be discounted again from the year of construction to the present (*i.e.*, to the beginning of Year 1) and annualized for comparison with 10 years' worth of costs. FEMA conducted its discounting from the year of construction to the beginning of Year 1 and conducted its annualization using both 3 and 7 percent discount rates, per the version of OMB Circular A-4 that was in effect at the time of publication.²⁶⁸ FEMA has clarified this in this RIA.

3. Costs

Comment: A commenter requested clarifications and provided recommendations regarding administrative costs in the RIA. Specifically, the commenter asked for clarification on the administrative costs in tables 85 and 86 of the RIA, which summarize the low and high estimated impacts of the rule, stating these costs were shown as being the same for all of the alternatives in those tables while the RIA stated a range for the administrative costs. The commenter also requested clarification on table ES-12 and other tables that omitted administrative costs

from the undiscounted total dollar figures while those costs were included in the undiscounted costs in tables 64-69 which show total costs by FFRMS approach. The commenter requested FEMA reconcile the issue. The commenter stated FEMA acknowledged there would be annual administrative costs but only included those costs in the economic analysis for the first 10 years of the period of the analysis. The commenter recommended FEMA either include annual administrative costs as they apply after the initial 10-year period or explain why they would no longer be included.

FEMA Response: The administrative costs are different in tables 85 and 86 in the RIA provided with the NPRM. FEMA created a range for estimating the administrative costs for two circumstances: (1) if all projects used the interagency Federal flood standard support tool (low estimate, as represented in Table 85) and (2) if all projects used the Job Aid (high estimate, as represented in Table 86) for the first 10 years under the CISA. In reality, the administrative costs will likely fall somewhere between the low and high estimates. These tables are still tables 85 and 86 in the RIA. Further, tables 64-69 show the costs of the three different approaches (CISA, FVA, and 0.2PFA), which include the administrative costs to show the total cost under each approach.

Table ES-12 is a summary table that shows the costs of each approach so that the reader can see the various options next to each other. The administrative cost is separated out because if FEMA added the administrative cost to each approach, it may be misinterpreted as triple counting. To address the commenter's concerns, FEMA included footnotes in Table ES-12 and Table ES-13. FEMA also removed the term "total" from the costs section within Table ES-12 and Table ES-13 as they are not the total cost as they do not include the administrative cost. The reader should add each individual approach to the FEMA administrative cost to obtain the total costs in Section 7.12. For example, CISA + FEMA administrative = total CISA cost.

FEMA examined the number of projects that will be subject to the requirements in the first 10 years after the rule's publication. FEMA's analysis focuses on the costs, benefits, and transfer payments (*i.e.*, impacts on FEMA grants) that will result over a 50-year period from the application of the requirements of the final rule to those projects, for a total period of analysis spanning 60 years. The costs and transfers occur in the first 10 years of

the 60-year period because that is when the initial investment to elevate or floodproof those projects takes place. This is an upfront cost that occurs when the project is constructed. However, the benefits of the final rule are estimated over the 50-year useful life of the affected structures.

Comment: A commenter recommended FEMA use a more general cost index such as the Gross Domestic Product-Implicit Price Deflator (GDP-IPD) or an appropriate construction cost index instead of the U.S. Department of Labor's Bureau of Labor Statistics Consumer Price Index (CPI) to establish a 2021 common dollar basis.

FEMA Response: FEMA used CPI in majority of the analysis within the RIA, such as to adjust historical grant obligation amounts to constant dollars. However, FEMA used an Engineering News Record (ENR) Construction Costs²⁶⁹ factor to adjust the construction values to 2021 costs within the NPRM RIA. The ENR was used to represent the change in costs from 2016 to 2021. The value selected was a national cost average. This value is consistent with the approach used to calculate the initial construction costs, which applied the national average square foot cost. The adjustment factor from 2016 to 2021 applied was 1.17 or a 17% increase in construction costs over the period analyzed. FEMA used the same ENR data for the final rule's RIA but adjusted it to 2022 costs. While other sources indicated a larger range of construction cost increase, the ENR value was selected in the 2022 report as a lower-bound approach to the benefits analysis.

Comment: A commenter stated that FEMA acknowledged the costs of operating and maintaining elevation and floodproofing projects were not included in the RIA but instead were zeroed out. The commenter stated that while additional costs for operating and maintaining an elevated structure would be low, the costs for floodproofed structures could be substantial if floodproofing entailed generator/pumping stations. The commenter stated the omission was particularly glaring given the 50-year design life of the project and recommended FEMA include some reasonable estimate of these costs rather than zeroing them out, though the commenter did not provide any such estimates. The commenter also stated the RIA was incomplete without information on the estimated costs of

²⁶⁸ OMB Circular A-4, Regulatory Analysis, September 17, 2003, pages 33-34. Available at: <https://www.reginfo.gov/public/jsp/Utilities/a-4.pdf> (last accessed Apr. 29, 2024).

²⁶⁹ Construction Cost Index History. Engineering News Record (ENR). Available at: https://www.enr.com/economics/historical_indices/construction_cost_index_history (last accessed: Mar. 18, 2024).

improving the flood resilience of facilities; however, the commenter did not provide a data source to use for estimating the cost of increased flood resilience for facilities.

FEMA Response: FEMA appreciates the commenter's concerns. FEMA requested available data that would assist FEMA in estimating the impact of the proposed increased flood resilience standards on specific types of facilities, including examples showing the cost of similar resilience measures, case studies, or other relevant information. FEMA did not receive any data. Instead, FEMA discusses the non-quantifiable costs within Qualitative Discussion of Additional Potential Costs section. FEMA was able to quantify the number of facilities that would be impacted by the rule as well as the incremental costs of applying the FFRMS to these facilities. FEMA conducted the analysis on facilities based on the best available information. FEMA acknowledges that there are lifecycle costs associated with floodproofing of structures, but these costs are unique to the type of structure and floodproofing methods used, and not generalizable across all potential projects nationwide. FEMA discusses these costs qualitatively in Section 7.11.3 of the RIA.

FEMA included a qualitative summary of the impacts that could not be quantified, such as increased resilience standards for facility projects, additional costs for adding requirements to buildings with basements, diversion of projects out of the floodplain, lifecycle maintenance costs for floodproofing and project delays and forgone projects, within the executive summary and conclusion section.

FEMA discusses facilities and the challenges with estimating economic impacts of the FFRMS. Because there are many methods for making facilities resilient, and due to the wide variety of projects considered facilities, FEMA could not make quantitative estimates of economic impacts for these projects that can be applied for all facility types nationwide.

Comment: A commenter requested FEMA further explain the omission of specific quantifiable costs, such as the costs for projects that may be diverted out of the floodplain, impacts to projects with existing basements, project delays, or foregone projects, that would result from the rule. The commenter stated these costs vary in terms of data and method calculation ability. In particular, the commenter questioned why impacts to structures with basements were not quantified because data are available about, for instance, the prevalence of basements geographically and depth-

damage functions for structures with basements, as well as information from the Census of Construction. The commenter also questioned whether diversion out of the floodplain is a cost of the rule because, presumably, a project would only be diverted if a project owner determined that net benefits would be higher without the project in the floodplain.

FEMA Response: FEMA identified these as data limitations because the agency does not generally track the information referenced by the commenter. For example, FEMA does not track project applications where the applicant withdraws their application for Federal funding due to floodplain considerations.

In addition, FEMA appreciates the commenter providing data sources for structures with basements and has considered this data. These data sources provide national-level summary statistics and geographic information on structures with basements. FEMA is unable to apply this data to FEMA's project level data, since FEMA databases do not include fields for structures with basements, and FEMA is unable to correlate the Census of Construction data with its own project-level data. Additionally, this data pertains to residential construction, and only a small number of FEMA actions subject to the FFRMS are residential construction.

4. Benefits

Comment: A commenter requested clarification on the discrepancy on "Appendix E: Benefits Net Present Value" heading on page 213, which would appear to indicate that Tables 1–18 display the Net Present Values, but the column headings in these tables are labeled ". . . Present Value Benefits. . . ." The commenter stated that the various values presented in said tables are elsewhere presented as Benefits rather than Net Benefit, as seen in a comparison of Table 84 with Tables 17 and 18 of Appendix E.

FEMA Response: The tables referenced by the commenter show the Present Value of the benefit streams expected from implementation of this rule. FEMA updated the table headings and footnotes as appropriate.

Comment: A commenter requested clarification on how the results of the analysis were presented in tables. Specifically, the commenter questioned the presentation of a single estimate for benefits the FFRMS approaches in the conclusion, the lack of monetization for benefits discussed qualitatively, how none of the FFRMS approaches have a positive net benefit, and how there was

no rationale for not selecting 0.2PFA as the preferred approach, as the commenter calculates it is the FFRMS approach with the greatest net benefit.

FEMA response: The benefits are not the same for all of the FFRMS approaches. FEMA could not quantify every cost and benefit associated with this rule. However, FEMA was able to quantify the number of structures and facilities that would be impacted. FEMA quantified a portion of the benefits for the CISA for all PA Category E projects that are subject to the FFRMS. Specifically, FEMA estimates the present value benefits of one additional foot of freeboard for the 50-year useful life of PA Category E projects undertaken during the 10-year period of analysis, with the assumption that there will be a 59-inch SLR.

FEMA was only able to estimate quantitative benefits for PA Category E projects affected using CISA. FEMA cannot compare quantitative benefits to the costs for IA or HMA, since FEMA does not have a reliable data source to estimate the benefits for projects covered by these programs; HMA data cannot be broken out by building types and IA data is limited to residential-related projects, which are not included in the 2022 report. The table that the commenter created making such a comparison to demonstrate that 0.2PFA is the FFRMS approach has the highest net benefits is not accurate. The present value of benefits using CISA is not the same as the present value of benefits using FVA or 0.2PFA, as the number of projects impacted by each approach varies. FEMA did estimate the impact on PA projects for FVA, 0.2PFA and CISA in sections 7.14.2.1 through 7.14.2.6 within the RIA. However, these estimates cannot be applied to IA and HMA projects for the reasons stated above. In addition, there are additional costs and benefits that FEMA could not quantify for this analysis so FEMA discussed them in a qualitative manner. For example, qualitative benefits include the potential for lives saved, savings in time and money from a reduced recovery period after a flood, increased safety of individuals, increased public safety, reduced personal and community impacts, and reduction in future health issues related to flooding.

Accordingly, FEMA is unable to use the commenter's table to select the "alternative with the greatest net benefits" as the commenter stated, since the table is not inclusive of all of the rule's quantified and unquantified benefits.

Comment: A commenter sought clarification about how FEMA

compared the costs and benefits within the RIA. The commenter stated that it appeared as if the costs pertaining to “14,427 PA, IA, and HMA structures” are being associated with, or charged to, the benefits associated with “1,173 PA Category E projects.”

The commenter also expressed confusion over how FEMA used +5-ft freeboard for costs and then used +1-ft freeboard for benefits. The commenter asserted that the statement “FEMA does not have data to quantify the benefits of additional freeboard” was confusing because depth-damage functions are available. They presumed that this would account for CISA’s poor economic performance relative to the other approaches.

FEMA Response: FEMA’s quantitative benefit estimates are based on a 2022 report that analyzed the benefits of 1 foot of additional freeboard for various building types. FEMA used this report to quantify the benefits of 1 foot of freeboard, as this was the only data that was available. This allowed FEMA to monetize the benefits of an additional foot of freeboard for non-residential PA projects (*i.e.*, Category E projects). FEMA was unable to use the benefits study to estimate the benefits for HMA and IA projects, since HMA data cannot be broken out by building type, and IA data is limited to residential projects. Accordingly, FEMA’s analysis acknowledges that when comparing the total monetized costs and benefits of the rule, it is an imperfect comparison: the total monetized costs are attributable to elevating or floodproofing PA, IA, and HMA structures between 1 and 5 feet (depending on the FFRMS approach used and the location of the project), while the total monetized benefits are attributable to elevating or floodproofing PA projects one additional foot.

FEMA does not claim that the benefits to PA Category E projects are associated with, or charged to, any of the other projects in this analysis. FEMA was able to estimate costs for PA, HMA, and IA, but only able to quantify benefits for PA Category E. FEMA expects benefits for all types of projects but does not have sufficient data for a quantitative estimate.

FEMA could not apply depth-damage functions to these projects, since they are only applicable to elevation or floodproofing at specified levels above the base flood elevation for specified flood zones. FEMA’s project databases only identify whether a project is in the 1 percent annual chance floodplain and do not show what flood zone a project is located in. Because of this, FEMA cannot apply depth-damage functions to

individual projects to determine the benefits from elevation or floodproofing.

FEMA supplements the monetized benefits with a qualitative discussion of additional benefits that FEMA could not monetize. Specifically, FEMA identified qualitative benefits, including reductions in damage to properties and contents from future floods, potential lives saved, public health and safety benefits, reduced recovery time from floods, and increased community resilience to flooding.

Comment: A commenter requested clarification about how FEMA would determine the necessary height to maximize net benefits for a given project under CISA. Specifically, the commenter asked what assumptions FEMA would use (*e.g.*, a 59-inch SLR, an 8.5 RCP) to determine elevations that result from “using the best-available, actionable hydrologic and hydraulic data and methods.”

FEMA Response: In the RIA, FEMA provided a summary of the estimated benefits per building type for PA projects. The analysis included both mitigation types (elevation and floodproofing) for 8-inch, 39-inch, and 59-inch SLR and both mitigation types for 4.5 and 8.5 RCP. For FEMA’s primary estimate, FEMA used 59 inches of SLR due to it being the closest SLR option to the vertical rise, in accordance with FEMA’s CISA+5-ft assumption. CISA is the preferred approach for the FFRMS if the data are available. Since 5 feet is equivalent to 60 inches (5 × 12 inches per foot), 59-inch SLR is the closest SLR option that FEMA had available for this portion of the analysis.

However, in practice, FEMA’s FFRMS policy sets minimum elevation requirements to account for possible changes in future flood hazards and therefore, under the CISA, the elevation or floodproofing height would vary by location and criticality of the project. As explained above, FEMA is relying on the FFRMS CISA State of the Science Report to determine what CISA data is actionable and available and will use the FFRMS Job Aid methodology to determine the CISA, FVA, and 0.2PFA for FFRMS actions. The FFRMS CISA State of the Science Report²⁷⁰ discusses

²⁷⁰ FFRMS CISA State of the Science Report, pg. 22, available at https://www.whitehouse.gov/wp-content/uploads/2023/03/Federal-Flood-Risk-Management-Standard-Climate-Informed-Science-Approach-CISA-State-of-the-Science-Report.pdf?trk=public_post_comment-text (last accessed April 4, 2024). The report recommends that agencies use the latest interagency Federal guidance for regionally-based SLR projections. The underlying SLR science reported used for the report is based on the IPCC AR6 which uses shared socioeconomic pathways (SSPs) rather than the older Representative Concentration Pathways

the SLR scenarios and what factors to consider when selecting the appropriate SLR projection. The FFRMS Job Aid recommends using the intermediate SLR scenarios for non-critical actions and intermediate-high SLR scenarios for critical actions.²⁷¹ As part of initial implementation, FEMA intends to leverage the FFRMS Job Aid as explained above.

Comment: A commenter requested clarification regarding a footnote in the RIA’s Executive Summary, in which FEMA explains the scope of its analysis is limited to impacts from affected projects in the initial 10 years. The commenter questioned the validity of the analysis under the assumption that the analysis relied on a sample of a larger set and recommended that FEMA coordinate with water resource agencies for additional data on elevation and floodproofing.

FEMA Response: This commenter is misinterpreting the footnote. The footnote is explaining why FEMA has limited the analysis to impacts from projects in only the initial 10 years of the rule’s implementation. It is not saying that the cost analysis is relying on a sample (the first ten years of implementation) of a larger set (the period of time in which the regulation would be in effect) as suggested.

Comment: One commenter wrote that the rule increased the efficiency and financial benefits of Federal investments and that it would be irresponsible to continue spending taxpayer dollars based on a backwards-looking assessment of flood risk. The commenter agreed with FEMA’s assessment that the benefits of the rule justified the rule’s costs. The commenter requested FEMA provide a more comprehensive and accurate accounting of benefits in the RIA and quantify and monetize a wider range of benefits, although the commenter did not provide any specific suggestions for doing so. The commenter noted that many of the RIA’s unquantified benefits were of profound importance to communities and families residing in the floodplain, including lives saved, access to evacuation routes and essential services, better long-term health outcomes, and reduced recovery times. Additionally, the commenter recommended FEMA

(RCPs). The five SLR scenarios described in Sweet et al. (2022), page 10, are based on global mean sea level (GMSL) target values at 2100. These sea level scenarios are related to but distinct from the emissions pathway scenarios in the IPCC AR6. The intermediate SLR scenario corresponds to a GMSL target value in 2100 of 1m and the intermediate-high SLR scenario corresponds to GMSL target value in 2100 of 1.5M.

²⁷¹ FFRMS Job Aid, pg. 21.

place greater emphasis on describing, quantifying, and monetizing the benefits of conserving floodplains and wetlands and encouraging nature-based solutions. Finally, the commenter suggested FEMA consider a more nuanced approach to the final rule's distributional effects by assessing how the rule's benefits might be distributed across populations.

FEMA Response: While monetizing the reduction in damages that is anticipated from the rule would be a useful way to show the rule's benefits, not all of the benefits can be effectively monetized with available data. FEMA thoroughly researched methods to quantify and monetize as many benefits as possible for the proposed rule but did not find adequate sources to reliably quantify or monetize most benefits. FEMA continues to research methods and data for quantifying benefits, but since publication of the proposed rule, has not found data sources that would enable FEMA to further quantify the benefits of incremental amounts of freeboard. In addition, FEMA did not receive any data or methods from commenters that would allow FEMA to quantify what it found to be unquantifiable impacts. Accordingly, consistent with direction by OMB Circular A-4 for costs and benefits that are difficult to quantify, FEMA provided a literature review of relevant benefits that could be realized from flood mitigation, an analysis of benefits quantified for the rule, a qualitative description of additional benefits that could be realized from the rule, and a discussion of why FEMA was unable to quantify such benefits.

Regarding the commenter's recommendation to assess how the rule's benefits might be distributed across populations, FEMA agrees that ensuring equal access to FEMA funding for PA, IA, and HMA projects is important. The projects affected by this rule will be a subset of—only new construction or substantial improvement—projects currently funded through these programs. Accordingly, current FEMA initiatives address these concerns. For example, FEMA has an agency-wide initiative focused on reducing barriers and increasing opportunities so all people, including those from vulnerable and underserved communities, can get help when they need it. Additionally, FEMA reviews all proposed FEMA-funded actions for potential disproportionate and adverse human health and environmental effects on communities with environmental justice concerns using a standardized environmental justice compliance review process.

5. Benefit Cost Analysis (BCA)

Comment: A commenter sought clarification of the term “cost-effective” within the RIA.

FEMA Response: FEMA added the definition of cost-effectiveness used within the RIA as “any alternative or measure whose discounted benefits are greater than its discounted costs” within the RIA to clarify this. FEMA acknowledges that it is possible to define cost-effectiveness as ensuring the most efficient use of a given amount of resources, but notes that the definition in the RIA is consistent with BCA principles applicable to some FEMA grant programs.

Comment: A commenter stated that the gross omissions in the “BCA” render it useless, if not misleading as a BCA. The commenter referenced guidelines at both 40 CFR 1502.22 and Chapter III of Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies (PR&G). The commenter did not provide data that would allow FEMA to fill the stated “omissions.”

FEMA Response: The commenter appears to be using the term “BCA” to refer generally to FEMA's regulatory impact analysis pursuant to E.O. 12866 and comparing the analysis to NEPA guidelines and PR&G. To the extent the commenter is referring generally to FEMA's regulatory impact analysis, FEMA recognizes that it has limitations based on available data, and provided qualitative analysis where it could not complete a quantitative analysis. OMB Circular A-4—the operating guidance for regulatory analysis conducted pursuant to E.O. 12866—acknowledges that it may not be possible to express in monetary units all of the important benefits and costs.²⁷² Circular A-4 directs that if monetization is not possible, agencies should explain why and present all available quantitative information, and if agencies are not able to quantify the effects they should also present a description—along with strengths and limitations—of the unquantified effects.

FEMA adhered to this guidance. Although FEMA could not estimate the cost of the rule for facilities due to the highly project-specific nature of facilities projects, and the numerous options for making them resilient, FEMA was able to quantify the number of impacted facilities and explained why monetization was not possible. FEMA was unable to estimate the

number of projects that would use each FFRMS approach per FEMA's policy, and so FEMA conducted an analysis assuming each FFRMS approach was the only one to demonstrate the range of possible costs. For benefits, FEMA acknowledged that the quantified estimates—where data allowed for quantification—represent only a portion of the increased risk reduction that will be achieved through this rule and discussed qualitatively other important benefits of the rule. When considering the total costs of the rule, FEMA noted that its choice of CISA as its preferred approach will use the best available and actionable scientific data to tailor future flooding risk to each project, ensuring that projects are built only to the elevation necessary and thus maximizing net benefits.

Comment: A commenter stated that the RIA did not comply with Circular A-4's requirements to present the net benefits for the different alternatives and provide a threshold or incremental analysis supporting the selection of FEMA's preferred alternative.

FEMA Response: As discussed above, Circular A-4 acknowledges that it may not be possible to express in monetary units all of the important benefits and costs. It notes that when important benefits and costs cannot be expressed in monetary terms, the calculation of net benefits is less useful, and “can even be misleading,” because in such cases, the calculation of net benefits do not provide a full evaluation of all of the relevant benefits and costs. Instead, Circular A-4 advises that in such circumstances agencies should exercise “professional judgment” in determining how important the non-quantified benefits and costs may be in the context of the overall analysis.²⁷³

As the commenter points out, Circular A-4 acknowledges that agencies “should also consider conducting a threshold analysis to understand the potential significance of these factors to the overall analysis.” FEMA considered including a threshold analysis, but such an analysis still would not have provided insight into the difference between the benefits of CISA, FVA, and 0.2PFA as data available to estimate quantitative benefits was limited to only one foot of freeboard for PA structure projects. The difference in unquantified impacts between the FFRMS approaches would result in comparison of thresholds comprising different sets of impacts. Accordingly, FEMA used its

²⁷² OMB Circular A-4, Regulatory Analysis, September 17, 2003, pages 33–34. Available at: <https://www.reginfo.gov/public/jsp/Utilities/a-4.pdf> (last accessed Apr. 29, 2024).

²⁷³ OMB Circular A-4, Regulatory Analysis, September 17, 2003, page 10. Available at: <https://www.reginfo.gov/public/jsp/Utilities/a-4.pdf> (last accessed Apr. 29, 2024).

professional judgment to determine that CISA is the best policy decision because it is meant to ensure that amount of additional flood protection for each project is determined by the best available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science.

Comment: A commenter stated that the FFRMS RIA does not comply with the requirements for a Cost-Effectiveness Analysis (CEA) as detailed in OMB Circular A-4.

FEMA Response: FEMA recognizes it has limitations in the available data and agrees the RIA was not intended to be a CEA, as defined by OMB Circular A-4. FEMA notes that OMB Circular A-4 provides agencies with a choice of analytical approaches for regulatory analysis and does not require agencies to perform a CEA.²⁷⁴ As mentioned above, FEMA provided qualitative analysis where it could not complete a quantitative analysis, as allowable under OMB Circular A-4. FEMA was unable to conduct a CEA because FEMA only had data available to estimate quantitative benefits of only 1 foot of freeboard for structures under the PA program. FEMA did not have data available to conduct the same quantitative analysis for projects under the IA and HMA grant programs or for additional levels of freeboard as applicable under each of the FFRMS approaches. Therefore, FEMA completed a Benefit Cost Analysis as it is more appropriate for this rulemaking given the wide range of unquantifiable benefits expected to accrue from each alternative.

6. Other RIA Comments

Comment: FEMA requested public comment on any available data, examples showing the costs of similar resilience measures, case studies, or other relevant information that would assist FEMA in estimating the magnitude of the impact of the FFRMS on specific types of facilities. A commenter recommended contacting the “four water resource agencies” identified as “USACE, BuRec, DOE-TVA, and NRCS,” to what information in their current databases or relevant studies might be useful.

FEMA Response: FEMA appreciates this suggestion. FEMA has engaged with the U.S. Army Corps of Engineers (USACE), the Bureau of Reclamation (BuRec), the Tennessee Valley Authority

(TVA),²⁷⁵ and the National Resources Conservation Service (NRCS), and none of the agencies had relevant data or studies in relation to facilities that FEMA could use for this economic analysis. While such agencies—like FEMA—have access to some information on making facilities more resilient to flooding,²⁷⁶ it is still not possible to use this information to generate estimates of the likely marginal cost of FFRMS implementation across FEMA-funded facility projects. The variety of projects, and unique characteristics of construction and repair of these projects does not allow FEMA to make estimates that can be broadly applied.

Comment: A commenter stated that the RIA is subject to the Principles and Requirements for Federal Investments in Water Resources March 2013. The commenter stated the RIA was inconsistent with the requirements of that document and supporting PR&G. Specifically, the commenter stated the RIA did not make any representation as to any alternatives that maximize public benefits relative to costs and failed to provide any representation of net public benefits. The commenter also stated the preferred alternative was not clearly defined and the commenter recommended FEMA disclose assumptions made and address uncertainties associated with the composition of the preferred alternatives consistent with the PR&G.

FEMA Response: As explained above, the PR&G does not generally apply to this rulemaking; rather, the PR&G applies to actions associated with water development projects. FEMA will apply the PR&G only to those specific actions under part 9 that are actions associated with a water development project.

Comment: One commenter noted that the baseline against which FEMA assessed the costs and benefits of this rule produced a “subjective assessment of the proposed rule’s costs and

benefits.” Specifically, the commenter stated that because FEMA said it was unable to conduct an analysis of the rule’s effects separate from the effects of FEMA’s recently implemented partial interim policies for Public Assistance (PA) and Hazard Mitigation Assistance (HMA) that the pre-guidance baseline it used was a “less-representative” analysis of the rule’s costs and benefits.

FEMA Response: FEMA conducted its analysis under the pre-guidance baseline that considered the holistic effects of the partial interim policies for PA and HMA, as well as the proposed rule. At the time the Notice of Proposed Rulemaking (NPRM) RIA was conducted, these partial implementation policies had been in place for less than 2 years, which is an insufficient period to provide adequate data for analysis. These policies were issued as temporary, partial implementation of the FFRMS until FEMA could implement it through this rulemaking. FEMA conducted the Regulatory Impact Analysis against a pre-statutory baseline to capture the economic impacts of the FFRMS and more accurately measure the impacts of the rule against the world without the interim PA and HMA policies. Therefore, FEMA was unable to complete an in-depth analysis of the impact of these interim policies. Accordingly, FEMA used a pre-guidance baseline for this final rule to measure the impacts of the rule against the world without the interim PA and HMA policies.

Comment: A commenter provided several clarification edits.

FEMA Response: FEMA thanks the commenter for these suggestions. FEMA has added these clarifications to the RIA and updated the language as suggested.

Comment: A commenter suggested rounding dollar figures to an appropriate level of significance.

FEMA Response: FEMA appreciates this suggestion. FEMA adjusted the figures in the analysis, where feasible and appropriate.

Comment: A commenter stated that for the CISA floodplain analysis, the mid-point of +1’ and +10’ is +5.5’ would round to 6’. They recommend against characterizing the +5-ft CISA level as the mid-point.

FEMA Response: FEMA updated the RIA to clarify this was rounded down to 5-ft.

Comment: A commenter recommended deleting the “minimum, moderate, and maximum” for the SLR qualifiers throughout the document as the reader could come to a misunderstanding that the totality of the range for SLR rise is encompassed by the 8” and 59” figures.

²⁷⁵ FEMA assumed the reference to DOE-TVA is to the Tennessee Valley Authority although FEMA notes that TVA is not a component of the Department of Energy.

²⁷⁶ For example, USACE has a suite of resources on its website related to its implementation of CISA in its Civil Works Programs which detail how project delivery teams must consider the effects of sea level change when formulating, selecting, and evaluating project alternatives, and how to characterize potential project vulnerabilities to the effects of climate change on inland hydroclimatology. See <https://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/About-the-Program/Policy-and-Guidance/Federal-Flood-Risk-Management-Standard/>. However, this information did not include relevant data that FEMA could use in its economic analysis related to the costs of implementation for facilities.

²⁷⁴ OMB Circular A-4, Regulatory Analysis, September 17, 2003, pages 9–10. Available at: <https://www.reginfo.gov/public/jsp/Utilities/a-4.pdf> (last accessed Apr. 29, 2024).

FEMA Response: FEMA removed the terms minimum, moderate and maximum from 8-inch, 36-inch, and 59-inch, respectively as suggested.

Comment: A commenter stated that a footnote in the Executive Summary of the RIA could be misleading, as it stated that “the United States has suffered more than \$1.7 trillion in flood-related damages over an approximately 40-year period.” The commenter noted that FEMA included tropical cyclones as a flood-related damage and stated that tropical cyclones entailed substantial wind making the \$1.7 trillion figure potentially misleading.

FEMA Response: FEMA clarified within the footnote that severe storms can include wind-related damages, but the data does not separate these damages out.

Comment: A commenter sought clarification on the use of “Federal Investments,” stating that FEMA’s use of the term might encompass actions taken by other agencies such as water resource agencies.

FEMA Response: FEMA’s rule only applies to projects it funds under its grant programs. All other Federal agencies will implement the FFRMS using their own processes and procedures. FEMA made clarifications in the RIA to clarify use of the term “federal investments.”

Comment: A commenter suggested editorial changes to refer to “9.11” as 44 CFR 9.11 as it was unclear when it is standing alone.

FEMA Response: FEMA appreciates this clarification. FEMA made this change to 44 CFR 9.11.

Comment: A commenter suggested editorial changes to Table ES–14.

FEMA Response: FEMA appreciates this suggestion. FEMA edited the RIA to reflect the commenter’s requested changes.

Comment: A commenter corrected miscited footnotes.

FEMA Response: FEMA appreciates this suggestion. FEMA updated the footnotes as suggested by the commenter.

Comment: A commenter suggested removing page reference within a footnote as the footnote did not address avoided loss as stated in the RIA.

FEMA Response: FEMA typically includes a page number so that the readers can easily find the referenced source. FEMA updated the page citation to properly reflect the location in the document.

Comment: A commenter suggested reconciliation of different statements in the text in the bottom paragraph on page 17, Table ES–1, and the text in the second paragraph in the RIA regarding

how FEMA analyzed the impact of each FFRMS expansion option as they are not consistent with one another.

FEMA Response: FEMA appreciates this suggestion. FEMA edited the document for consistency as suggested.

Comment: A commenter recommended re-titling Table ES–1 within the RIA since it was not consistent with its introductory text in the last paragraph on page 17.

FEMA Response: FEMA appreciates this suggestion. FEMA clarified the title to table ES–1.

Comment: A commenter recommended editorial changes to Table ES–3 within the RIA so that the rows were properly aligned.

FEMA Response: FEMA appreciates this suggestion. FEMA corrected this for the final rule.

Comment: A commenter recommended making editorial changes to the RIA and to use quotations around statements that were verbatim from an outside source.

FEMA Response: FEMA appreciates this suggestion. FEMA has gone through the document and made the recommended changes.

Comment: A commenter recommended FEMA edit a statement of present values, as present values are discounted by definition.

FEMA Response: FEMA appreciates this suggestion. FEMA removed the term undiscounted from the benefit statements for clarity purposes.

Comment: A commenter recommended FEMA edit the RIA to avoid confusion between discount rates and annual increases, providing an example within the Executive Summary of the RIA.

FEMA Response: FEMA clarified the wording to prevent confusion on the discount rates with annual increases.

Comment: A commenter pointed out inconsistency with the annualized CISA costs within Table ES–13 and ES–14.

FEMA Response: FEMA updated all of the costs for the final rule and reconciled this discrepancy.

Comment: A commenter requested FEMA delete an introductory sentence in RIA section 6.14 that states flooding is “by far the most common natural disaster type in the United States.”²⁷⁷ The commenter noted that NOAA distinguishes flooding as a category separate from tropical cyclones and storms which were both identified as having greater frequencies than flooding. The commenter also opined that storm damages are more properly

associated with wind damage than with flooding.

FEMA Response: FEMA appreciates the commenter’s concerns and deleted the sentence. Categorizing and calculating damage for different disaster types can be quite complex; however, the methodology set forth in the benefits section of the RIA is not dependent on resolution of these complexities.

Further, it is not necessary to prove that flooding is the most common natural disaster type to state, as FEMA has in section 6.14 of the RIA, that there are benefits to mitigating against flooding.

Comment: A commenter requested rationale on why FEMA selected a 10-year period for the RIA. The commenter also recommended FEMA change language in the RIA to state that the agency limited the dollar-valuation to the projects impacted in the first 10 years following the rule’s publication or expand the analysis to reflect economic concerns over the expected life of the regulation. The commenter stated additional discussion was needed regarding future effects and provided a number of questions around those effects including whether development within the floodplain would be progressively more likely to be diverted outside the floodplain over time and whether the costs of elevating or floodproofing would be expected to decline over time in real terms as contractors and architects adapt to the new requirements. The commenter asked whether it would be most appropriate to simply state that the first 10 years of the analysis was viewed as being a sample for the entire period or if the use of the maximum 8.5 RCP and the 59-inch SLR indicated a 50-year life for the regulation was suspected and that a shorter period of analysis was in order.

FEMA Response: FEMA appreciates the commenter’s concerns regarding the analysis period. FEMA has clarified language throughout the RIA to further address the commenter’s concerns. FEMA conducted the regulatory analysis using its standard 10 years of historical data and, based on this data, estimated the number of affected projects for the first 10 years after implementation of the rule. Circular A–4 directs that the timeframe for an agency’s analysis “should cover a period long enough to encompass all the important benefits and costs likely to result from the rule.” FEMA believes estimating the number of affected projects over the initial 10 years and benefits over their 50-year useful life captures all the important benefits (protection from flooding) and costs (construction costs) likely to result from

²⁷⁷ FEMA–2023–0026–0018.

the rule because FEMA does not expect a change in the types of costs or benefits after this time period. FEMA acknowledges that flooding is widely expected to increase in frequency and severity in the future,²⁷⁸ so estimating the number of affected projects and their associated benefits farther into the future would become increasingly inaccurate as conditions change and the expected frequency and severity of disasters increases. However, due to increased flooding frequency and severity, FEMA believes that the benefits of increasing the protection of structures in the future is expected to continue to justify the cost of doing so beyond the 10-year timeframe that FEMA used for this analysis.

Regarding other future effects such as diversion of projects outside of the floodplain, FEMA notes that this is discussed within the RIA in the Qualitative Discussion of Additional Potential Costs section. The effect of the rule could be to divert some projects out of the floodplain. However, it is not possible to state with a reasonable degree of certainty how many projects this will affect, or the costs or benefits associated with diverting these projects out of the floodplain, as FEMA does not currently track this information. The costs and benefits, and the decision to build inside or outside of the floodplain, will be dependent on the specific location or characteristics of a property or project.

Comment: A commenter stated that they could not find the “2022 Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains” file at [regulations.gov](https://www.regulations.gov) under docket ID FEMA-2023-0026.

FEMA Response: FEMA verified that all of the supporting documents were listed on the site during the comment period, including the report referenced.²⁷⁹

Comment: A commenter pointed out confusion with the footnote “25 FEMA’s project level data for IA, PA, and HMA delineate whether projects are in the Special Flood Hazard Area (1 percent annual chance floodplain) but do not show whether they are in the 0.2 percent chance floodplain” because FIRMs characteristically identify both the 1 percent annual chance floodplain

and the 0.2 percent annual chance floodplain.

FEMA Response: FEMA agrees that the 0.2 percent annual chance floodplain, in locations where that floodplain is mapped, is available on FIRMs. However, the data availability issue noted in the footnote is that FEMA’s project databases (e.g., IA, PA, HMA) do not include FIRM data, so FEMA is not able to accurately determine whether a project is in the 0.2 percent chance floodplain. FEMA’s project level data only indicate whether a project is located in the SFHA in most cases. Project databases do not contain accurate geolocation data, and addresses on file are for the recipient’s address, which may not be the project location, so FEMA was unable to locate projects on a FIRM, or determine which flood zone a project was located in.

Comment: A commenter stated that FEMA’s preferred policy approach is not clearly defined, as it consists of an unidentified mixture of CISA, FVA, and 0.2PFA, which requires the reader to speculate and make assumptions about the composition in order to draw conclusions. The commenter suggested FEMA discuss the uncertainty associated with the composition of the FFRMS approaches that comprise FEMA’s preferred policy approach.

FEMA Response: FEMA selected CISA as the preferred policy approach, since FEMA believes it has the potential to be the best and most well-informed approach to building resilience in an equitable manner and ensuring a reduction in disaster suffering. CISA is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity. FEMA added clarification on what the primary approach is earlier in the RIA.

FEMA acknowledges that its policy—which requires use of FVA and 0.2PFA when CISA data are not available and actionable—will result in an unknown mixture of projects using CISA, FVA, and 0.2PFA. OMB Circular A-4 suggests using central estimates “where such information exists” but authorizes the use of upper and lower bounds where it does not, together with any available information that might help in qualitatively determining which scenario is most likely to occur. FEMA conducted its analysis to consist of a range of potential costs, benefits, and transfers. FEMA analyzed the impact of the FVA, 0.2PFA, and CISA for each of the programs, PA, IA, and HMA, as if each approach were the only FFRMS expansion option. FEMA discussed that because the composition of applied

FFRMS approaches will continue to change with the addition of CISA data over time, there is significant uncertainty in any such estimates. Accordingly, FEMA estimated the costs of the requirements for each of the approaches separately to create upper and lower bounds estimates of the possible outcomes. In addition, as discussed above, FEMA presents CISA as the primary estimate for the impacts of the rule because it is FEMA’s preferred FFRMS approach and therefore, over time, it will become the most widely used FFRMS approach.

Comment: A commenter disagreed with FEMA’s statement about how “RCP 4.5 and 8.5 are widely accepted scenarios that represent medium and low efforts to curb emissions, respectively.” They suggested better explaining the definitions of RCP 4.5 and 8.5 based on the EPA’s language about RCPs.

FEMA Response: FEMA appreciates this suggestion. FEMA updated the use of RCP 4.5 and 8.5 and the definitions for the Final Rule RIA.

Comment: A commenter suggested explaining the terms “low estimate” and “high estimate” earlier in the RIA. They also suggested that instead of using a range, FEMA should present a best estimate for these values and discuss the uncertainty associated with such values in the Risk and Uncertainty section of the document. They also requested a sensitivity analysis showing how the decision might be affected if the values used proved to be unduly high or low. The commenter suggested that because of the number of variables contributing to the ranges (e.g., discount rate, high and low), the presentation of information would be clearer if single, best-estimate, rounded values were used in the analysis.

FEMA Response: OMB Circular A-4 suggests using central estimates “where such information exists” but authorizes the use of upper and lower bounds where it does not. In the instances where FEMA uses a range, it is because FEMA does not have adequate justification for a single best estimate. FEMA conducted its analysis to consist of a range of potential costs, benefits, and transfers. For example, as discussed above, FEMA analyzed the impact of the FVA, 0.2PFA, and CISA for each of the programs, PA, IA, and HMA, as if each approach were the only FFRMS expansion option because it is unknown exactly how many projects will be subject to the FVA, 0.2PFA, or CISA requirements under the final rule, and how use of CISA will change as more data become available over time. Because FEMA analyzed each approach

²⁷⁸ The Third National Climate Assessment. <https://nca2014.globalchange.gov>, (last accessed Apr. 29, 2024).

²⁷⁹ FEMA, A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains, July 2002, available at: <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

separately, it is unable to provide a primary estimate, and instead had to rely on a range of possible impacts. In addition, FEMA does not have data to estimate whether certain non-residential new construction projects will elect to floodproof or elevate and therefore also used a range for the cost of meeting the rule's increased construction standards.

FEMA appreciates that the presentation of the range of impacts may not be as clear as a single point estimate. FEMA presents this information in tables, to help more clearly convey the information, and has also reviewed the language and streamlined for increased clarity.

Comment: A commenter provided editorial suggestions to the statement: "CISA is the only approach that ensures projects are designed to meet current and future flood risks unique to the location and thus provides the best overall resilience, cost effectiveness, and equity." The commenter suggested the claim that CISA makes such an assurance is an overstatement of the risk reduction from the CISA.

FEMA Response: FEMA appreciates this suggestion. FEMA accepted this change in part: "CISA is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity."

Comment: A commenter provided suggested edits to FEMA's statement regarding whether the action was a significant regulatory action under Executive Order 12866, as amended by Executive Order 14094.

FEMA Response: This is standard language that FEMA uses in RIAs. FEMA provided footnotes to this statement clarifying the relevant sections of Executive Order 12866.

Comment: A commenter recommended presenting the CISA-only analysis as an alternative or explaining why it was found to be unreasonable and including it in the section of the document on alternatives considered but not selected. If FEMA found a CISA-alone approach to be unreasonable, the commenter recommended changing all blanket statements in the document that describe CISA as the best approach for achieving overall resilience, cost effectiveness, and equity.

FEMA Response: The CISA is one of three approaches available under the FFRMS, and FEMA's preferred approach. However, because the CISA data is not available nationwide, a CISA-only approach is not currently feasible, and other FFRMS approaches are needed for areas where the CISA is not available. FEMA's implementation of the FFRMS allows for the use of the

most appropriate approach depending on the data available for a given project. Although FEMA estimated the impacts of the CISA for affected programs as if it were the only FFRMS expansion option, just as it did for the FVA and 0.2PFA, FEMA was unable to use actual CISA estimates, as they are not yet available nation-wide and instead used an estimate. As the CISA data becomes more available, FEMA expects it to be the more widely-adopted. FEMA made clarifying edits to statements describing the CISA as the preferred approach.

Comment: A commenter encouraged FEMA to consider implications of FEMA's FFRMS policy on benefit-cost analyses for flood mitigation assistance grants.

FEMA Response: FEMA appreciates the commenter's concerns. FEMA's FFRMS policy will generally not change BCA requirements for FEMA programs. Certain Hazard Mitigation Assistance programs and Public Assistance projects are subject to a Benefit-Cost Analysis prior to approval, where the mitigation action must be determined to be cost-beneficial using FEMA's BCA tool. For FEMA's FMA program, the costs of additional elevation above the base flood elevation will be considered as part of the BCA. Currently, the BCA tool includes pre-calculated benefits that streamline the cost-effectiveness determination for structure elevation projects are limited to structures where some part of the structure is within the 1 percent annual chance floodplain. For an elevation project where the entire structure footprint is outside the 1 percent annual chance floodplain, FEMA will also require a BCA to show cost-effectiveness. For FEMA's PA program, cost-effectiveness requirements apply only to Hazard Mitigation measures on projects to restore disaster damaged structures and facilities. FEMA notes that any increased costs are generally eligible for funding under FEMA's assistance programs subject to cost share requirements. FEMA acknowledges that FFRMS requirements may impact individual BCA results, with the potential to cause some projects to pass that otherwise wouldn't, and vice-versa, but is not able to predict this for future individual projects because project-level analysis is not generalizable nationwide. For structures, FEMA estimates the marginal cost of implementing FFRMS to be relatively low, ranging from 0.32 percent (1 foot of elevation for new construction) to 8.07 percent (4 feet of dry floodproofing for a building retrofit) of total project cost, depending on the elevation required and the type of project. Given available evidence

showing relatively small costs and even positive increases in Benefit-Cost Ratio in connection with additional elevation for studied residential buildings, FEMA does not expect FFRMS requirements to adversely affect the BCR for a large volume of projects.^{280 281}

Comment: A commenter questioned the baseline data used for the floodplain expansion analysis in Appendix A. The commenter stated that FEMA should have compared the 1' freeboard measured to the "Effective/Preliminary 1 percent annual chance floodplain" instead of the "replotted" 1 percent annual chance floodplain.

FEMA Response: The goal of the floodplain expansion analysis performed by FEMA is to estimate the number of additional projects that would be affected by a requirement for a higher vertical elevation, and thus horizontal expansion, of the floodplain. When FEMA calculated the FFRMS floodplains for different freeboard values, FEMA used the latest high-accuracy ground elevation data. The original 1 percent annual chance floodplain boundaries were likely calculated using older ground elevation data. For consistency, FEMA compared the FFRMS freeboard-based floodplains to a 1 percent annual chance floodplain redrawn using the new ground elevation data. This approach provides the most consistent comparison of the difference in area between the 1 percent annual chance floodplain and the FFRMS floodplain (*i.e.*, specific levels of freeboard added to the 1 percent annual chance flood elevations). This approach does not account for differences between the redrawn 1 percent annual chance floodplain boundaries and the original 1 percent annual chance floodplain boundaries. Since the goal is to produce a statistical estimate of the impact of freeboard, FEMA assumed the differences between the original 1 percent annual chance boundaries and the redrawn 1 percent annual chance boundaries would be largely random and not essential to the goal of the estimate.

Comment: A commenter assessed that FEMA's statements that a study upon

²⁸⁰ National Institute of Building Sciences. Multi-Hazard Mitigation Council. "Natural Hazard Mitigation Saves." 2019. https://www.nibs.org/files/pdfs/NIBS_MMC_MitigationSaves_2019.pdf (last accessed Apr. 29, 2024). *See, for example, Table 5: BCRs for various heights above BFE for new coastal V-zone buildings and Table 2-2: Summary BCR results for sampled counties susceptible to riverine flooding.*

²⁸¹ A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains. FEMA. Draft, July 2022, pg. 16, available at: <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

which it relied considered various levels of SLR “by 2100” is problematic, as the study does not extend as far as the year 2100, and it actually only extends some 60 years into the future. The commenter sought clarification.

FEMA Response: FEMA would like to distinguish between the coastal and riverine flood studies used within the 2022 Report.²⁸² The riverine analysis considered two climate change scenarios to evaluate the amount of increase or decrease in riverine flood elevations over the next 50 years. These evaluated two widely accepted scenarios of the Representative Concentration Pathways (RCP) 4.5 and 8.5, which represent medium and low efforts to curb emissions.

The coastal study within the 2022 Report considered 12 different locations along a hypothetical coastal transect to evaluate the impact of various wave conditions in Zone A (areas with wave heights less than 1.5 feet) subject to coastal storm surge. The sea level rise conditions replicated a 2016 evaluation considered 8-inch, 20-inch, 39-inch, and 59-inch sea level rise by 2100.²⁸³ The sea level rise assumptions are explained in the 2022 report. Specifically, when evaluating the increases in flood depths, the rise scenarios were considered in 10-year increments from 2022 to 2100, but the evaluation of the benefits is limited to the 50-year useful life of a project (*i.e.*, from 2022–2072). The assumed increase in flood depths is shown in Table 1 of the report in 10-year increments.

Consistent with FEMA’s BCA guidance,²⁸⁴ FEMA selected the 50-year project useful life which is the timeframe evaluated to determine the cost-effectiveness for a public building and is consistent with the assumption in the FEMA BCA Toolkit. FEMA’s analysis focuses on the costs, benefits, and transfer payments (*i.e.*, impacts on FEMA grants), that will result over a 50-year period from the application of the requirements of the final rule to those projects, for a total period of analysis spanning 60 years. For example, if a structure is built in Year 10, the analysis

covers 50 years of costs, benefits, and transfers for that structure starting in Year 10. However, if a structure is built in Year 11, that is outside of the first 10 years, and so the analysis does not consider the costs, benefits, or transfers of the FFRMS requirements on that structure.²⁸⁵

III. Discussion of Changes

This rule makes changes to the NPRM in response to comments received, as well as minor technical edits. Specifically, in § 9.7(c)(3), FEMA made a clarifying edit by adding the words “information from” before the colon, such that the sentence reads “In obtaining the best available information, FEMA may consider other FEMA information as well as other available information, such as information from:”

FEMA also edited § 9.7(c)(3)(iv) to include the National Park Service as an agency within the Department of the Interior where FEMA obtains information. FEMA also edited § 9.7(c)(3)(ix) to include Indian Tribal governments; as revised, this paragraph now reads, “Agencies of State, Regional, and Indian Tribal governments.” While FEMA always considered Tribal information, the edits further confirm the agency’s commitment to doing so. The changes made to § 9.7(c)(3) clarify that FEMA considers certain relevant and appropriate data in making the floodplain determination under part.

FEMA is also making minor technical edits in § 9.7(c)(1)(i)(C) and § 9.11(d)(3)(ii). In § 9.7(c)(1)(i)(C), FEMA is adding appropriate hyphenation to state “0.2-Percent-Annual-Chance Flood Approach (0.2PFA): The 0.2 percent annual chance flood” for consistency with the Revised Guidelines. In § 9.11(d)(3)(ii), FEMA is correcting a grammatical error from “water tight” to “watertight.”

²⁸⁵ If FEMA limited the analysis to only 10 years of impacts, it would consider all of the costs and transfers but only a small portion of the benefits from additional protection from flood events because the life of the structure is more than 10 years. After year 10, the final rule would continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage. To estimate the future number of impacted structures, FEMA used the average number of projects that would have been affected by this rule had it been in place over the past 10-year period, assuming the next 10 years would look largely like the past 10 years. FEMA chose to limit the analysis to 10 years of affected structures because estimating the number of affected projects and their associated benefits further into the future—that is, further from historical disaster data would become less accurate as conditions change and the expected frequency and severity of major disasters increases. Accordingly, FEMA’s analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

²⁸² A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains. FEMA. Draft, July 2022, pg. 16, available at: <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

²⁸³ FEMA, 2016 Evaluation of the Benefits of Freeboard for Public and Nonresidential Buildings in Coastal Areas. Available at: <https://www.regulations.gov/document/FEMA-2015-0006-0379>.

²⁸⁴ BCA Reference Guide, Appendix D. Project Useful Life Summary (June 2009). Available at: https://www.fema.gov/sites/default/files/2020-04/fema_bca_reference-guide.pdf (last accessed May 15, 2024).

FEMA’s FFRMS policy is also being finalized with the publication of this rule and will be effective with the rule’s implementation. FEMA is making minor clarifying edits to the FFRMS policy consistent with commenters’ suggestions by further clarifying the use of the 0.2PFA in coastal areas and making other technical edits to the document for readability. Specifically, FEMA is making technical formatting and grammatical edits on pages 1, 2, 3, 4, 7, 8, and 13. FEMA is adding clarifying language in section C. In section C.2, FEMA is eliminating the reference to wave action in coastal areas at the end of the paragraph. In section C.3.a, FEMA is adding the following clarifying text in footnote 14: “In coastal areas Flood Insurance Rate Maps (FIRMs) and Flood Insurance Studies (FISs) provide 1 percent AC flood elevations that account for the effects of wave action. However, 0.2 percent AC flood elevations are generally stillwater elevations that do not account for the effects of wave action. In coastal areas, if the 0.2 percent AC flood elevation does not account for the effects of wave action, the FVA flood elevation must be used.” FEMA is further eliminating section C.3.c consistent with these edits. FEMA also edited Figure 1 in the FFRMS policy to clarify “AC” means “annual chance” at a commenter’s request and reflect the clarifications to C.3 referenced above. Additionally, FEMA updated section G.2 to reflect “Flood Risk Mitigation for Facilities.” FEMA removed the term “non-structure” in that section because commenters expressed confusion about the term.

IV. Regulatory Analyses

A. Executive Order 12866, Regulatory Planning and Review, as Amended, and Executive Order 13563, Improving Regulation and Regulatory Review

Executive Orders 12866 (Regulatory Planning and Review), as amended by Executive Order 14094 (Modernizing Regulatory Review), and 13563 (Improving Regulation and Regulatory Review), directs agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying costs and benefits, reducing costs, harmonizing rules, and promoting flexibility. The Office of Management and Budget (OMB) has designated this

rule a “significant regulatory action” as defined under section 3(f) of Executive Order 12866, as amended by Executive Order 14094, but it is not significant under section 3(f)(1) because its annual effects on the economy do not exceed \$200 million in any year of the analysis. Accordingly, OMB has reviewed this rule.

This analysis provides an assessment of the potential costs, benefits, and transfer payments from the Updates to Floodplain Management and Protection of Wetlands Regulations to Implement the Federal Flood Risk Management Standard (FFRMS) Final Rule. For further detail please refer to the Regulatory Impact Analysis (RIA) in the docket accompanying this rule.

FEMA is amending 44 CFR part 9 Floodplain Management and Protection of Wetlands and issuing a supplementary policy²⁸⁶ to implement the FFRMS and update the agency’s 8-step decision-making process used to determine whether an action would be located within or affect a floodplain, and if so, whether and how to continue with, or modify, the action.

The FFRMS is a flood resilience standard that is required for Federally funded projects and provides a flexible framework to increase resilience against flooding and to help preserve the natural values of floodplains and wetlands. A floodplain is any land area that is subject to flooding and refers to geographic features with undefined boundaries. FEMA will incorporate the FFRMS into its existing processes to ensure that the floodplain for an action subject to the FFRMS is expanded from the current 1 percent annual chance (100-year) floodplain based on the one percent annual chance elevation²⁸⁷ to a higher vertical elevation and corresponding horizontal floodplain; and that, where practicable, natural systems, ecosystem processes, and nature-based approaches will be considered when developing alternatives to locating Federal actions in the floodplain.

Under current FEMA regulations set out in 44 CFR part 9, the floodplain is defined as the 100-year floodplain (1

percent annual chance) for non-critical actions and the 500-year floodplain (0.2 percent annual chance) for critical actions. New construction or substantial improvement of structures located in a floodplain must be elevated to or above the 1 percent annual chance (100-year) flood level or base flood elevation (BFE). For critical actions, the new construction or substantial improvement of structures must be elevated to or above the 0.2 percent annual chance (500-year) flood level. Non-residential structures may be appropriately floodproofed rather than elevated to meet the applicable flood level.

This rule will implement the supplemental FFRMS policy in the expanded floodplain and codify implementation of the supplemental FFRMS policy in the current floodplain. FEMA has interim policies for PA and HMA that partially implement FFRMS, as discussed in further detail below. Depending on the program, these programs apply the supplemental FFRMS policy either to the base floodplain, or to both the 100-year (base floodplain) and 500-year floodplain (for critical actions). Following guidance in OMB Circular A-4, FEMA assessed each impact of this rule against a pre-guidance baseline. The pre-guidance baseline is an assessment against what the world would be like if the relevant guidance (*i.e.*, the partial interim policies for PA and HMA) were not implemented.

At the time the Notice of Proposed Rulemaking (NPRM) RIA was conducted, these partial implementation policies had been in place for less than 2 years. These policies were issued as temporary, partial implementation of the FFRMS until FEMA could implement it through this rulemaking. FEMA conducted this Regulatory Impact Analysis against a pre-statutory baseline to capture the economic impacts of the FFRMS and more accurately to measure the impacts of the rule against the world without the interim PA and HMA policies.

Under the final rule, the Climate-Informed Science Approach (CISA) would result in a flood elevation and corresponding horizontal expansion floodplain determination utilizing the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. The CISA is FEMA’s preferred policy approach, as FEMA believes it has the potential to be the best and most well-informed approach to building resilience in an equitable manner and ensuring a reduction in disaster

suffering. CISA is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity. The FFRMS requires FEMA to consider the criticality of the action involved, the availability and actionability of data, and equity concerns, as further explained in the supplementary policy. As actionable climate data are not currently available for all locations, FEMA will utilize the Freeboard Value Approach (FVA) and 0.2-Percent-Annual-Chance Flood Approach (0.2PFA) alternatives in the absence of actionable CISA data. Specifically:

- For critical actions:²⁸⁸ FEMA will use the higher of the +3-foot FVA floodplain or the 0.2PFA floodplain.²⁸⁹ Where the 0.2PFA data is not available, the +3-foot FVA will be utilized.
- For non-critical actions: FEMA will use the lower of the +2-foot FVA or 0.2PFA.²⁹⁰

The floodplain established by the FVA is the equivalent of the 1 percent annual chance floodplain (also known as the 100-year flood), plus either 2 or 3 feet of vertical elevation, as applicable based on criticality, and a corresponding increase in the horizontal extent of the floodplain. The increased horizontal extent will not be the same in every case. When the same vertical increase is applied in multiple actions subject to the FFRMS in different areas, the amount of the increase in the horizontal extent of the respective floodplains will depend upon the topography of the area surrounding the proposed location of the action.

The term 0.2PFA refers to the elevation to which floodwater is anticipated to rise during the 0.2 percent annual chance flood (also known as the 500-year flood) and the associated floodplain. The 0.2PFA generally covers a larger area than the 1 percent annual chance floodplain.

²⁸⁸ A critical action is any activity for which even a slight chance of flooding would be too great. A non-critical action is any activity not considered a critical action.

²⁸⁹ For all projects in coastal areas, if the 0.2 percent annual chance flood elevations do not account for the effects of wave action, the appropriate FVA must be used to determine the FFRMS floodplain.

²⁹⁰ While application of the 0.2PFA may provide a more consistent reduction of flood risk as it is probability based, the relationship to the FVA varies depending on topography (*i.e.*, in some instances the 0.2PFA may result in a lower flood elevation than the FVA). Application of only the 0.2PFA without a comparison to the FVA may result in building to a higher resilience standard than is necessary.

²⁸⁶ The final rule and policy contain content that is interrelated but not identical. For purposes of this analysis, FEMA considers both documents as a single proposal.

²⁸⁷ The one percent annual chance elevation refers to the elevation to which floodwater is anticipated to rise during the 1 percent annual chance flood (also known as the base or 100-year flood). Under Executive Order 11988, non-critical actions must be elevated or floodproofed to at least the one percent annual chance elevation (or base flood elevation). Critical actions must be elevated or floodproofed to at least the 0.2 percent annual chance flood (or 500-year) elevation.

Projects that are located near a Special Flood Hazard Area (SFHA),²⁹¹ but not in it, may be in the FFRMS floodplain. At the time the NPRM was published, there were no FEMA products depicting the boundary of the FFRMS floodplain. For this reason, FEMA and its interagency partners have developed and are continuing to develop various tools, including the FFRMS Floodplain Determination Job Aid published on FEMA's website and in the public docket with this rulemaking and a web-based decision support tool, Federal Flood Standard Support Tool (FFSST), that will provide the agency with guides to determine which FFRMS floodplain approach has available and actionable data, in map form, thus should be used for each project. The FFRMS Job Aid helps Federal agencies and their non-federal partners (including potential Federal financial aid recipients) conduct a screening to determine if a proposed Federally funded action will be located within an FFRMS floodplain, based on any of the three approaches in accordance with Sec. 2(a)(1) of Executive Order 11988, as amended. FEMA will leverage the FFRMS Job Aid for determining the FFRMS floodplain when the final rule is implemented. FEMA will continue to collaborate across the Federal government to continue to develop the FFSST to facilitate the implementation of the CISA and the FFRMS.

FEMA developed a flexible approach to implementing the FFRMS to maximize the net benefits—quantified and unquantified—of the rule. Floods are expected to be more frequent and more severe over the next century due to the projected effects of changing conditions.^{292 293} The ocean has warmed, polar ice has melted, and porous landmasses have subsided.²⁹⁴ The global sea level has risen by about 8 inches since reliable record keeping began in 1880.²⁹⁵ It is projected to rise upwards of 1 to 4 feet by 2100, affecting many coastal areas.^{296 297 298} Floods are

²⁹¹ The Special Flood Hazard Area is the area designated on FEMA regulatory mapping products depicting a 1 percent annual chance floodplain.

²⁹² National Oceanic and Atmospheric Administration. U.S. Department of Commerce. "Climate change impacts." <https://www.noaa.gov/education/resource-collections/climate/climate-change-impacts>. Last accessed February 15, 2022.

²⁹³ U.S. Global Change Research Program (2014). Climate Change Impacts in the United States: The Third National Climate Assessment. Available at: <https://repository.library.noaa.gov/view/noaa/19485>. Page 20. Last accessed: April 16, 2024.

²⁹⁴ *Ibid* [page 21].

²⁹⁵ *Ibid* [page 21].

²⁹⁶ Global Change Research Program (2014). Climate Change Impacts in the United States: The Third National Climate Assessment. Available at:

costly natural disasters; between 1980 and 2022, the United States suffered more than \$2.0 trillion (in 2022 dollars) in flood-related damages.²⁹⁹ This final rule will help protect FEMA funded investments from future floods and will help minimize harm in floodplains by changing the standards used to determine future risk for FEMA-funded new construction and substantial improvement, and/or to address substantial damage to Federally funded projects.

The requirements of this rule will apply to grants under FEMA programs such as Individual Assistance (IA), Public Assistance (PA), and Hazard Mitigation Assistance (HMA), as well as grants processed by FEMA's Grants Programs Directorate (GPD) (involving grants for preparedness activities), for projects funding new construction, substantial improvement, or repair of substantial damage. The primary focus of this analysis is to estimate the costs and benefits resulting from a higher vertical elevation and associated horizontal expansion of the floodplain for specific projects paid for with Federal funds. The expected impacts of this final rule primarily result from the cost of the increase in elevation or floodproofing requirements of structures in the FFRMS floodplain. The majority of these costs will be funded by FEMA through several grant programs. For the grant programs that have a cost-share requirement, FEMA grant recipients typically will bear about 25 percent of the elevation and floodproofing project costs. Additionally, FEMA expects to incur costs for administration of the FFRMS requirements, including training FEMA personnel.

To estimate the number of projects that will be subject to the requirements of this rule, FEMA used historical PA, IA, and HMA data. First, FEMA

<https://repository.library.noaa.gov/view/noaa/19485>. Page 20. Last accessed: April 16, 2024.

²⁹⁷ Environmental Protection Agency (EPA). *Supplementary Material for the Regulatory Impact Analysis for the Supplemental Proposed Rulemaking*. "Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review." Page 36. https://www.epa.gov/system/files/documents/2022-11/epa_scghg_report_draft_0.pdf. Last accessed: September 14, 2023.

²⁹⁸ The EPA uses the Framework for Assessing Changes To Sea-level (FACTS) and Building Blocks for Relevant Ice and Climate Knowledge (BRICK) sea-level rise models for their projections.

²⁹⁹ *Climate.gov*. "U.S. billion-dollar weather and climate disasters." <https://www.ncei.noaa.gov/access/billions/summary-stats/US/1980-2022>. Last accessed October 31, 2023. Flood related damages are from flooding, severe storms, and tropical cyclones. Data is CPI adjusted. Severe storms can include wind-related damages, but the source does not separate data out by type of damage.

estimated the number of past new construction, substantial improvement, or repairs to substantial damage projects that are in the existing floodplain. Next, FEMA relied upon data from samples of floodplain expansion at varying levels of freeboard in inland and coastal areas to estimate an average percentage expansion of the floodplain under each of the three FFRMS approaches. FEMA then multiplied the expansion percentages by the estimated number of projects in the current floodplain to estimate the number of projects that will be in the expanded floodplain under each of the FFRMS approaches.

To estimate the cost of the FFRMS elevation requirements, FEMA used reports from the National Flood Insurance Program (NFIP) to determine the increased cost per square foot associated with elevation and floodproofing. FEMA presents the costs as a range because of uncertainty about whether new construction projects would choose to floodproof or elevate.

Finally, to present the total impacts of the final rule, FEMA analyzed the impact of the FVA, 0.2PFA, and CISA for each of the programs, PA, IA, and HMA, as if each approach were the only FFRMS expansion option. This is because it is unknown exactly how many projects will be subject to the FVA, 0.2PFA, or CISA requirements under the final rule, as it will continue to change with the addition of CISA data over time. Accordingly, FEMA estimated the costs of the requirements for each of the approaches separately. This allows FEMA to create a range for each approach. FEMA is opting to use this methodology because it allows for estimation of the highest and lowest probable costs, transfers, and benefits associated with each of the FFRMS expansion options for each of the programs.

FEMA limited its dollar-valuation to the projects impacted in the first 10 years after the rule's effective date.³⁰⁰ FEMA's analysis focuses on the costs, benefits, and transfer payments (*i.e.*, impacts on FEMA grants), that will result over a 50-year period³⁰¹ from the application of the requirements of the final rule to those projects, for a total period of analysis spanning 60 years. For example, if a structure is built in Year 10, the analysis covers 50 years of

³⁰⁰ FEMA used an average of the number of affected projects during the prior 10-year period to estimate the average annual impacts of the future 10-year period.

³⁰¹ The 50-year period is based on the 2022 Report, which assumed 50-year useful life for public buildings. Therefore, FEMA estimated such benefits over a 50-year period. Please see section 7.14.2 of the RIA for more information.

costs, benefits, and transfers for that structure starting in Year 10. However, if a structure is built in Year 11, that is outside of the first 10 years and so the analysis does not consider the costs, benefits, or transfers of the FFRMS requirements on that structure.³⁰² The costs and transfers occur in the first 10 years of the 60-year period because that is when the initial investment to elevate or floodproof those projects takes place. This is an upfront cost that occurs when the project is constructed. However, the

benefits of the final rule are estimated over the 50-year useful life of the affected structures.

The table below provides the estimated number of structures and facilities that will be affected by the final rule over the first 10 years, assuming that each approach is the only expansion option. Structures that are walled and roofed buildings, will comply with the FFRMS through elevating or floodproofing to the required height. Facilities, which are

any human-made or human-placed items other than structures, such as roads and bridges, will require different mitigation measures in order to comply with the increased resiliency standard of the final rule. The monetized impacts of this rule are representative of the floodproofing and elevation mitigation measures that will be required of structures. However, for reasons explained in more detail later, FEMA was unable to monetize the impacts of the rule for facilities.

Table 4: Estimated Number of Structures and Facilities Affected by the Final Rule in Years 1-10 For Each Approach as if Each Approach Were the Only Expansion Option^{[303][304]}

FFRMS Approach	Structures			Total Structures	Facilities		Total Facilities	Total Projects
	PA	IA	HMA		PA	HM A		
FVA	899	1,434	7,755	10,088	26,144	841	26,985	37,073
0.2PFA	688	1,434	7,712	9,834	26,144	841	26,985	36,819
CISA	1,154	1,924	10,398	13,476	26,144	841	26,985	40,461

The final rule will increase construction and resiliency standards for FFRMS-affected structures and facilities. FEMA considers implementing these standards, whether through higher vertical elevation, floodproofing, or other mitigation measures, to be new economic activity that will result from this rule. Accordingly, these compliance activities are categorized as costs of this rule.

FEMA analyzed the impact of the FVA, 0.2PFA, and CISA for each of the programs, PA, IA, and HMA, as if each approach were the only FFRMS expansion option. FEMA selected the CISA as the primary approach as it is the preferred option. Using the CISA as the primary approach, FEMA has estimated that this final rule will affect 13,476 PA, IA, and HMA structures over the first 10 years. The low estimate³⁰⁵ cost will be between \$134.0 million and \$110.4 million, discounted at 3 and 7 percent respectively, with a 60-year

annualized cost between \$4.8 million and \$7.9 million, discounted at 3 and 7 percent. The high estimate cost will be between \$169.8 million and \$139.9 million, discounted at 3 and 7 percent respectively, with a 60-year annualized cost between \$6.1 million and \$10.0 million, discounted at 3 and 7 percent respectively. These costs include additional training for FEMA staff, as well as the total cost for additional elevation and floodproofing. FEMA is unable to quantify the cost for increased resiliency standards for an estimated 26,985 affected facility projects over the first 10-year period of the analysis. Additionally, FEMA is unable to quantify the cost for projects that may be diverted out of the floodplain, impacts to projects with existing basements, project delays, or forgone projects that may result from this rule.

Because the cost to implement the FFRMS mitigation measures will be shared between FEMA and grant

recipients according to statutory cost shares, there are also important distributional impacts. The majority of these costs will be borne by FEMA through additional grants (a transfer from FEMA to grant recipients). Grant recipients will bear the remaining costs. Using the CISA as the primary approach, FEMA estimates that this final rule will affect 13,476 structures in the first 10 years. FEMA presents the change in transfer payments from FEMA to grant recipients as a range because of uncertainty regarding whether new construction projects would be floodproofed or elevated. The low estimate ranges between \$104.7 million and \$86.2 million, discounted at 3 and 7 percent respectively, with a 60-year increase in transfers between \$3.8 million and \$6.1 million annually, discounted at 3 and 7 percent respectively. The high estimate ranges between \$134.2 million and \$110.5 million, discounted at 3 and 7 percent

³⁰² If FEMA limited the analysis to only 10 years of impacts, it would consider all of the costs and transfers but only a small portion of the benefits from additional protection from flood events because the life of the structure is more than 10 years. After year 10, the final rule would continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage, but FEMA chose to limit the analysis to 10 years of affected structures because it used 10 years of historical data, and due to changing conditions, projecting impacts past 10 years would become less accurate due to an expected increase in the frequency and severity of major disasters. Accordingly, FEMA's analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

³⁰³ From 2013–2022, for PA, FEMA funded a total of 199,993 projects for \$172.6 billion (CPI adjusted

to 2022 dollars). Of that total number of projects, FEMA funded \$22.8 billion (CPI adjusted to 2022 dollars) for all PA Category E projects, which is about 13.2 percent (\$22.8 billion ÷ \$172.6 billion) of the total FEMA PA funding. For PA Category E projects within the floodplain, FEMA funded \$1.2 billion (CPI adjusted to 2022 dollars) which is about 0.7 percent (\$1.2 billion ÷ \$172.6 billion) of all FEMA PA funding or 2,437 projects which is about 1.2 percent (2,437 projects ÷ 199,993 projects) of all FEMA PA projects.

From 2013–2022, for HMA, FEMA funded a total of 8,761 projects. There are no data fields that show whether a project is located in a floodplain. Therefore, FEMA used the assumption that all HMA projects were located in the floodplain. This may lead to an overestimate in the costs associated with HMA projects.

From 2013–2022, for IA, FEMA funded a total of 13,576 THU and 184 PHC projects. FEMA assumed

that 11.1 percent of IA PHC and THU projects would be located in the floodplain, based on PA project data. Accordingly, FEMA estimated a 20 (184 PHC projects × 11.1 percent) PHC projects and 1,507 (13,576 THU projects × 11.1 percent) THU projects in the current floodplain in years 1–10 of the analysis.

³⁰⁴ These counts are based on the number of closed or obligated projects at the time of analysis. It can take several years for a project to close out or reach the obligation status after the disaster year.

³⁰⁵ FEMA estimated a range of possible costs since it was not able to accurately estimate the number of new construction projects that would elect to elevate versus those that would elect to floodproof, so estimates are provided for both the cost of elevating all new construction projects and the costs of floodproofing all new construction projects.

respectively, with a 60-year increase in transfers between \$4.8 million and \$7.9 million annually, at 3 and 7 percent respectively.

Grant recipients will be responsible for between \$22.6 million and \$18.6 million, discounted at 3 and 7 percent respectively, with a 60-year annualized amount between \$0.8 million and \$1.3 million, at 3 and 7 percent respectively for the low estimate. The high estimate ranges between \$27.8 million and \$22.9 million, discounted at 3 and 7 percent respectively, with a 60-year annualized amount of \$1.0 million and \$1.6 million, at 3 and 7 percent respectively. Not included in these estimates are the additional grants FEMA will provide or the additional costs recipients will incur for their portion of the cost share, for any of the elevation and floodproofing costs that FEMA is unable to monetize.

FEMA has been able to quantify benefits for a small portion of projects affected by the rule. Using CISA as the

primary approach, FEMA estimates that 1,154 PA Category E (Public Buildings)³⁰⁶ projects will be subject to the FFRMS in the first 10 years. Assuming a 59-inch Sea Level Rise,³⁰⁷ FEMA estimates that the present value benefits of one additional foot of freeboard for the 50-year useful life of projects undertaken during the 10-year period of analysis ranges at the low end between \$56.1 million and \$46.2 million, discounted to the beginning of Year 1 at 3 and 7 percent respectively, with a 60-year annualized benefit between \$2.0 million and \$3.3 million.

³⁰⁶ FEMA Public Assistance. <https://www.fema.gov/fact-sheet/fema-public-assistance-0>. Accessed April 23, 2024.

³⁰⁷ For FEMA's primary estimate, FEMA used 59 inches of SLR, due to it being the closest SLR option to FEMA's +5-ft assumption for CISA. CISA is the preferred approach for FFRMS if the data are available. Since 5 ft is equivalent to 60 inches (5 × 12 inches per foot), 59-inch SLR is the closest SLR option that FEMA has available to use for this portion of the analysis.

The high estimate ranges between \$66.1 million and \$54.4 million, discounted to the beginning of Year 1 at 3 and 7 percent respectively, with a 60-year annualized benefit between \$2.4 million and \$3.9 million. These quantified benefits include estimates of avoided physical damage, avoided displacement, and avoided loss of function for the 1,154 PA Category E projects over their 50-year useful life. In addition, unquantified benefits of this final rule include the reduction in damage to 12,322 affected IA and HMA structures and their contents from future floods, 26,985 PA and HMA facilities, potential lives saved, public health and safety benefits, reduced recovery time from floods, and increased community resilience to flooding.

Table 5 shows the summary of the total costs, benefits, and distributional impacts of the final rule.

Table 5: Summary of the Impacts of the Final Rule (2022\$)

Category	Summary
Regulatory and Policy Changes	Adds language to incorporate the best available and actionable science into determinations for Federally funded projects.
	Adds approach to developing the alternative actions, the agency shall use, where possible, natural systems, ecosystem processes, and nature-based approaches.
	Updates the dollar thresholds for the applicability of the 8-step process to repairs under sections 406 and 407 to \$18,000 for 2022. Also adds that the thresholds will be adjusted annually for inflation.
	Establishes a process to determine whether the FFRMS action is located in a wetland and/or a floodplain.
	Incorporates FFRMS approaches into regulations. FEMA's supplementary policy will be using CISA as the preferred approach to establishing the FFRMS floodplain and resilience requirements if the data are available. If CISA is not available, for critical actions, use the higher of +3 FVA or 0.2PFA floodplain. If 0.2PFA data are not available, use +3 FVA. For non-critical actions, use the lower of FVA or 0.2PFA floodplain unless the 0.2PFA does not account for wave action. If 0.2PFA is not available use +2 FVA.
	Adds an exception to use of the FFRMS floodplain in limited situations involving national security and emergency actions.
	Clarification that the minimization standards required of 44 CFR §9.11 are applicable to all of FEMA's grant programs, not just grant programs authorized by the Disaster Relief Act of 1974.
Affected Population	The FFRMS elevation requirements will apply to those actions subject to the FFRMS in the applicable FFRMS floodplain. Grant recipients will be required to comply with the new standard by elevating or floodproofing projects located in the expanded FFRMS floodplain. Specific grant programs include IA, PA, and HMA. Using CISA as the primary approach, FEMA limited its dollar-valuation to the projects impacted in the first 10 years after the rule's effective date, FFRMS will impact the following number of structures: 1,154 PA projects, 1,924 IA projects, and 10,398 HMA projects, for a total of approximately 13,476 structure projects. FEMA also estimates FFRMS will impact the following number of facilities: 26,144 PA projects and 841 HMA projects, for a total of approximately 26,985 facility projects in years 1-10.
Transfers	<p>The majority of elevation and floodproofing costs will be funded by FEMA through several grant programs. Using CISA as the primary approach, FEMA estimates 13,476 affected PA, IA, and HMA structures. Discounted, the low estimate will be between \$104.7 million and \$86.2 million, using 3 and 7 percent respectively, with a 60-year transfer between \$3.8 million and \$6.1 million annually, at 3 and 7 percent respectively. Discounted, the high estimate will be between \$134.2 million and \$110.5 million, using 3 and 7 percent respectively, with a 60-year transfer between \$4.8 million and \$7.9 million annually, at 3 and 7 percent respectively. These transfer payments will occur in the first 10 years of the 60-year period because that is when the investment in those projects takes place.</p> <p>Not included in these estimates are the additional grants FEMA will provide, and additional costs recipients will incur for their portion of the cost share, for any of the elevation and floodproofing costs that FEMA is unable to monetize.</p>
Costs (quantitative)	Using CISA as the primary approach, FEMA estimates that this final rule will affect 13,476 PA, IA, and HMA structures. Discounted, the low estimate cost for these projects will be between \$134.0 million and \$110.4 million, using 3 and 7 percent respectively, with a 60-year annualized cost between \$4.8 million and \$7.9 million, using 3 and 7 percent. Discounted, the high estimate cost for these projects will be between \$169.8 million and \$139.9 million, using 3 and 7 percent respectively, with a 60-year annualized cost between \$6.1 million and \$10.0 million, using 3 and 7 percent respectively. These

	costs include additional training for FEMA staff, time for FEMA staff to make FFRMS floodplain determinations, the time for FEMA staff to make floodplain determinations, as well as the cost for the additional elevation and floodproofing this rule would require. These costs will be incurred in the first 10 years of the 60-year period because that is when the investment in those projects takes place.
Costs (qualitative)	Diversion of projects out of the floodplain.
	Increase in resiliency standard for an estimated 26,985 affected facility projects over 10 years
	Additional costs for adding requirements to building with basements
	Lifecycle maintenance costs for floodproofing
	Project delays and forgone projects.
Benefits (quantitative)	FEMA is able to quantify benefits for a portion of projects affected by the rule. Using CISA as the primary approach, FEMA estimates that 1,154 PA structures will be subject to the FFRMS over the 10-year period after the rule’s publication. Assuming a 59-inch Sea Level Rise, FEMA estimates the present value benefits of one additional foot of freeboard for the 50-year useful life of projects undertaken in the first 10 years after the rule’s effective date. The low estimate ranges between \$56.1 million and \$46.2 million, discounted to the beginning of Year 1, at 3 and 7 percent respectively, with a 50-year annualized benefit of \$2.0 million and \$3.3 million, at 3 and 7 percent. The high estimate ranges between \$66.1 million and \$54.4 million, discounted to the beginning of Year 1 at 3 and 7 percent respectively, with a 50-year annualized benefit of \$2.4 million and \$3.9 million, at 3 and 7 percent respectively. These quantified benefits include avoided physical damage, avoided displacement, and avoided loss of function for the 1,154 PA projects estimated over the 50-year useful life of public buildings.
Benefits (qualitative)	Reduction in damage to properties and contents from future floods for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects, potential lives saved, public health and safety benefits, reduced recovery time from floods, and increased community resilience to flooding.

PA Projects

FEMA provides PA grants to public and certain non-profit entities for the rebuilding, replacement, or repair of public and non-profit structures and facilities damaged by disasters. PA projects that involve new construction, substantial improvement, or repairs to address substantial damage are affected by this rule. FEMA divides its PA work into categories A–G.³⁰⁸ Projects that get funding under PA Categories C (Roads and Bridges), D (Water Control Facilities), E (Public Buildings), F (Utilities), and G (Parks, Recreational Areas, and Other Facilities) are affected by this rule, but FEMA is only able to provide estimates of costs associated with Category E (Public Buildings). FEMA has adequate data to estimate the additional costs for structures subject to the FFRMS, so monetized impacts are only available for Category E projects. The remaining PA categories fund facilities that are not subject to the same elevation and floodproofing requirements as buildings.

44 CFR part 9 classifies projects as either structures or facilities. Under this

rule, a structure is a walled and roofed building, including mobile homes and gas or liquid storage tanks. Structures will be subject to freeboard requirements to floodproof or elevate to a certain level above the BFE. Freeboard is the additional height above the BFE to which the structure is floodproofed or elevated for the purpose of reducing the risk of flood damage.

In contrast, facilities are any human-made or human-placed item other than a structure, including roads, bridges, power lines, water control facilities, and other types of infrastructure. Facility mitigation measures are more varied and highly project-specific. For example, damage to roads during flood events can be caused by numerous events, such as erosion and scour, inundation by floodwater, or debris blockage. Likewise, the mitigation measures to address the damages can include a variety of approaches, such as installing low water crossings, increasing culvert size, installing a relief culvert, adding riprap to a road embankment, and many others.³⁰⁹

Due to the highly project-specific nature of facilities projects, and the numerous options available for making them resilient, FEMA cannot estimate the costs of improving flood resiliency of facilities. Where FEMA provides funding for facilities to complete new construction, substantial improvement, or repairs to address substantial damage, the projects must incorporate minimization measures that will consider the FFRMS flood elevation. However, floodproofing and elevation to a specific height may not be appropriate as a minimization measure for facilities, depending on the facility. FEMA cannot estimate the cost due to the variability of those measures, which may include a variety of approaches. Facilities that are already located in the 1 percent annual chance floodplain for non-critical actions or 0.2 percent annual chance floodplain for critical actions must take resilience measures under current regulations. Based on 2013–2022 data, FEMA estimates that about 1,036 Category C projects, 120 Category D projects, 208 Category F projects, and 314 Category G projects may be affected by the FFRMS each year.

For PA Category E projects, if the FVA is the only expansion option, FEMA estimates the final rule will affect 899 projects over the first 10 years. The costs

³⁰⁸ PA Category A-Debris Removal and Category B-Emergency Protective Measures do not fund building or repair of structures and are not subject to the FFRMS.

³⁰⁹ FEMA. “FEMA B–797 Hazard Mitigation Field Book: Roadways.” 2010. Available at https://www.fema.gov/sites/default/files/2020-07/b797_hazmit_handbook.pdf.

would be incurred in the first 10 years of the 60-year period because that is when the investment in those projects takes place. Accordingly, FEMA estimated that the average annual costs in years 1–10 will range between \$4.3 million and \$5.5 million. The average Federal cost share for PA projects from 2013–2022 was 85.0 percent. Accordingly, FEMA estimates that it will cover 85.0 percent of the cost to elevate or floodproof PA projects, for a total of between \$3.6 million and \$4.7 million in additional grants per year for the first 10 years. Grant recipients will bear the remaining cost of between \$0.6 million and \$0.8 million per year for the first 10 years.

For PA Category E projects, if 0.2PFA is the only expansion option, FEMA estimates the final rule will affect 688 projects over the first 10 years. Because these costs are incurred in the first 10 years, FEMA estimated the average annual costs in years 1–10 will range between \$2.5 million and \$3.2 million. Using the historical average 85.0 percent Federal cost share, FEMA estimates that it will cover 85.0 percent of the cost to elevate or floodproof PA projects, for a total of between \$2.1 million and \$2.8 million in additional grants per year for the first 10 years. Grant recipients will bear the remaining costs of approximately \$0.4 million and \$0.5 million per year for the first 10 years.

For PA Category E projects, if CISA is the only expansion option, FEMA estimates the final rule will affect 1,154 projects over the first 10 years. Because these costs are incurred in the first 10 years, FEMA estimated the average annual costs in years 1–10 will range between \$10.4 million and \$14.5 million. Using the historical average 85.0 percent Federal cost share, FEMA estimates that it will cover 85.0 percent of the cost to elevate or floodproof PA projects, for a total of between \$8.9 million and \$12.3 million in additional grants per year for the first 10 years. Grant recipients will bear the remaining cost of between \$1.6 million to \$2.2 million per year for the first 10 years.

Table 6: Summary of FFRMS PA Category E Annual Project Costs and Distributional Impacts by Approach

		FVA	0.2PFA	CISA
Low Estimate	Annual cost (Years 1-10)	\$4,272,069	\$2,474,052	\$10,434,180
	FEMA’s portion (grants from FEMA to recipients)	\$3,631,259	\$2,102,944	\$8,869,053
	Recipients’ portion	\$640,810	\$371,108	\$1,565,127
High Estimate	Annual cost (Years 1-10)	\$5,549,873	\$3,241,488	\$14,497,988
	FEMA’s portion (grants from FEMA to recipients)	\$4,717,392	\$2,755,265	\$12,323,290
	Recipients’ portion	\$832,481	\$486,223	\$2,174,698
Unquantified	Increase in resiliency standard for structures that would affect an estimated 1,036 Category C projects, 120 Category D projects, 208 Category F projects, and 314 Category G projects per year.			

IA Projects

Individual Assistance (IA) grants are provided to individuals who, as a direct result of a disaster, have necessary expenses and serious needs that they are unable to meet through other means. IA funding is divided into Housing Assistance and Other Needs Assistance. Other Needs Assistance under IA provides financial assistance for medical, dental, childcare, funeral, personal property, transportation, or other necessary expenses or serious needs and is not subject to FFRMS requirements. Under Housing Assistance, FEMA may provide temporary housing assistance (financial assistance or direct assistance in the form of temporary housing units), a capped amount of financial assistance for the repair or replacement of disaster-damaged private residences; and, in rare circumstances, financial or direct assistance to construct permanent or semi-permanent housing.

The financial caps on housing repair or replacement assistance means IA grants do not generally fund new construction or substantial improvements. However, two types of

IA grants are affected by the final rule: IA Permanent Housing Construction (PHC) projects, and sales and disposal of temporary housing units (THUs). PHC is Federal assistance that FEMA provides under IA for the purpose of constructing permanent housing where alternative housing resources are unavailable or scarce. IA also includes the sale and disposal of THUs such as mobile housing units and recreational vehicles; THUs located in the FFRMS floodplain will be subject to the requirements of this rule. FEMA regulations prohibit the floodproofing of residential structures at or below the BFE, and so elevation is the only option.³¹⁰

FEMA has calculated the cost of elevating PHC structures, depending on FFRMS approach and location and type of project.³¹¹ FEMA then subtracted

³¹⁰ See 44 CFR 60.3.

See also Floodproofing. FEMA. Available at: <https://www.fema.gov/glossary/floodproofing>. Last accessed: January 11, 2023.

³¹¹ Projects outside of the 1 percent annual chance floodplain, but below the required level will need to be elevated to the required level. These projects require elevations of different levels, depending on the structure’s current elevation. FEMA assumes that half of the projects will need

certain costs that it determined to be part of the baseline. Specifically, numerous States and localities have existing freeboard requirements that will result in elevation costs and benefits regardless of this rule, so costs and benefits for these areas have been reduced based on existing requirements.

For IA, if the FVA is the only expansion option, FEMA estimates that the final rule will affect 1,434 structures over the first 10 years. These costs would be incurred in the first 10 years of the 60-year period because that is when the investment in those projects takes place. Accordingly, FEMA estimates average annual costs of \$57,343 in years 1–10. Since there is no cost share for IA, FEMA will fund the entire cost of elevating IA projects through grants.

For IA, if the 0.2PFA is the only expansion option, FEMA estimates that the final rule will affect 1,434 structures

to be elevated 1-ft and the other half or projects will need to be elevated 2-ft. This assumption was made because FEMA is unsure of the actual number of projects that will need to be elevated by 1-ft or 2-ft and so assumed that it will be an even proportion for each height. IA projects is all considered non-critical actions and will not require a 3-ft level.

over the first 10 years. Because these costs would be incurred in the first 10 years of the analysis, FEMA estimates the average annual cost in years 1–10 is \$57,343. Since there is no cost share for IA, FEMA will fund the entire cost of elevating IA projects through grants.

For IA, if the CISA is the only expansion option, FEMA estimates that the final rule will affect 1,924 projects over the first 10 years.³¹² Because these costs would be incurred in the first 10 years of the analysis, FEMA estimates that the average annual cost in years 1–

10 is \$168,174. Since there is no cost share for IA, FEMA will fund the entire cost of elevating IA projects through grants.

Table 7: Summary of FFRMS IA Annual Project Costs and Distributional Impacts by Approach

	FVA	0.2PFA	CISA
Annual cost (Years 1-10)	\$57,343	\$57,343	\$168,174
FEMA’s portion (grants from FEMA to recipients)	\$57,343	\$57,343	\$168,174
Recipients’ portion	\$0	\$0	\$0

HMA Projects

FEMA provides Hazard Mitigation Assistance (HMA) grants to States, territories, Federally-recognized Tribes, and local communities for the implementation of hazard mitigation measures to increase resiliency to disasters. Hazard mitigation is defined as any action taken to reduce or eliminate long-term risk to people and property from natural hazards. HMA projects related to flood mitigation mainly include elevation of structures, floodproofing of structures, and acquisition of properties that are at a high risk of damage from flooding. HMA also funds various other types of projects such as minor flood control, property acquisition, and generators, but FEMA is unable to estimate the potential costs associated with these projects because the manner in which each applicant meets the resiliency standards will be fact-specific and dependent upon the nature of the design and purpose of the project. HMA grant program includes Hazard Mitigation Grant Program (HMGP), HMGP Post Fire, Pre-Disaster Mitigation (PDM), Building Resilient Infrastructure and Communities (BRIC), and Flood

Mitigation Assistance (FMA). Between 2010 and 2019, FEMA funded a total of 841 minor flood control and generators projects, for an average of 84 such projects per year. Additional minor mitigation measures will have to be taken for these projects, if located in the expanded FFRMS floodplain.

FEMA used data from HMA grant approvals for projects that include the elevation or floodproofing of structures from 2010–2019 and a multi-step process to estimate the range of costs for elevating or floodproofing these structures to the FFRMS.

For HMA, if the FVA is the only expansion option, FEMA estimated the final rule will affect 7,755 structures over the first 10 years. These costs would be incurred in the first 10 years of the 60-year period because that is when the investment in those projects would take place. Accordingly, FEMA estimates average annual costs in years 1–10 of \$1.8 million. Using the 75 percent Federal cost share, FEMA estimates that it will cover 75 percent of the cost to elevate or floodproof HMA projects, for a total of \$1.4 million in additional grants per year in years 1–10. Grant recipients will bear the remaining cost of \$0.5 million per year.

For HMA, if the 0.2PFA is the only expansion option, FEMA estimated that the final rule will affect 7,712 structures in the first 10 years. Because these costs would be incurred in the first 10 years of the analysis, FEMA estimates the average annual cost in years 1–10 will be \$1.8 million. Using the 75 percent Federal cost share, FEMA estimates that it will cover 75 percent of the cost to elevate or floodproof HMA projects, for a total of \$1.4 million in additional grants per year in years 1–10. Grant recipients will bear the remaining cost of \$0.5 million per year.

For HMA, if the CISA is the only expansion option, FEMA estimated that the final rule will affect 10,398 structures over the first 10 years. Because these costs would be incurred in the first 10 years, FEMA estimates that the average annual cost in years 1–10 is \$4.3 million. Using the 75 percent Federal cost share, FEMA estimates that it will cover 75 percent of the cost to elevate or floodproof HMA projects, for a total of \$3.2 million in additional grants per year. Grant recipients will bear the remaining cost of \$1.1 million per year.

Table 8: Summary of FFRMS HMA Structure Annual Project Costs and Distributional Impacts by Approach

	FVA	0.2PFA	CISA	
Quantified Estimates	Annual cost (Years 1-10)	\$1,848,298	\$1,809,364	\$4,319,206
	FEMA’s portion (grants from FEMA to recipients)	\$1,386,224	\$1,357,023	\$3,239,406
	Recipients’ portion	\$462,074	\$452,341	\$1,079,802
Unquantified	Increase in resiliency standard for an estimated 84 minor flood controls and generators projects per year			

³¹² For analysis purposes, FEMA calculated the expanded floodplain using the mid-point (and rounded down) to +5-ft CISA which would expand

the floodplain by 26 percent. FEMA opted for the mid-point for CISA because this is the best approach with available data. Please see further

explanation in the appropriate CISA sections: 7.4.3, 7.5.3, and 7.6.3.

Need for Regulation

Executive Order 11988, as amended, requires agencies to improve the resilience of communities and Federal assets against the impacts of flooding. The FFRMS is a flood resilience standard that provides a flexible framework to increase resilience against flooding and help preserve the natural values of floodplains and wetlands. Incorporating the FFRMS ensures FEMA expands flood risk management from the current base flood elevation to a higher vertical elevation and corresponding horizontal floodplain to address current and future flood risk and ensure that projects funded with taxpayer dollars last as long as intended.

Affected Population

The affected population is FEMA grant recipients whose projects are located in the current and the expanded FFRMS floodplain. Grant recipients will be required to comply with the new standard by elevating or floodproofing projects located in the expanded FFRMS floodplain. Specific grant programs include PA, IA, and HMA. PA grant recipients include public and certain non-profit entities, IA grant recipients include individuals, and HMA grant recipients include States, territories, Federally-recognized Tribes, and local communities.

The implementation of the FFRMS will have negligible impacts on community property values, tax bases and the distribution of real income. Additionally, FEMA expects the impacts on affordable housing for low to moderate income households and disadvantaged communities to be minimal since most actions subject to FFRMS requirements are non-residential. FEMA only funds residential construction in the IA and HMA programs; FEMA funds 153 residential IA projects and 268 HMA residential projects per year on average.

Baseline

Under current FEMA regulations set out in 44 CFR part 9, the base floodplain is defined as the 100-year floodplain (1 percent annual chance), or for critical actions, defined as the 500-year floodplain (0.2 percent annual chance). New construction or substantial improvement of structures located in the base floodplain must be elevated to or above the 1 percent annual chance flood level or Base Flood Elevation (BFE) or floodproofed below the BFE. Critical actions located within either the 1 percent annual chance floodplain or the 0.2 percent annual chance floodplain must be elevated or

floodproofed up to the corresponding elevation for the 0.2 percent annual chance floodplain where it is mapped.³¹³

FEMA has interim policies for PA and HMA that partially implement FFRMS and ASCE 24 standards in some areas, discussed in further detail below. Depending on the criticality of the action, these programs apply the supplemental FFRMS policy either to the base floodplain, or to both the 100-year and 500-year floodplains for critical actions. At the time the NPRM RIA was conducted, these partial implementation policies had been in place for less than 2 years. These policies were issued as temporary, partial implementation of the FFRMS until FEMA could implement it through this rulemaking. FEMA conducted this Regulatory Impact Analysis against a pre-statutory baseline to capture the economic impacts of the FFRMS and more accurately to measure the impacts of the rule against the world without the interim PA and HMA policies. Likewise, data on projects that adhered to the ASCE 24 standards is not available. Accordingly, FEMA used a pre-guidance baseline for this final rule to measure the impacts of the rule against the world without these policies and in accordance with the current requirements of 44 CFR part 9.

PA Interim Policy

The June 3, 2022 PA interim partial implementation policy³¹⁴ provides elevation requirements for critical and non-critical actions involving structures located in a designated floodplain. The policy established requirements for elevating and floodproofing structures funded under the PA program. The interim policy set forth principles at its issuance that ensure that communities affected by future flooding are less vulnerable to losses of life and property, that investment of PA program funds for projects in the floodplain are spent to protect structures from flood risk, that structures are elevated or floodproofed

³¹³ FEMA's project level data for IA, PA, and HMA delineate whether projects are in the Special Flood Hazard Area (1 percent annual chance floodplain) but do not show whether they are in the 0.2 percent chance floodplain. For critical actions, FEMA was unable to determine the baseline number of critical actions that are located in the 0.2 percent chance floodplain. Regardless of which floodplain the project is in, a critical action must be elevated at or above the 0.2 percent annual chance flood level.

³¹⁴ Partial Implementation of the Federal Flood Risk Management Standard for Public Assistance (Interim). FEMA Policy 104-22-0003. Available at: https://www.fema.gov/sites/default/files/documents/fema_fp-104-22-0003-partial-implementation-ffrms-pa-interim.pdf. Last accessed: July 20, 2022.

to address current and future flood risk, and that the policy is implemented in a consistent and equitable manner.

This policy is being applied to structures (walled or roofed buildings, including mobile homes and gas or liquid storage tanks) in a mapped or established 1 percent annual chance floodplain or 0.2 percent annual chance floodplain³¹⁵ that have a substantial damage³¹⁶ determination, require substantial improvement,³¹⁷ or involve new construction.³¹⁸ This applies regardless of the cause of damage.

HMA Interim Policy

The August 26, 2021 HMA interim partial implementation policy³¹⁹ sets forth the elevation requirements for the use of FEMA HMA for non-critical actions involving structure elevation, dry floodproofing, and mitigation reconstruction projects in the 1 percent annual chance floodplain.^{320 321}

³¹⁵ Under 44 CFR 9.4, Floodplain means the "lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year. Wherever in this regulation the term floodplain is used, if a critical action is involved, floodplain shall mean the area subject to inundation from a flood having a 0.2 percent chance of occurring in any given year (500-year floodplain). Floodplain does not include areas subject only to midflow until FIA adopts maps identifying M Zones."

³¹⁶ Under 44 CFR 59.1, Substantial Damage means "damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred."

³¹⁷ Under 44 CFR 9.4, Substantial Improvement means "any repair, reconstruction or other improvement of a structure or facility, which has been damaged in excess of, or the cost of which equals or exceeds, 50% of the market value of the structure or replacement cost of the facility (including all public facilities as defined in the Disaster Relief Act of 1974) (a) before the repair or improvement is started, or (b) if the structure or facility has been damaged and is proposed to be restored, before the damage occurred. If a facility is an essential link in a larger system, the percentage of damage will be based on the relative cost of repairing the damaged facility to the replacement cost of the portion of the system which is operationally dependent on the facility. The term substantial improvement does not include any alteration of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places."

³¹⁸ Under 44 CFR 9.4, New Construction means "the construction of a new structure (including the placement of a mobile home) or facility or the replacement of a structure or facility which has been totally destroyed."

³¹⁹ Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Programs (Interim). FEMA Policy FP-206-21-0003. Available at: https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-0003-partial-implementation-ffrms-hma-programs-interim.pdf. Last accessed: July 20, 2022.

³²⁰ FEMA implemented an update to the HMA interim policy on December 2022. This updated interim policy provides updated elevation

The updated HMA interim policy,³²² which supersedes the initial HMA interim policy, provides elevation requirements for critical and non-critical actions involving structures (as defined in 44 CFR 9.4) located in a designated floodplain. This updated interim policy covers the additional flexibility for non-critical actions to select the lower of the 0.2PFA or +2-ft above the BFE and setting elevation requirements for critical actions involving structures.

By partially implementing the FFRMS and requiring a higher vertical flood elevation for certain non-critical actions, FEMA is helping to ensure that communities affected by future flood disasters are less vulnerable to losses of life and property. This policy purpose is to improve the resilience of non-critical actions involving structure elevation, dry floodproofing, and mitigation reconstruction projects located in the SFHA against the impacts of flooding, which are anticipated to increase over time due to changing conditions and

requirements for critical and non-critical actions involving structures as defined in 44 CFR part 9.4 located in a designated floodplain. The updated interim policy also provides updated requirements for elevating and floodproofing structures funded under HMA programs. The RIA does not address the changes in the updated HMA interim policy.

³²¹ The 1 percent annual chance floodplain is currently also defined as the Special Flood Hazard Area under the NFIP.

³²² Partial Implementation of the Federal Flood Risk Management Standard for Hazard Mitigation Assistance Programs. FEMA Policy 206–21–003–0001. Available at: https://www.fema.gov/sites/default/files/documents/fema_policy-fp-206-21-003-0001-implementation-ffrms-hma-program_122022.pdf. Last accessed: December 30, 2022.

other threats; and to ensure such projects will last as long as intended.

Total Costs

This final rule will increase costs for certain IA, PA, and HMA program projects, as well as result in administrative costs for FEMA. FEMA expects minimal effects on grants processed by FEMA's GPD because these programs involve grants for preparedness activities and generally do not fund new construction or substantial improvement projects. Future FEMA facilities that may be located within the FFRMS floodplain will also be subject to the requirements of the final rule.

FEMA is unable to quantify the cost for increased resiliency standards for the 26,985 facility projects estimated to be affected in the first 10 years after this rule's publication. Additionally, FEMA is unable to quantify the cost for projects that may be diverted out of the floodplain, impacts to projects with existing basements, project delays, or forgone projects that may result from this rule.

Using the CISA as the primary approach, FEMA estimates that the final rule will affect 13,476 PA, IA, and HMA structures over the first 10 years. Those costs are incurred in the first 10 years of the 60-year period because that is when the investment in those projects takes place.³²³ Discounted over 60

³²³ FEMA limited its dollar-valuation to the projects impacted in the first 10 years after the rule's effective date. FEMA has considered the resulting costs, benefits, and transfer payments of the final rule on those projects over a 50-year period, for a total of 60 years. The costs and

years, the low estimate³²⁴ cost is between \$134.0 million and \$110.4 million, using 3 and 7 percent respectively, with a 60-year annualized cost of \$4.8 million and \$7.9 million, using 3 and 7 percent respectively (see Table 9). Discounted over 60 years, the high estimate cost is between \$169.8 million and \$139.9 million, using 3 and 7 percent respectively, with a 60-year annualized cost of \$6.1 million and \$10.0 million, using 3 and 7 percent (see Table 10). Monetized costs include additional training for FEMA staff as well as the cost for the additional elevation or floodproofing. FEMA is unable to quantify the cost for increased resiliency standards for an estimated 26,985 affected facility projects over the 10-year period of analysis. Additionally, FEMA is unable to quantify the cost for projects that may be diverted out of the floodplain, impacts to projects with existing basements, project delays, or forgone projects that may result from this rule.

transfers occur in the first 10 years of the 60-year period because that is when the initial investment to elevate or floodproof them to meet the FFRMS requirements takes place. This is an upfront cost that occurs when the project is constructed. However, the benefits of the final rule are realized over the 50-year useful life of the affected structures.

³²⁴ FEMA has created a range for the administrative costs: between if all projects used the FFSST (low estimate) and if all used the Job Aid (high estimate). FEMA acknowledges that there may be situations where a combination of the FFSST and Job Aid may be used. However, FEMA was unable to estimate how many would use the FFSST and how many would use the Job Aid since the FFSST is currently being improved. In reality, the administrative costs will likely fall somewhere within the low and high estimates.

Table 9: Primary Approach (CISA) Estimated Costs over the 60-Year Period of Analysis (Low Estimate, 2022\$)

Year	FEMA Admin Costs	Elevation and Floodproofing Costs	Undiscounted annual costs	Annual costs discounted at 3%	Annual costs discounted at 7%
1	\$1,442,218	\$14,921,562	\$16,363,780	\$15,887,165	\$15,293,252
2	\$701,177	\$14,921,562	\$15,622,739	\$14,725,930	\$13,645,505
3	\$701,177	\$14,921,562	\$15,622,739	\$14,297,019	\$12,752,809
4	\$701,177	\$14,921,562	\$15,622,739	\$13,880,601	\$11,918,513
5	\$701,177	\$14,921,562	\$15,622,739	\$13,476,312	\$11,138,797
6	\$701,177	\$14,921,562	\$15,622,739	\$13,083,798	\$10,410,091
7	\$701,177	\$14,921,562	\$15,622,739	\$12,702,716	\$9,729,057
8	\$701,177	\$14,921,562	\$15,622,739	\$12,332,734	\$9,092,576
9	\$701,177	\$14,921,562	\$15,622,739	\$11,973,529	\$8,497,735
10	\$701,177	\$14,921,562	\$15,622,739	\$11,624,785	\$7,941,808
11-60*	\$0	\$0	\$0	\$0	\$0
Total				\$133,984,589	\$110,420,143
Annualized				\$4,841,260	\$7,865,141

* After year 10, this final rule will continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage, but FEMA has chosen to limit the analysis to 10 years of affected structures because FEMA believes the number of structures affected in this 10-year period is enough to provide a reasonable estimate of the costs, benefits, and transfers resulting from the final rule. Accordingly, FEMA’s analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

Table 10: Primary Approach (CISA) Estimated Costs over the 60-Year Period of Analysis (High Estimate, 2022\$)

Year	FEMA Admin Costs	Elevation and Floodproofing Costs	Undiscounted annual costs	Annual costs discounted at 3%	Annual costs discounted at 7%
1	\$1,576,243	\$18,985,370	\$20,561,613	\$19,962,731	\$19,216,461
2	\$835,202	\$18,985,370	\$19,820,572	\$18,682,790	\$17,312,055
3	\$835,202	\$18,985,370	\$19,820,572	\$18,138,631	\$16,179,491
4	\$835,202	\$18,985,370	\$19,820,572	\$17,610,322	\$15,121,019
5	\$835,202	\$18,985,370	\$19,820,572	\$17,097,400	\$14,131,794
6	\$835,202	\$18,985,370	\$19,820,572	\$16,599,417	\$13,207,284
7	\$835,202	\$18,985,370	\$19,820,572	\$16,115,939	\$12,343,256
8	\$835,202	\$18,985,370	\$19,820,572	\$15,646,543	\$11,535,753
9	\$835,202	\$18,985,370	\$19,820,572	\$15,190,818	\$10,781,078
10	\$835,202	\$18,985,370	\$19,820,572	\$14,748,367	\$10,075,774
11-60*	\$0	\$0	\$0	\$0	\$0
Total				\$169,792,958	\$139,903,965
Annualized				\$6,135,122	\$9,965,251

* After year 10, the final rule will continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage, but FEMA has chosen to limit the analysis to 10 years of affected structures because it believes that the number of structures affected in this 10-year period is enough to provide a reasonable estimate of the costs, benefits, and transfers resulting from the final rule. Accordingly, FEMA’s analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

Total Benefits

FEMA believes that the benefits of the final rule will justify the costs. FEMA has identified qualitative benefits, including reductions in damage to properties and contents from future floods, potential lives saved, public health and safety benefits, reduced recovery time from floods, and increased community resilience to flooding. FEMA has also analyzed

quantified benefits of one additional foot of freeboard for PA projects using the CISA.

This final rule will result in savings in time and money from a reduced recovery period after a flood, as well as the increased safety of individuals. Generally, if properties are protected, there will be less damage, resulting in less recovery time. In addition, higher elevations will help to protect people, leading to increased safety. FEMA is

unable to quantify these benefits but discusses them qualitatively in the Regulatory Impact Analysis.

In support of these benefits, FEMA is using the 2022 Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains³²⁵ (2022

³²⁵ A Benefits Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains. FEMA. Draft, July 2022.

report) that analyzed potential benefits (such as a reduction in damages, displacement, and loss of function, from increased flood protection requirements for public and nonresidential use buildings located in riverine and coastal SFHAs). This report's scope included six construction methods in coastal and riverine areas: Elementary School 1-Story, Hospital 2–3 Stories, Police Station 2-Stories, Office Building (Business) 1-Story, Office Building (Business) 3-Story, and Office Building (Government office) 1-Story. The riverine analysis considered locations along 14 rivers, while the coastal analysis considered 12 different locations along a hypothetical coastal transect; both only considered scenarios based on future conditions.

Future conditions for the riverine analysis included two climate change scenarios: the Representative Concentration Pathways (RCP) 4.5 scenario and the RCP 8.5 scenario that represent various efforts to curb future emissions.³²⁶ The study used these two climate change scenarios to evaluate the amount of increase or decrease in riverine flood elevations over the next 50 years. For the coastal analysis, the study included the impact of various sea level rise conditions in areas with wave heights less than 1.5-ft (flood zones A) that are subject to coastal storm surge. The sea level rise conditions replicated a 2016 evaluation considering 8-, 20-, 39- and 59-inch sea level rises by 2100. FEMA has evaluated benefits associated with the rule using both RCP 4.5 and 8.5 scenarios, and three of the four sea level rise conditions: 8-, 39-, and 59-inches.

Available at: <https://www.regulations.gov/document/FEMA-2023-0026-0003>. Last accessed: March 22, 2024.

³²⁶ Representative Concentration Pathways (RCP) are projected future emissions and concentration trajectories for climate change models that account for the increase in greenhouse gas, aerosol, and chemically active gas emissions. According to the Environmental Protection Agency, they define RCP as the following. RCP 4.5: This scenario assumes a stabilization in GHG emissions shortly after 2100. RCP 8.5: This scenario is characterized by increasing GHG emissions over time, and factors in the highest GHG concentration levels of all the scenarios by 2100.

Changes Over Time. EPA. Available at: <https://www.epa.gov/enviroatlas/changes-over-time>. Last accessed: December 1, 2023.

The 2022 report used FEMA's BCA Toolkit to calculate benefits for each year between 2023 and 2072 and then used these projections to calculate the present value benefits for each scenario.³²⁷ The Toolkit used standard depth-damage functions (curves) to estimate damages from inundation and to calculate the benefits of mitigation that included avoided physical damage, avoided displacement (costs incurred while staying in a temporary location following an event), and avoided loss of function (the economic impact to a community due to a lack of critical services). The study also considered the potential avoided losses (or benefits) associated with either dry floodproofing or elevation of nonresidential and public use buildings.³²⁸ It compared existing freeboard requirements against one additional foot of freeboard; that is, the study evaluated the benefits of elevating or floodproofing to the BFE+2 from a current assumed height of BFE+1 for non-critical actions and to BFE+3 from a current assumed height of BFE+2 for critical actions.

According to this report, for critical facilities in coastal SFHAs, such as police stations and hospitals, inclusion of one additional foot of freeboard will provide increased protection and continuity of operations and result in a quantifiable benefit. Elevating buildings would help to maintain community resiliency farther into the future. The riverine analysis indicated that despite the large variation in the flood data for the 14 sites, inclusion of one additional foot of freeboard would result in quantifiable average benefits. Critical actions and schools had the highest benefits across various riverine locations.

FEMA has used this study to estimate the benefits of an additional foot of freeboard for non-residential PA

³²⁷ FEMA developed the BCA Toolkit to perform an analysis of cost-effectiveness of mitigation projects. The BCA Toolkit uses Office of Management and Budget cost-effectiveness guidelines and FEMA-approved methodologies and tools to complete a benefit-cost analysis. The tool can be found here: <https://www.fema.gov/grants/tools/benefit-cost-analysis#toolkit>.

³²⁸ 2016 Evaluation of the Benefits of Freeboard for Public and Nonresidential Buildings in Coastal Areas. <https://www.regulations.gov/document/FEMA-2015-0006-0379>. Page 4.

projects. FEMA was unable to use the benefits study to estimate the benefits for HMA and IA projects, since HMA data cannot be broken out by building types and IA data is limited to residential-related projects.

For FEMA's primary estimate, FEMA used 59 inches of SLR due to it being the closest SLR option to the vertical rise in FEMA's +5-ft assumption for CISA. CISA is the preferred approach for the FFRMS if the data are available. Since 5 feet is equivalent to 60 inches (5 × 12 inches per foot), 59-inch SLR is the closest SLR option that FEMA had available for this portion of the analysis. Using CISA for all PA Category E projects that are subject to the FFRMS, with the assumption that there would be a 59-inch SLR, FEMA estimates that the present value benefits of one additional foot of freeboard for the 50-year useful life of 1,154 PA Category E projects undertaken during the first 10 years after the rule's effective date will be between \$56.1 million and \$46.2 million (low estimate), discounted at 3 and 7 percent respectively, with a 60-year annualized benefit of \$2.0 million and \$3.3 million, at 3 and 7 percent (See Table 11) and between \$66.1 million and \$54.4 million (high estimate), discounted at 3 and 7 percent respectively, with a 60-year annualized benefit of \$2.4 million and \$3.9 million, at 3 and 7 percent. (See Table 12).

Tables 11 and 12 show the number of projects constructed each year (column 2), the present value of the benefits as of the year in which they were constructed (column 3), and the present value of the benefits as of the beginning of Year 1, using a 3 percent and 7 percent discount rate (columns 3 and 4, respectively). For example, the benefits shown in Year 1 represent the present value of the benefits for the 115 Category E projects constructed in Year 1 over their 50-year useful life (*i.e.*, in Years 1–50 of the analysis). The analysis does not account for any benefits for Year 1 projects after their 50-year useful life. The benefits shown in Year 10 represent the present value of the benefits for projects constructed in Year 10 over their 50-year useful life, (*i.e.*, in Years 11–60 of the analysis).

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Table 11: Primary Approach (CISA) Estimated 50-Year Benefits for PA Category E Projects Undertaken During Years 1-10 (Low Estimate, 2022\$)

Year	Number of PA Category E Projects	Total 50-Year Benefit for Projects Constructed in Each Year*	Discounted 3%	Discounted 7%
1	115	\$6,581,729	\$6,390,028	\$6,151,149
2	115	\$6,581,729	\$6,203,911	\$5,748,737
3	115	\$6,581,729	\$6,023,214	\$5,372,651
4	115	\$6,581,729	\$5,847,781	\$5,021,170
5	115	\$6,581,729	\$5,677,457	\$4,692,682
6	115	\$6,581,729	\$5,512,094	\$4,385,684
7	115	\$6,581,729	\$5,351,548	\$4,098,770
8	115	\$6,581,729	\$5,195,678	\$3,830,626
9	115	\$6,581,729	\$5,044,347	\$3,580,024
10	115	\$6,581,729	\$4,897,424	\$3,345,817
60-Year Total*			\$56,143,482	\$46,227,310
Annualized**			\$2,028,630	\$3,292,735

* The benefits in this column represent the present value of the benefits for structures constructed in that year over their 50-year useful life, as of the year in which they were constructed.

** The total benefits represent the total present value of benefits as of the beginning of Year 1.

Table 12: Primary Approach (CISA) Estimated 50-Year Benefits for PA Category E Projects Undertaken During Years 1-10 (High Estimate, 2022\$)

Year	Number of PA Category E Projects	Total 50-Year Benefit for Projects Constructed in Each Year*	Discounted 3%	Discounted 7%
1	115	\$7,750,655	\$7,524,908	\$7,243,603
2	115	\$7,750,655	\$7,305,736	\$6,769,722
3	115	\$7,750,655	\$7,092,947	\$6,326,843
4	115	\$7,750,655	\$6,886,357	\$5,912,938
5	115	\$7,750,655	\$6,685,783	\$5,526,110
6	115	\$7,750,655	\$6,491,052	\$5,164,589
7	115	\$7,750,655	\$6,301,992	\$4,826,718
8	115	\$7,750,655	\$6,118,439	\$4,510,952
9	115	\$7,750,655	\$5,940,232	\$4,215,843
10	115	\$7,750,655	\$5,767,215	\$3,940,040
60-Year Total*			\$66,114,661	\$54,437,358
Annualized**			\$2,388,918	\$3,877,531

* The benefits in this column represent the present value of the benefits for structures constructed in that year over their 50-year useful life, as of the year in which they were constructed.

** Annualized over the 60-year period of analysis.

Total Transfer Payments

Because the cost to implement the FFRMS mitigation measures will be shared between FEMA and grant recipients according to the statutory cost share, there are also important distributional impacts. The majority of elevation and floodproofing costs will be borne by FEMA through additional grants (a transfer from FEMA to grant

recipients). Grant recipients will bear the remaining cost. The below section shows the additional transfers from FEMA to grant recipients. Using CISA as the primary approach, FEMA estimates that this final rule will affect 13,476 structures in the first 10 years resulting in an increase in transfer payments (*i.e.*, grants) over the 60-year period of analysis. FEMA's low estimate of the increase in transfer payments is between

\$104.7 million and \$86.2 million, with a 60-year transfer between \$3.8 million and \$6.1 million annually, at 3 and 7 percent respectively (see Table 13). FEMA's high estimate of the increase in transfer payments is between \$134.2 million and \$110.5 million, with a 60-year transfer between \$4.8 million and \$7.9 million annually, at 3 and 7 percent discount rates, respectively (see Table 14).

Table 13: Primary Approach (CISA) Estimated Transfers over the 60-Year Period of Analysis (Low Estimate, 2022S)

Year	Transfers from FEMA to Recipients	Total transfers discounted at 3%	Total transfers discounted at 7%
1	\$12,276,633	\$11,919,061	\$11,473,489
2	\$12,276,633	\$11,571,904	\$10,722,887
3	\$12,276,633	\$11,234,858	\$10,021,389
4	\$12,276,633	\$10,907,629	\$9,365,785
5	\$12,276,633	\$10,589,931	\$8,753,070
6	\$12,276,633	\$10,281,487	\$8,180,439
7	\$12,276,633	\$9,982,026	\$7,645,270
8	\$12,276,633	\$9,691,287	\$7,145,112
9	\$12,276,633	\$9,409,017	\$6,677,675
10	\$12,276,633	\$9,134,968	\$6,240,818
11-60*	\$0	\$0	\$0
Total		\$104,722,168	\$86,225,934
Annualized		\$3,783,922	\$6,141,806

* After year 10, the final rule will continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage, but FEMA has chosen to limit the analysis to 10 years of affected structures because FEMA believes the number of structures affected in this 10-year period is enough to provide a reasonable estimate of the costs, benefits, and transfers resulting from the final rule. Accordingly, FEMA's analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

Table 14: Primary Approach (CISA) Estimated Transfers over the 60-Year Period of Analysis (High Estimate, 2022S)

Year	Transfers from FEMA to Recipients	Total transfers discounted at 3%	Total Transfers discounted at 7%
1	\$15,730,870	\$15,272,689	\$14,701,748
2	\$15,730,870	\$14,827,854	\$13,739,951
3	\$15,730,870	\$14,395,974	\$12,841,076
4	\$15,730,870	\$13,976,674	\$12,001,005
5	\$15,730,870	\$13,569,587	\$11,215,893
6	\$15,730,870	\$13,174,356	\$10,482,143
7	\$15,730,870	\$12,790,637	\$9,796,395
8	\$15,730,870	\$12,418,094	\$9,155,510
9	\$15,730,870	\$12,056,402	\$8,556,551
10	\$15,730,870	\$11,705,245	\$7,996,777
11-60*	\$0	\$0	\$0
Total		\$134,187,512	\$110,487,049
Annualized		\$4,848,592	\$7,869,907

* After year 10, the final rule will continue to impact FEMA projects funding new construction, substantial improvements or repairs to fix substantial damage, but FEMA has chosen to limit the analysis to 10 years of affected structures because FEMA believes the number of structures affected in this 10-year period is enough to provide a reasonable estimate of the costs, benefits, and transfers resulting from the final rule. Accordingly, FEMA's analysis focuses on the 50-year impacts of the rule on projects that take place in the initial 10-year period, for a total period of analysis spanning 60 years.

In Tables 15 and 16, FEMA presents the cost, transfer payments and benefit estimates by FFRMS approach. FEMA also presents estimates of costs, transfers, and benefits by grant program for CISA, FEMA's primary approach. The administrative cost estimate is not broken down by grant program because much of the cost will exist regardless of the program. Quantitative estimates of benefits are only available for projects under PA category E (Public Buildings). Due to the highly project-specific nature of facilities projects, and the numerous

options for making them resilient, FEMA cannot estimate the costs of improving flood resiliency of facilities.³²⁹ Tables 15 and 16 show that the total 60-year benefits for non-residential PA Category E projects constructed in the first 10 years is \$54.4 million (7 percent, high). This benefit is for adding one foot of freeboard,

³²⁹ Category E projects are public buildings and contents. See "Public Assistance Program and Policy Guide" Page 51, at https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf.

assuming a 59-inch SLR. Although the cost for residential and non-residential PA Category E projects is \$133.3 million (7 percent, high), this cost represents 5 feet of freeboard (FEMA's assumption for CISA).³³⁰ FEMA does not have data to quantify the benefits of additional freeboard, and thus the quantified benefits represent only a portion of the

³³⁰ Costs for the FVA may be a better comparison because they represent 2 or 3 feet of freeboard, depending on criticality. However, the number of projects using FVA and CISA differ, making such a comparison difficult.

increased risk reduction that will be achieved through this rule. Ensuring projects are built to the height necessary to avoid additional loss scenarios will provide additional unquantified benefits of avoided damages to the structure,

decreased cleanup time and disruption to the community, and increased public health and safety. Moreover, FEMA’s use of CISA as its preferred approach will use the best available and actionable scientific data to tailor future

flooding risk to each project, ensuring that projects are built only to the height necessary and thus maximizing net benefits. Accordingly, FEMA believes the benefits of the rule—quantified and unquantified—will justify its costs.

Table 15: Summary of 60-Year Costs, Transfers, and Benefits by Approach and Program for Affected Projects in Years 1-10 (Low Estimate, 2022S)

Costs ³³¹	3% Discount Rate			7% Discount Rate	
	Undiscounted	Present Value	Annualized	Present Value	Annualized
CISA (primary) (+5-ft)	\$149,215,620	\$127,283,949	\$4,599,146	\$104,802,806	\$7,465,023
PA	\$104,341,798	\$89,005,671	\$3,216,038	\$73,285,315	\$5,220,056
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$43,192,063	\$36,843,704	\$1,331,272	\$30,336,295	\$2,160,831
FVA	\$756,606,840	\$645,400,983	\$23,320,247	\$531,408,984	\$37,851,850
0.2PFA	\$43,407,580	\$37,027,545	\$1,337,915	\$30,487,667	\$2,171,613
FEMA Admin	\$7,752,811	\$6,700,641	\$242,114	\$5,617,336	\$400,118
Not Quantified	Not Estimated: Increased resiliency standard for approximately 26,985 facility projects over 10 years, Additional costs for Adding Requirements to Buildings with Basements, Diversion of Projects Out of the Floodplain, Lifecycle maintenance costs for floodproofing, and Project Delays and Forgone Projects				
Transfer Payments from FEMA to Grant Recipients					
CISA Total (primary) (+5-ft)	\$122,766,330	\$104,722,168	\$3,783,922	\$86,225,934	\$6,141,806
PA	\$88,690,530	\$75,654,821	\$2,733,633	\$62,292,516	\$4,437,048
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$32,394,060	\$27,632,790	\$998,454	\$22,752,232	\$1,620,624
FVA Total	\$50,748,250	\$43,289,287	\$1,564,170	\$35,643,448	\$2,538,855
0.2PFA Total	\$35,173,090	\$30,003,358	\$1,084,110	\$24,704,108	\$1,759,654
Benefits					
PA (CISA, primary) (+1-ft)	\$65,817,290	\$56,143,482	\$2,028,630	\$46,227,310	\$3,292,735
Not Quantified	Not Estimated: Damage Avoidance for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects over 10 years, Potential Lives Saved, Increased Public Health and Safety, Decreased Cleanup Time, Protection of Critical Facilities, Reduction of Personal and Community Impacts				

³³¹ To obtain the total costs as in Section 7.12, add each individual approach to the FEMA admin

cost. For example, CISA + FEMA admin = total CISA cost.

Table 16: Summary of 60-Year Costs, Transfers, and Benefits by Approach and Program for Affected Projects in Years 1-10 (High Estimate, 2022\$)

Costs ³³²	Undiscounted	3% Discount Rate		7% Discount Rate	
		Present Value	Annualized	Present Value	Annualized
CISA (primary) (+5-ft)	\$189,853,700	\$161,949,055	\$5,851,699	\$133,345,292	\$9,498,082
PA	\$144,979,878	\$123,670,781	\$4,468,591	\$101,827,801	\$7,253,115
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$43,192,063	\$36,843,704	\$1,331,272	\$30,336,295	\$2,160,831
FVA	\$74,555,130	\$63,597,039	\$2,297,949	\$52,364,403	\$3,729,876
0.2PFA	\$51,081,940	\$43,573,931	\$1,574,455	\$35,877,816	\$2,555,549
FEMA Admin	\$9,093,061	\$7,843,901	\$283,423	\$6,558,671	\$467,169
Not Quantified	Not Estimated: Increased resiliency standard for approximately 26,985 facility projects over 10 years, Additional costs for Adding Requirements to Buildings with Basements, Diversion of Projects Out of the Floodplain, Lifecycle maintenance costs for floodproofing, and Project Delays and Forgone Projects				
Transfer Payments from FEMA to Grant Recipients					
CISA Total (primary) (+5-ft)	\$157,308,700	\$134,187,512	\$4,848,592	\$110,487,049	\$7,869,907
PA	\$123,232,900	\$105,120,163	\$3,798,303	\$86,553,631	\$6,165,148
IA	\$1,681,740	\$1,434,557	\$51,835	\$1,181,184	\$84,135
HMA	\$32,394,060	\$27,632,790	\$998,454	\$22,752,232	\$1,620,624
FVA Total	\$61,609,580	\$52,554,220	\$1,898,939	\$43,271,991	\$3,082,230
0.2PFA Total	\$41,696,300	\$35,567,787	\$1,285,169	\$29,285,736	\$2,086,000
Benefits					
PA (CISA, primary) (+1-ft)	\$77,506,550	\$66,114,661	\$2,388,918	\$54,437,358	\$3,877,531
Not Quantified	Not Estimated: Damage Avoidance for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects over 10 years, Potential Lives Saved, Increased Public Health and Safety, Decreased Cleanup Time, Protection of Critical Facilities, Reduction of Personal and Community Impacts				

In Table 17, FEMA presents the OMB A-4 Accounting Statement. FEMA's analysis presents a range for costs and transfers of +5-ft of freeboard, and the benefits of +1-ft of freeboard. The range is due to uncertainty about whether new construction PA Category E projects will choose to floodproof or elevate.³³³

Accordingly, FEMA's PA minimum estimate assumes all new construction projects choose to floodproof and the maximum assumes all new construction projects choose to elevate. FEMA's analysis for HMA and IA projects do not have a range. Table ES-14 shows the primary costs and transfers using the

CISA approach only and the average of the ranges. FEMA has calculated the total benefits using the minimum and maximum estimates of PA benefits. FEMA has calculated the primary benefit estimates using the CISA approach with a 59-inch SLR and then taking the average of this range.

³³² To obtain the total costs as in Section 7.12, add each individual approach to the FEMA admin cost. For example, CISA + FEMA admin = total CISA cost.

³³³ Because it is more expensive to elevate substantial repair projects than to floodproof them, FEMA assumes that all substantial repair projects will choose to floodproof.

Table 17: A-4 Accounting Statement: Benefits, Costs and Transfers from 2023-2082 for Projects Undertaken in 2023 – 2032 (2022\$)

CATEGORY	PRIMARY ESTIMATE ³³⁴	MINIMUM ESTIMATE	MAXIMUM ESTIMATE	SOURCE CITATION (RIA, preamble, etc.)
BENEFITS*				
Annualized Monetized benefits	3 percent: \$2,208,774 7 percent: \$3,585,133	3 percent: \$2,028,630 7 percent: \$3,292,735	3 percent: \$2,388,918 7 percent: \$3,877,531	RIA Section 7.14.2
Annualized quantified, but unmonetized benefits	N/A	N/A	N/A	N/A
Qualitative (unquantified) benefits	<ul style="list-style-type: none"> Reduction in damage to properties and contents from future floods for approximately 12,322 IA and HMA structure projects and 26,985 PA and HMA facility projects in Years 1-10, potential lives saved, public health and safety benefits, reduced recovery time from floods, and increased community resilience to flooding. 			RIA Section 7.14.1 and 6.14.3
COSTS*				
Annualized monetized costs	3 percent: \$5,488,191 7 percent: \$8,915,196	3 percent: \$4,841,260 7 percent: \$7,865,141	3 percent: \$6,135,122 7 percent: \$9,965,251	RIA Sections 7.4, 7.5, 7.6, 7.8, 7.9
Qualitative (unquantified) costs	<ul style="list-style-type: none"> Increased resiliency standard for approximately 26,985 facility projects in Years 1-10 years, diversion of projects out of the floodplain, project delays and forgone projects, lifecycle maintenance costs for floodproofing, and additional costs for adding requirements to buildings with basements. 			RIA Section 7.11
TRANSFERS*				
Annualized monetized transfers grants	3 percent: \$4,316,257 7 percent: \$7,005,857	3 percent: \$3,783,922 7 percent: \$6,141,806	3 percent: \$4,848,592 7 percent: \$7,869,907	RIA Sections 7.13
from whom to whom?	From FEMA to recipients			
Category	Effects			Source Citation (RIA, preamble, etc.)
Effects on State, Local, Tribe, and Territory (SLTT) governments	<ul style="list-style-type: none"> SLTT grant recipients whose projects are for new construction, substantial improvement, or to address substantial damage and are located within the expanded floodplain would have to comply with the updated FFRMS regulations by elevating or floodproofing these projects to the new standard. Specific grant programs include IA, PA, and HMA. 			RIA

<p style="text-align: center;">Effects on small entities*</p>	<ul style="list-style-type: none"> • In an average year, FFRMS would impact about 1,154 PA Category E projects. Based on a random sample of 92 projects, FEMA found that the grant recipients for 47 of the projects met the definition of a small entity. FEMA estimated that 51 percent (47 ÷ 92) of projects, or 504 Category E projects were small entities under the Regulatory Flexibility Act. • In an average year, FFRMS would impact about 63 HMA elevation or floodproofing projects per year. Assuming 51 percent of HMA grants benefit small entities, FEMA estimated that the final rule would impact 32 small entities receiving HMA grants each year. • In an average year, FFRMS would impact about 1,036 PA Category C facilities. Based on a random sample of 91 projects, FEMA found that grant recipients for 70 of the projects, or 76.9 percent (70 ÷ 91), were small entities that would meet the definition of small entities under the Regulatory Flexibility Act. • In an average year, FFRMS would impact about 120 PA Category D facilities. Based on a random sample of 55 projects, FEMA found that grant recipients for 37 of the projects, or 67.3 percent (37 ÷ 55), were small entities that would meet the definition of small entities under the Regulatory Flexibility Act. • In an average year, FFRMS would impact about 208 PA Category F facilities. Based on a random sample of 68 projects, FEMA found that grant recipients for 55 of the projects, or 80.9 percent (55 ÷ 68), were small entities that would meet the definition of small entities under the Regulatory Flexibility Act. • In an average year, FFRMS would impact about 314 PA Category G facilities. Based on a random sample of 76 projects, FEMA found that grant recipients for 40 of the projects, or 52.6 percent (40 ÷ 76), were small entities that would meet the definition of small entities under the Regulatory Flexibility Act. • In an average year, FFRMS would impact about 84 HMA grant recipients received FEMA funding per year for minor flood controls and generator projects. Based on a random sample of 46 projects, FEMA found that grant recipients for 19 of the projects, or 41.3 percent (19 ÷ 46), were small entities that would meet the definition of small entities under the Regulatory Flexibility Act. 	<p style="text-align: center;">Final Rule Preamble, Regulatory Flexibility Act</p>
<p>Effects on wages</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">N/A</p>
<p>Effects on growth</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">N/A</p>

* FEMA limited its dollar-valuation to the projects impacted in the first 10 years after the rule’s effective date. FEMA considered the resulting costs, benefits, and transfer payments of the final rule on those projects over a 50-year period, for a total of 60 years. The costs and transfers occur in the first 10 years of the 60-year period because that is when the initial investment in those projects takes place to elevate or floodproof them to meet the FFRMS requirements. This is an upfront cost that occurs when the project is constructed. However, the benefits of the final rule would be realized over the 50-year useful life of the affected structures.

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B. Regulatory Flexibility Act

This section considers the effects that this rule will have on small entities as required by the Regulatory Flexibility Act (RFA, 5 U.S.C. 601 *et seq.*, Pub. L. 96-354) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). The

³³⁴ FEMA has calculated the primary estimates by calculating the average of the minimum and the maximum estimates for respective each percent. For example, for the primary 3 percent benefits, FEMA calculated the average for 3 percent discount minimum and 3 percent discount maximum.

RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute, unless the agency certifies that the rule will not have a “significant economic impact on a substantial number of small entities.” 5 U.S.C. 605(b). Small entities include small businesses, small organizations, and small governmental jurisdictions.

FEMA prepared a Final Regulatory Flexibility Analysis (FRFA) for this rule. This analysis is detailed in this section and represents FEMA’s assessment of

the impacts of this rule on small entities. Section 1 outlines FEMA’s assessment of small entities that will be affected by the regulations. Section 2 presents FEMA’s analysis and summarizes the steps taken by FEMA to comply with the FRFA.

1. Assessment of Small Entities Affected by the Regulations

This rule will affect FEMA grant recipients that receive Federal funds under the PA, IA, and HMA programs for new construction, substantial improvement to structures, or to address substantial damage to structures and

facilities. Recipients of these grants are primarily States, Tribal governments, local governmental jurisdictions, and certain non-profit organizations. FEMA does not provide grants to for-profit businesses.

2. Analysis and Steps Taken To Comply With the Regulatory Flexibility Act

The following addresses the below requirements of a FRFA:

(1) a statement of the need for, and objectives of, the rule;

(2) a statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

(3) the response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments;

(4) a description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

(5) a description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;

(6) a description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

2.1 Statement of the need for, and objectives of the rule.

FEMA is responsible for publishing information on floodplain areas and identifying special hazards. FEMA is also responsible for several grant programs that use Federal funds to assist in construction or reconstruction following a disaster, as well as grants for hazard mitigation and recovery. These grants can potentially be used for locations within a floodplain.

To meet the requirements of section 2(d) of Executive Order 11988, directing agencies to issue or amend existing

regulations and procedures to implement the Executive Order, FEMA promulgated regulations located at 44 CFR part 9. FEMA is revising 44 CFR part 9 to reflect the changes to Executive Order 11988 made by Executive Order 13690.

The objective of the rule is to revise the regulations for locating actions subject to the FFRMS in an expanded floodplain to reduce the risk of flooding to those projects. In addition, for actions that are determined to be “critical actions” as defined by the rule, the rule will impose more stringent elevation and resilience requirements. This is necessary to protect actions where even a slight chance of flooding is too great.

The rule will also require the use, where possible, of natural features and nature-based approaches when developing alternatives for consideration that will accomplish the same purpose as a considered action but have less potential to affect or be affected by the floodplain. Common examples of a nature-based approach will be replacing concrete drainage systems with natural drainage or covering an area with plants to absorb water and reduce runoff.

Several programs exist to assist with flood mitigation or recovery efforts after a flood.³³⁵ IA and PA are disaster relief programs and primarily provide assistance after a disaster. HMA Grants are provided to increase resilience to hazards, and these have been shown to be very effective. By requiring recipients of FEMA funding to consider an expanded floodplain and build a higher level of flood resilience into their projects, the rule will reduce the likelihood of further damage and help prevent the loss of life in future flooding events. This will compel recipients of Federal funds to build to higher flood resilience standards and avoid repetitive loss situations.

2.2 Statement of the significant issues raised by the public comments in response to the Initial Regulatory Flexibility Analysis (IRFA), a statement of the assessment of the agency of such issues, and a statement of any changes made to the proposed rule as a result of such comments.

FEMA did not receive any comments on the IRFA for this rule, and therefore did not make any changes to this FRFA due to public comments.

2.3 The response of the agency to any comments filed by the Chief

³³⁵ In addition to the FEMA-administered grant programs discussed in this analysis (IA, PA, HMA, and programs administered by GPD), FEMA also provides flood insurance through the NFIP. FEMA does not apply 44 CFR part 9 to non-grant site specific actions under the NFIP.

Counsel for Advocacy of the Small Business Administration (SBA) in response to the proposed rule, and a detailed statement of any change made to the final rule as a result of the comments.

FEMA did not receive any comments on the proposed rule from the Chief Counsel for Advocacy of the SBA.

2.4 Description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available.

This rule will affect certain recipients of FEMA grants. These will primarily be PA and HMA grant recipients, including States, Tribal governments, local governments, and certain non-profit organizations. The PA grant recipients will include Categories C, D, E, F, and G projects; however, FEMA is only able to provide reasonable estimates of the number of entities and costs associated with Categories E (public buildings) because Category E is for structures whereas projects funded under the remaining PA categories are for facilities. Facilities will not be required to floodproof or elevate but will instead need to be made resilient to the appropriate flood levels, which is highly project-specific in nature, and the lack of data for such projects makes it exceedingly difficult to estimate costs. Therefore, FEMA has included only estimates of the number of affected facility projects but was unable to estimate a corresponding cost. IA and GPD are not discussed in this analysis. IA provides grants directly to individuals, who are not small entities as defined in 5 U.S.C. 601(6). FEMA finds that this rule will likely have no effect on GPD grants because GPD projects are not typically substantial improvement or new construction.

FEMA estimates that the FFRMS requirements will expand the floodplain between 5 percent and 43 percent based on a study³³⁶ conducted in 800 square miles of coastal and riverine areas representative of places where the FFRMS will apply. FEMA developed floodplain expansion estimates for two distinct areas of the country: coastal and riverine. The first estimate was for coastal areas where FEMA anticipates implementing the CISA approach using currently-actionable sea level rise data. The second estimate was the area that represented the rest of the country, where 0.2PFA or FVA approaches will likely be applied. A total of 400 square miles of mapped flood zones were used as the baseline estimate for each of the two areas of the country. FEMA selected

³³⁶ This report is available at [regulations.gov](https://www.regulations.gov) under docket ID FEMA-2023-0026.

a random sample of 40 coastal and riverine areas representative of the areas where the FFRMS will apply, with at least 10 square miles in each sampled area to ensure varying topography was captured. FEMA calculated the floodplain expansion in each sample at various levels of freeboard so that there was a total of 400 square miles of expansion information for each area.

FEMA selected the CISA as the primary approach for evaluating the impacts of this final rule, since it is the preferred approach and is designed to meet current and future estimates of flood risks unique to the location and thus provide the best overall resilience, cost effectiveness, and equity. FEMA does not have data detailed enough to estimate the average CISA level within the United States for this analysis. Instead, FEMA assumes CISA values will range from 1- to 10-ft of freeboard, based on the anticipated interagency tools that are currently in development. FEMA anticipates applying the CISA in those rounded amounts as “climate-informed freeboard.” The 10-foot ceiling will account for the highest levels of anticipated sea level rise along the Gulf and Atlantic coasts. Depending on location, under the CISA, some places may be required to elevate or floodproof to +1-ft above the 1 percent annual chance plain, while other places may be required to use +10-ft above the 1 percent annual chance plain. However, FEMA does not have available data or research to estimate what the required levels or how many structures will be subject to the requirements. For analysis purposes, FEMA has calculated the expanded floodplain using the mid-point (rounded down), +5-ft CISA level, which FEMA estimates will expand the floodplain by 26 percent.

FEMA considered using the minimum and maximum levels, but the minimum and maximum levels will not reflect the impacts of the rule accurately. FEMA did not use the minimum level for this approach because it will reflect a large number of structures that were not elevated or floodproofed to a high enough standard, when the rule may actually require them to be subject to a higher standard. If FEMA modeled all structures at the minimum standard, the costs would be underestimated compared to the actual impact of the rule. The benefits of protecting the structures from flood will also be underestimated because at the minimum level, many structures will be left vulnerable to devastating flood damage. Likewise, FEMA did not use the maximum level because it will reflect a large number of structures elevated or floodproofed to a standard

too high compared to what the rule may require. If FEMA modeled all structures at the maximum standard, the costs would be overestimated compared to the actual impact. The benefits of protecting the structures from flood could potentially be overestimated as well, and not reflect the actual impact of the rule.

PA provides grants to States, Tribal governments, local governments and certain non-profit organizations for rebuilding, replacement, or repair of public and non-profit facilities damaged by disasters. Where such rebuilding, replacement, or repair involves new construction, substantial improvement, and repair of substantial damage of structures in the expanded FFRMS floodplain, PA recipients will incur additional costs to comply with elevation and floodproofing requirements. From 2013–2022, 916 individual PA Category E grant recipients received FEMA funding for substantial improvement floodproofing³³⁷ or new construction. Under the CISA, with the 26 percent expansion of the floodplain, an additional 238 PA Category E projects (916 × 26 percent), for a total of 1,154 (916 + 238) projects, will be located in the 1 percent annual chance floodplain or expanded FFRMS floodplain over the 10-year period. FEMA randomly sampled 92 projects.³³⁸ Of the 92 projects, 47 projects, or 51 percent (47 ÷ 92), meet the definition of small entities under the Regulatory Flexibility Act.

HMA provides mitigation grants to States, Tribal governments, local governments, and certain non-profit organizations to, among other things, relocate property outside of the floodplain, or to elevate or floodproof structures above the flood level. FEMA will apply the FFRMS to all actions subject to the FFRMS, and all structure elevation, mitigation reconstruction, and dry floodproofing projects. As noted in the Regulatory Impact Analysis, FEMA funded an average of about 50 HMA elevation, mitigation reconstruction, and floodproofing structure projects per year from 2020–

2022.³³⁹ Unlike PA grants, most HMA grants are for projects located in the floodplain, so for this analysis, FEMA assumes that all HMA elevation, mitigation reconstruction, and dry floodproofing projects are in the floodplain. FEMA cannot estimate what projects might be considered actions subject to the FFRMS in addition to structure elevation, mitigation reconstruction, and dry floodproofing projects because HMA data does not distinguish whether projects are considered new construction, substantial improvement, or repairs to address substantial damage. However, structure elevation, mitigation reconstruction, and dry floodproofing are the primary HMA projects relating to flood mitigation.³⁴⁰

With the 26 percent expansion of the floodplain, an additional 13 HMA projects per year (50 × 26 percent), for a total of 63 (50 + 13) projects, will be located in the 1 percent annual chance floodplain or expanded FFRMS floodplain. Assuming 51 percent³⁴¹ of HMA grant recipients are small entities, approximately 32 (63 projects × 51 percent) small entities receiving HMA grants will be affected per year.

Facilities will not be required to floodproof or elevate but will instead need to be made resilient to the appropriate FFRMS floodplain. Resilience measures for facilities are highly project-specific, and FEMA lacks data for such projects, making it exceedingly difficult to estimate costs. FEMA could not estimate the cost of this rule on small entities for facilities. However, FEMA conducted an analysis to estimate the number of small entities for affected facility projects based on historical data.

In an average year, FFRMS will impact about 1,036 PA Category C

³³⁹ FEMA was unable to obtain 10-years of historical data from 2013–2022 for HMA due to changes within the program’s database. Therefore, FEMA used the best available data for years 2010 through 2019 instead.

³⁴⁰ The other project type related to flood mitigation is acquisition. Generally, acquisition projects are for open space purposes and restore the natural and beneficial functions of the floodplain. Property acquisitions that result in relocated structures would be subject to FFRMS elevation and floodproofing requirements if the structure is relocated within the FFRMS floodplain. HMA data does not break out relocation costs from acquisition costs, so FEMA is unable to estimate additional relocation expenses for acquisition projects.

³⁴¹ In FEMA’s dataset, HMA recipients only included project titles and not the name of the grantee. This prevented FEMA from determining if a grant recipient was a small entity. Since PA and HMA provide funding to similar entities (States, Tribal governments, local governments, and certain non-profit organizations) for disaster related activity, FEMA used the percentages of small entity grant recipients found in PA Category E as a proxy for HMA small entities.

³³⁷ The cost of elevating an existing structure is significantly higher than the cost of retrofitting the structure to be floodproofed, so FEMA assumed that substantial improvement projects would elect to floodproof rather than elevate.

³³⁸ The population of PA Category E projects includes all “Public Buildings” grants from 2013–2022 that received substantial improvement floodproofing or new construction funding. Because of the large population, FEMA used Slovin’s formula and a 90 percent confidence interval to determine the sample size. Slovin’s formula: $n = N / (1 + N^*e \wedge 2)$. Therefore, $1,154 / (1 + 1,154 \times 0.1 \wedge 2) = 92$ (rounded).

facilities. Based on a random sample of 91 projects,³⁴² FEMA found that grant recipients for 71 of the projects, or 76.9 percent (70 ÷ 91), met the definition of small entities under the Regulatory Flexibility Act.

In an average year, FFRMS will impact about 120 PA Category D facilities. Based on a random sample of 55 projects,³⁴³ FEMA found that grant recipients for 37 of the projects, or 67.3 percent (37 ÷ 55), met the definition of small entities under the Regulatory Flexibility Act.

In an average year, FFRMS will impact about 208 PA Category F facilities. Based on a random sample of 68 projects,³⁴⁴ FEMA found that grant recipients for 55 of the projects, or 80.9 percent (55 ÷ 68), met the definition of small entities under the Regulatory Flexibility Act.

In an average year, FFRMS will impact about 314 PA Category G facilities. Based on a random sample of 76 projects,³⁴⁵ FEMA found that grant recipients for 40 of the projects, or 52.6 percent (40 ÷ 76), met the definition of small entities under the Regulatory Flexibility Act.

In an average year, FFRMS will impact about 84 HMA grant recipients that received FEMA funding per year for minor flood controls and generator projects. Based on a random sample of 46 projects,³⁴⁶ FEMA found that grant recipients for 19 of the projects, or 41.3 percent (19 ÷ 46), were small entities under the definition of small entities under the Regulatory Flexibility Act.

2.5 Description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

³⁴² Because of the large population, FEMA used Slovin's formula and a 90 percent confidence interval to determine the sample size. Slovin's formula: $n = N / (1 + N * e \wedge 2)$. Therefore, $1,036 / (1 + 1,036 \times 0.1 \wedge 2) = 91$ (rounded).

³⁴³ Because of the large population, FEMA used Slovin's formula and a 90 percent confidence interval to determine the sample size. Slovin's formula: $n = N / (1 + N * e \wedge 2)$. Therefore, $120 / (1 + 120 \times 0.1 \wedge 2) = 55$ (rounded).

³⁴⁴ Because of the large population, FEMA used Slovin's formula and a 90 percent confidence interval to determine the sample size. Slovin's formula: $n = N / (1 + N * e \wedge 2)$. Therefore, $208 / (1 + 208 \times 0.1 \wedge 2) = 68$ (rounded).

³⁴⁵ Because of the large population, FEMA used Slovin's formula and a 90 percent confidence interval to determine the sample size. Slovin's formula: $n = N / (1 + N * e \wedge 2)$. Therefore, $314 / (1 + 314 \times 0.1 \wedge 2) = 76$ (rounded).

³⁴⁶ Because of the large population, FEMA used Slovin's formula and a 90 percent confidence interval to determine the sample size. Slovin's formula: $n = N / (1 + N * e \wedge 2)$. Therefore, $84 / (1 + 84 \times 0.1 \wedge 2) = 46$ (rounded).

FEMA will not be changing the application process for its grant programs. The majority of the costs for the increased elevation or floodproofing requirements of structures in the FFRMS floodplain will be funded by FEMA through several grant programs. Small entities, like all entities, will be subject to additional costs not covered by these grants for the floodproofing, elevation of structures, and flood resilience measures required by the rule. For the purposes of this analysis, and based on historical data, FEMA presents the costs such that all projects will choose to elevate because of the additional level of safety that elevation provides over floodproofing and a historically higher number of HMA projects that involved elevation as opposed to floodproofing.³⁴⁷ FEMA uses an NFIP report to estimate the cost of the elevation requirements.³⁴⁸ The report provides estimates for the cost of elevating structures as a percentage of total construction cost.

The cost of elevating an existing structure is considerably higher than the cost of retrofitting the structure to be floodproofed. Floodproofing involves sealing off areas below the flood level so that water cannot enter or altering the use of these areas so that flood waters may pass through without causing serious damage. Non-residential structures, where elevation is not feasible, may be floodproofed rather than elevated. Additionally, floodproofing existing properties may be less costly than elevating an existing property. So, where a project may floodproof rather than elevate, costs may be lower for some projects than the costs presented here. However, for existing properties that choose to elevate rather than floodproof, costs may be higher for some projects than the costs presented here because the NFIP report cost estimates are for when freeboard is included in the design of a structure. New buildings will be evaluated for both dry floodproofing (preventing the intrusion of floodwaters into the building by using a system of waterproofing and shields) and elevation (constructing higher), while existing buildings will only be evaluated for dry floodproofing.

As established above, FEMA estimates this rule will impact 47 small entity PA

Category E projects annually. Using CISA as the primary approach, FEMA estimates that the total cost for the elevation and floodproofing requirements of this rule for all PA Category E projects will be between \$10,434,180 (\$104,341,798 ÷ 10 years) and \$14,497,988 (\$144,979,878 ÷ 10 years) annually for 115 (1,154 PA Total FFRMS action Category E projects ÷ 10 years) projects annually. Therefore, each project will cost between \$90,732 (\$10,434,180 ÷ 115 projects) and \$126,078 (\$14,497,988 ÷ 115 projects). There is an average of 47 small entity PA projects per year. Small entity projects will have a total average expected cost between \$4,264,404 ($\$90,732 \times 47$ small entities PA projects) and \$5,925,666 ($\$126,078 \times 47$ small entities PA projects) per year. The historical average cost share for PA Category E projects is 85.0 percent covered by FEMA and 15.0 percent covered by the recipients, with the majority of recipients receiving a 75 percent or a 90 percent cost share, depending on the type of disaster declaration. FEMA estimates that, for PA Category E projects, each small entity will have an average expected cost (*i.e.*, their portion of the cost share) of between \$13,610 ($\$90,732 \times 15.0$ percent) and \$18,912 ($\$126,078 \times 15.0$ percent) per project.

As established above, FEMA estimates that this rule will affect approximately 32 small HMA grant recipients per year. Using CISA as the primary approach, FEMA estimates that the total 10-year cost for the elevation and floodproofing requirements of this rule for HMA projects will be \$4,319,206 ($\$43,192,063 \div 10$ years) annually for 1,040 (10,398 HMA Total FFRMS action projects ÷ 10 years) projects annually. There is an average of 32 small entities HMA projects per year. The average HMA project cost is \$4,153 ($\$4,319,206 \div 1,040$ HMA projects) per project. The cost-sharing arrangement for HMA is 75 percent Federal and 25 percent recipient, so HMA recipients will be required to fund 25 percent of the costs to comply with the requirements of the rule. Each small entity cost share will have an average expected cost of \$1,038 ($\$4,153 \times 25$ percent).

Reporting and recordkeeping are not expected to change, with the exception of minor changes to FEMA's Mitigation Grant Program/e-Grants system. FEMA will continue to make the determination of whether a project will take place in an FFRMS floodplain.

2.6 Description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated

³⁴⁷ According to historical HMA data, there have been an average of 63 elevation projects and only 4 floodproofing projects per year.

³⁴⁸ FEMA, "2008 Supplement to the 2006 Evaluation of the National Flood Insurance Program's Building Standards" Table 3, available at https://www.fema.gov/sites/default/files/2020-07/fema_nfip_2008_freeboard_report_0.pdf (last accessed Apr. 29, 2024).

objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

The standards in this rule represent FEMA's efforts to implement Executive Order 11988, as amended, which establishes executive branch-wide policy in this area. Executive Order 13690 establishes the FFRMS. The policies established in these EOs do not consider exempting small entities from all or part of the standard; the purpose of the FFRMS is to ensure that agencies expand management from the current base flood level to a higher vertical elevation and corresponding horizontal floodplain to address current and future flood risk and help ensure that projects funded with taxpayer dollars last as long as intended. Accordingly, the FFRMS will apply to all affected FEMA projects, including small entities.

As discussed previously, most of the cost of the mitigation standards required by this rule will be paid by FEMA in the form of additional PA, IA, or HMA grants. Cost sharing is required for most FEMA grant programs. For PA and HMA, affected small entities will be required to pay the recipient portion of the cost share, which is 25 percent in most cases. There are, however, some exceptions and cost shares can be waived or set at a different level by Congress for PA. FEMA does not have the authority to adjust the cost share specifically for small entities.

Executive Order 11988, as amended, allows several approaches to determine the FFRMS floodplain. Section F of this Final Rule, FEMA's Implementation of Executive Order 11988, as amended, and FFRMS, describes the FFRMS approaches allowed by Executive Order 11988, as amended, and FEMA's considerations when selecting between the FFRMS approaches. FEMA will, in its accompanying policy, use the CISA as the preferred approach. FEMA has chosen the CISA as its preferred approach because it is the only one that uses the best available climate science to help ensure projects are designed to meet current and future flood risks unique to the location and thus provides the best overall resilience, cost effectiveness, and equity. Accordingly, FEMA believes its preferred approach will minimize the risk that affected small entities incur more costs than necessary because of overprotection or incur preventable costs from future damage because of under protection.

The CISA establishes the required vertical elevation and corresponding horizontal floodplain, through the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science, in accordance with the Revised Guidelines. When such data is not available, this rule and supplementary policy direct the use of other approaches depending on the criticality of the action. The rule also requires the use of natural systems, ecosystem processes, and nature-based approaches where possible.

The FFRMS is a flexible framework to increase resilience against flooding and help preserve the natural and beneficial values of floodplains. Incorporating the FFRMS into FEMA regulations will ensure that FEMA expands flood risk management from the current base flood elevation to a higher vertical elevation and corresponding horizontal floodplain to address current and future flood risk and helps ensure that projects funded with taxpayer dollars last as long as intended for all applicants, including small entities. FEMA considered a more protective approach for critical actions but did not select this approach. FEMA could have chosen a more protective approach in which it would determine the elevations established under CISA, FVA, and the 0.2PFA for critical actions and only allow the applicant to use the highest of the three elevations. This approach would ensure that applicants were protecting these critical assets at the highest level. However, this approach may lead to overbuilding and not be the most cost-effective or equitable approach for applicants including small entities.

FEMA also considered a more protective approach for all actions but did not select this approach. FEMA could have required use of the highest standard for all actions, regardless of criticality. While this approach would ensure that applicants, including small entities, were building all actions to the most protective level, this approach would likely lead to overbuilding and not be the most cost-effective, equitable approach, particularly for non-critical actions.

Small entities affected by the rule, as with any entity affected by the rule, will have the option to relocate outside of the floodplain. This may be preferable in cases where property can be obtained and new facilities built for less cost than elevating or floodproofing to the FFRMS level in the floodplain, and the recipient has the ability to relocate.

C. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995, 2 U.S.C. 658, 1501–1504, 1531–1536, 1571, pertains to any rulemaking which is likely to result in the promulgation of any rule that includes a Federal mandate that may result in the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector, of \$100 million (adjusted annually for inflation) or more in any one year. If the rulemaking includes a Federal mandate, the Act requires an agency to prepare an assessment of the anticipated costs and benefits of the Federal mandate. The Act also pertains to any regulatory requirements that might significantly or uniquely affect small governments. Before establishing any such requirements, an agency must develop a plan allowing for input from the affected governments regarding the requirements.

FEMA has determined this rulemaking will not result in the expenditure by State, Territorial, local, and Tribal governments, in the aggregate, nor by the private sector, of \$100,000,000 or more in any one year as a result of a Federal mandate, and it will not significantly or uniquely affect small governments.³⁴⁹ Therefore, no actions are deemed necessary under the provisions of the Unfunded Mandates Reform Act of 1995.

D. Paperwork Reduction Act of 1995

As required by the Paperwork Reduction Act of 1995 (PRA), Public Law 104–13, 109 Stat. 163, (May 22, 1995) (44 U.S.C. 3501 *et seq.*), FEMA may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. *See* 44 U.S.C. 3506, 3507. This final rule calls for no new collections of information under the PRA. The final rule includes information currently collected by FEMA and approved in OMB information collections 1660–0072 (FEMA Mitigation Grant Programs) and 1660–0076 (Hazard Mitigation Grant

³⁴⁹ FEMA expects that increased costs to applicants will be minimal. For example, FEMA found that for a project with a 75% FEMA/25% applicant cost share, the cost to an applicant to elevate a structure above the BFE to meet FEMA's FFRMS requirements using the FVA+2 (1.91 percent of construction cost) represented less than 0.5% of the total project cost, or an average of an additional \$4,775 in applicant cost share on an original total project cost of \$1,000,000. *See* A Benefit Analysis of Increased Freeboard for Public and Nonresidential Buildings in Riverine and Coastal Floodplains, posted to the public docket of this rulemaking at <https://www.regulations.gov/document/FEMA-2023-0026-0003>.

Program (HMGP) Application and Reporting). With respect to these collections, this final rule will not impose any additional burden and will not require a change to the forms, the substance of the forms, or the number of recipients who would submit the forms to FEMA.

E. Privacy Act

Under the Privacy Act of 1974, 5 U.S.C. 552a, an agency must determine whether implementation of a proposed regulation would result in a system of records. A “record” is any item, collection, or grouping of information about an individual that is maintained by an agency, including, but not limited to, his/her education, financial transactions, medical history, and criminal or employment history and that contains his/her name, or the identifying number, symbol, or other identifying particular assigned to the individual, such as a finger or voice print or a photograph. See 5 U.S.C. 552a(a)(4). A “system of records” is a group of records under the control of an agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual. See 5 U.S.C. 552a(a)(5). An agency cannot disclose any record, which is contained in a system of records, except by following specific procedures.

In accordance with DHS policy, FEMA completed a Privacy Threshold Analysis for this rule. This rule is covered by the following PIAs: DHS/FEMA/PIA-006 FEMA National Emergency Management Electronic Grants System, DHS/FEMA/PIA-025-Hazard Mitigation Grant Program (HMGP) System, DHS/FEMA/PIA-026 Operational Data Store and Enterprise Data Warehouse PIA, and DHS/FEMA/PIA-031 Authentication and Provisioning Services (APS). No updates to these PIAs are necessary. Further, this rule is covered under the following System of Records Notices (SORNs): DHS/FEMA-009 Hazard Mitigation, Disaster Public Assistance, and Disaster Loan Programs, 79 FR 16015, Mar. 24, 2014; DHS/ALL-004 General Information Technology Access Account Records System (GITAARS), 77 FR 70792, Nov. 27, 2012; and DHS/FEMA-008 Disaster Recovery Assistance Files. This final rule will not create a new system of records, and no updates to these SORNs are necessary.

F. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, “Consultation and Coordination With Indian Tribal Governments,” 65 FR 67249, Nov. 9, 2000, applies to agency regulations that have Tribal implications, that is, regulations that have substantial direct effects on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes. Under this Executive Order, to the extent practicable and permitted by law, no agency shall promulgate any regulation that has Tribal implications, that imposes substantial direct compliance costs on Indian Tribal governments, and that is not required by statute, unless funds necessary to pay the direct costs incurred by the Indian Tribal government or the Tribe in complying with the regulations are provided by the Federal Government, or the agency consults with Tribal officials.

FEMA reviewed this final rule under Executive Order 13175 and determined that this rule would not have a substantial direct effect on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes.

Part 9 applies to FEMA disaster and non-disaster assistance programs, including IA, PA, and HMA programs, and grants processed by FEMA’s GPD. Pursuant to section 8 of Executive Order 11988, part 9 does not apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to sections 403 and 502 of the Stafford Act, as amended (42 U.S.C. 5170b and 5192).

Indian Tribes have the same opportunity to participate in FEMA’s grant programs as other eligible participants, and participation is voluntary. The requirements of this rule do not affect Tribes differently than other grant recipients. FEMA’s edits in this final rule specifically provide for Indian Tribal government information as a resource when making the floodplain determination under part 9, consistent with comments received.

G. Executive Order 13132, Federalism

Executive Order 13132, “Federalism,” 64 FR 43255, August 10, 1999, sets forth principles and criteria that agencies must adhere to in formulating and implementing policies that have

federalism implications, that is, regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” Federal agencies must closely examine the statutory authority supporting any action that would limit the policymaking discretion of the States, and to the extent practicable, must consult with State and local officials before implementing any such action.

FEMA has determined this rulemaking does not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, and therefore does not have federalism implications as defined by the Executive Order.

Part 9 applies to FEMA disaster and non-disaster assistance programs, including IA, PA, and HMA programs, and grants processed by FEMA’s GPD. Pursuant to section 8 of Executive Order 11988, part 9 does not apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to section 403 and 502 of the Stafford Act, as amended (42 U.S.C. 5170b and 5192). The final rule does not significantly affect the rights, roles, and responsibilities of States, and involves no preemption of State law, nor does it limit State policymaking discretion.

H. National Environmental Policy Act of 1969 (NEPA)

Section 102 of NEPA (42 U.S.C. 4321 *et seq.*) requires Federal agencies to evaluate the effects of a proposed major Federal action to determine if it will significantly affect the human environment, consider alternatives to the proposed action, provide public notice and opportunity for comment, and properly document its analysis. See 40 CFR parts 1501, 1506.6. DHS and its component agencies analyze proposed actions to determine whether NEPA applies and, if so, what level of analysis and documentation is required. 40 CFR 1501.3. DHS Directive 023-01, Rev. 01 and DHS Instruction Manual 023-01-001-01, Rev. 01 (Instruction Manual) establish the policies and procedures DHS and its component agencies use to comply with NEPA and the Council on Environmental Quality (CEQ) regulations for implementing the procedural requirements of NEPA codified in 40 CFR parts 1500 through 1508. The CEQ regulations allow

Federal agencies to establish in their NEPA implementing procedures categories of actions (“categorical exclusions”) that normally do not have a significant effect on the human environment. Categorically excluded actions do not require preparation of an environmental assessment or environmental impact statement. 40 CFR 1501.4, 1507.3(e)(2)(ii), 1508.1(d). The Instruction Manual, Appendix A, lists the DHS categorical exclusions. Under DHS NEPA implementing procedures, for an action to be categorically excluded, it must satisfy each of the following conditions: (1) the entire action clearly fits within one or more of the categorical exclusions; (2) the action is not a piece of a larger action; and (3) no extraordinary circumstances exist that create the potential for a significant environmental effect.

The final rule updates the Floodplain Management and Protection of Wetland requirements to adopt the approaches outlined in Executive Order 11988, as amended. This involves establishing the floodplain, using the vertical elevation and corresponding horizontal extent, in the 8-step decision-making process FEMA follows in applying Executive Order 11988, as amended to its actions. FEMA’s final rule amends regulations codified at 44 CFR part 9 to revise the definition of the floodplain based on the approaches in Executive Order 11988, as amended, consisting of the Climate-Informed Science Approach (CISA), the freeboard value approach (FVA), the 0.2-percent-annual-chance flood approach (0.2PFA), and any other method identified in updates. The final rule allows FEMA to select and prioritize among these approaches. The rule revises the 8-step decision-making process to incorporate consideration of the approaches in determining if the project is in the floodplain. The rule also adds a requirement, where possible, to use natural systems, ecosystem processes, and nature-based approaches in the development of alternatives for Federal actions in a floodplain. The result of redefining the floodplain and applying the approaches outlined in Executive Order 11988, as amended, may be that structures and facilities determined to be in the floodplain (“the FFRMS floodplain”) would be designed to be more resilient, and more structures and facilities—due to the corresponding horizontal expansion of the floodplain—might be subject to an elevation requirement and/or other mitigation measures. Further, with the expanded horizontal floodplain, and application of the 8-step decision-making process,

which allows for Federal actions in the floodplain only if there is no practicable alternative, it is possible some structures or facilities that otherwise would be constructed in a high-risk flood area, would be constructed elsewhere. This would result in better protection of people and their property, the floodplain and environment. When placing the action in the floodplain cannot be avoided, implementing mitigation measures to actions in the FFRMS floodplain will not only promote public safety and lessen flood risk, but may also reduce the impact of the action on the floodplain, and thereby contribute to preserving the natural and beneficial values of the floodplain per the mandate in E.O. 11988. Similarly, the requirement to use natural systems, ecosystem processes, and nature-based approaches, where possible, in alternatives to the proposed action, would contribute to restoring and preserving the natural and beneficial values of the floodplain.

FEMA has determined NEPA applies to the final rule because it fits the definition of a “major federal action.” CEQ’s NEPA regulations define “major federal action” to include “new or revised agency rules,” regulations and policies. 40 CFR 1508.1(q)(2).

FEMA analyzed the final rule and finds it meets the three DHS criteria for a categorical exclusion. FEMA has determined consistent with the first criterion, the rule clearly fits within the categorical exclusion found at A3 in the DHS Instruction Manual, Appendix A. Categorical exclusion A3 states “promulgation of rules, issuance of rulings or interpretations, and the development and publications of policies” may be categorically excluded if such actions “interpret or amend an existing regulation without changing its environmental effect.” Instruction Manual, Appendix A, A3(d). The final rule may result in requiring a structure or facility to have either higher elevation or floodproofing, or more resilient design. The rule provides for a higher resilience standard than the existing rule. It is possible the expanded horizontal floodplain may discourage placing a “Federal action” in the floodplain, as under the 8-step decision-making process, an action may be located in the floodplain only if there is no practicable alternative. In the event there is a practicable alternative, and new construction is consequently located outside the floodplain, the effect of the final rule would be to benefit the environment by contributing to restoring and preserving the values of the floodplain, as well as enhancing public safety. FEMA’s environmental

and historic preservation review would ensure that the agency takes into account other potential environmental impacts of locating outside the floodplain.

If the Federal action must be located in the FFRMS floodplain, that is, there is no practicable alternative, it will be subject to one of the three approaches or a combination of them. FEMA’s preferred approach is CISA. If the CISA is used, it could result in an estimated average of 5 feet of additional elevation for a structure (or floodproofing to that level). FEMA prefers the CISA because it uses the best actionable and available climate-informed science to determine the floodplain is the most effective way to make the action resilient. If the CISA data is not available and/or actionable, the final rule provides alternatives for determining the floodplain for critical actions and non-critical actions: for non-critical actions, the lesser of the freeboard value approach (2 or 3 feet above base flood elevation) or the 0.2 percent annual flood; and for critical actions, the higher of the freeboard value approach or 0.2 percent annual flood. Given the CISA or the combination of approaches may be used, the potential for the change in elevation (or floodproofing) levels varies. Further, if communities have stricter standards, which they are required to apply, the communities will still apply that standard, and thus, application of the FFRMS would not require a change in elevation. If the “Federal action” is substantial improvement or addresses substantial damage to a structure or facility, it would involve action in a pre-built environment, with the only change being the structure or facility might be elevated or floodproofed to the appropriate higher level. If design rather than elevation, or in addition to elevation, is used to comply with the FFRMS resilience standard, it is not anticipated it will significantly impact the environment. As part of implementing the FFRMS resilience standard, nature-based solutions are required in alternatives to the proposed action, where possible. When applied, they will benefit the environment by contributing to restoring and preserving the natural and beneficial values of the floodplain. None of the changes required by any of the combined FFRMS approaches are anticipated to change the environmental effects of application of the 8-step process. Categorical exclusion A3 applies to this regulatory action, however any of the Federally funded actions to which the FFRMS applies (new construction, substantial

improvement and repair of substantial damage) will undergo separate NEPA analysis.

In addition to and apart from application of the decision process in this final rule, all Federal actions, new construction, substantial improvement, and actions addressing substantial damage, are subject to NEPA review and must comply with NEPA requirements. Each Federal action subject to the FFRMS will be evaluated on an individual basis under NEPA and related environmental laws, regulations, and executive orders. The Federal action will not be approved unless it meets all applicable environmental and historic preservation requirements. Further, the Federal actions subject to the proposed rule must comply with all applicable floodplain requirements. *See* 44 CFR 9.11(d)(6) (referring to requirement to be consistent with the criteria of the NFIP at 44 CFR part 59 *et seq.* or any more restrictive Federal, State, or local floodplain management standard).

FEMA therefore concludes the final rule clearly fits within categorical exclusion A3. FEMA also finds the final rule meets the second and third DHS criteria for applying a categorical exclusion. The final rule is not a piece of a larger action, as it will be implemented independently of other FEMA actions and is a separate action unto itself. Furthermore, FEMA finds adopting the floodplain management and protection approaches outlined in Executive Order 11988, as amended, presents no extraordinary circumstances that increase the potential for significant environmental effects to the environment. Accordingly, the final rule is categorically excluded, and no further NEPA analysis or documentation is required.

I. Executive Orders 12898 and 14096 on Environmental Justice

Under Executive Order 12898, “Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations,” (59 FR 7629, Feb. 16, 1994); and Executive Order 14096, “Revitalizing Our Nation’s Commitment to Environmental Justice for All” (88 FR 25251, Apr. 26, 2023), FEMA incorporates environmental justice into its policies and programs. Executive Order 14096 charges agencies to make achieving environmental justice part of their missions, consistent with statutory authority, by identifying, analyzing, and addressing disproportionate and adverse human health and environmental effects and hazards of Federal activities, including those related to climate

change and cumulative impacts of environmental and other burdens on communities with environmental justice concerns.

This final rule will not have a disproportionate and adverse human health or environmental effect on communities with environmental justice concerns. FEMA addressed specific comments related to environmental justice above.

J. Executive Order 12630, Taking of Private Property

This rule will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, “Governmental Actions and Interference With Constitutionally Protected Property Rights” (53 FR 8859, Mar. 18, 1988).

K. Executive Order 12988, Civil Justice Reform

This final rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, “Civil Justice Reform” (61 FR 4729, Feb. 7, 1996), to minimize litigation, eliminate ambiguity, and reduce burden.

L. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

This final rule will not create environmental health risks or safety risks for children under Executive Order 13045, “Protection of Children From Environmental Health Risks and Safety Risks” (62 FR 19885, Apr. 23, 1997).

M. Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities, OMB Circular A-119

“Voluntary consensus standards” are standards developed or adopted by voluntary consensus standards bodies, both domestic and international. These standards include provisions requiring owners of relevant intellectual property to agree to make that intellectual property available on a non-discriminatory, royalty-free, or reasonable royalty basis to all interested parties. OMB Circular A-119 directs agencies to use voluntary consensus standards in their regulatory actions in lieu of government-unique standards, except where inconsistent with law or otherwise impractical. The policies in the Circular are intended to reduce to a minimum the reliance by agencies on government-unique standards.

Consistent with then-President Obama’s Climate Action Plan,³⁵⁰ the

³⁵⁰The White House, “President Obama’s Climate Action Plan, 2nd Anniversary Progress Report—

National Security Council staff coordinated an interagency effort to create a new flood risk reduction standard for Federally funded projects. The views of Governors, mayors, and other stakeholders were solicited and considered as efforts were made to establish a new flood risk reduction standard for Federally funded projects. The FFRMS is the result of these efforts.

N. Congressional Review of Agency Rulemaking

Under the Congressional Review Act (CRA), 5 U.S.C. 801–808, before a rule can take effect, the Federal agency promulgating the rule must submit to Congress and to the Government Accountability Office (GAO) a copy of the rule; a concise general statement relating to the rule, including whether it is a major rule; the proposed effective date of the rule; a copy of any cost-benefit analysis; descriptions of certain actions under the Regulatory Flexibility Act and the Unfunded Mandates Reform Act; and any other relevant information or requirements under any other Act and any executive orders. FEMA has submitted this rule to the Congress and to GAO pursuant to the CRA. OMB has determined that this rule is not a “major rule” within the meaning of the CRA.

List of Subjects in 44 CFR Part 9

Floodplains; Reporting and recordkeeping requirements.

For the reasons discussed in the preamble, the Federal Emergency Management Agency (FEMA) is amending 44 CFR part 9 as follows:

PART 9—FLOODPLAIN MANAGEMENT AND PROTECTION OF WETLANDS

■ 1. The authority citation for part 9 is revised to read as follows:

Authority: 6 U.S.C. 101 *et seq.*; 42 U.S.C. 4001 *et seq.*; 42 U.S.C. 4321 *et seq.*; E.O. 11988 of May 24, 1977, 42 FR 26951, 3 CFR, 1977 Comp., p. 117; E.O. 11990 of May 24, 1977, 42 FR 26961, 3 CFR, 1977 Comp. p. 121; E.O. 13690, 80 FR 6425; E.O. 14030, 86 FR 27967.

■ 2. Revise § 9.1 to read as follows:

§ 9.1 Purpose.

This part sets forth the policy, procedure, and responsibilities to implement and enforce relevant sections of the National Flood Insurance Act of 1968, as amended, and the Flood Disaster Protection Act of 1973, as

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amended, 42 U.S.C. 4001 *et seq.*, the National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, as amended, and other relevant statutory authorities in conjunction with Executive Order 11988, Floodplain Management, as amended, and Executive Order 11990, Protection of Wetlands.

■ 3. Amend § 9.2 by revising paragraph (b) and adding paragraphs (c) and (d) to read as follows:

§ 9.2 Policy.

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(b) The Agency will provide leadership in floodplain management and the protection of wetlands, informed by the best available and actionable science, to bolster the resilience of communities and Federal assets against the impacts of flooding, which are anticipated to increase over time due to the effects of changing conditions which adversely affect the environment, economic prosperity, public health and safety, and national security.

(c) The Agency shall integrate the goals of the Orders to the greatest possible degree into its procedures for implementing the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*).

(d) The Agency shall:

- (1) Minimize the impact of floods on human health, safety, and welfare;
- (2) Avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and the destruction and modification of wetlands;
- (3) Avoid direct and indirect support of floodplain development and new construction in wetlands wherever there is a practicable alternative;
- (4) Reduce the risk of flood loss;
- (5) Promote the use of nonstructural flood protection methods to reduce the risk of flood loss;
- (6) Minimize the destruction, loss, or degradation of wetlands;
- (7) Restore and preserve the natural and beneficial values served by floodplains;
- (8) Preserve and enhance the natural values of wetlands;
- (9) Involve the public throughout the floodplain management and wetlands protection decision-making process;
- (10) Adhere to the objectives of the Unified National Program for Floodplain Management; and
- (11) Improve and coordinate the Agency's plans, programs, functions, and resources so that the Nation may attain the widest range of beneficial uses of the environment without degradation or risk to health and safety.

■ 4. Revise § 9.3 to read as follows:

§ 9.3 Severability.

Any provision of this part held to be invalid or unenforceable as applied to any action should be construed so as to continue to give the maximum effect to the provision permitted by law, unless such holding is that the provision of this part is invalid and unenforceable in all circumstances, in which event the provision should be severable from the remainder of this subpart and shall not affect the remainder thereof.

■ 5. Amend § 9.4 by:

- a. Adding in alphanumeric order definitions for “0.2 percent annual chance flood elevation”, “0.2 percent annual chance floodplain”, “1 percent annual chance flood elevation”, and “1 percent annual chance floodplain”;
- b. Revising the definitions of “Action” and “Actions Affecting or Affected by Floodplains or Wetlands”;
- c. Adding in alphabetical order a definition for “Action subject to the Federal Flood Risk Management Standard”;
- d. Removing the definitions of “Base Flood” and “Base Floodplain”;
- e. Adding in alphabetical order a definition for “Base flood elevation”;
- f. Revising the definitions of “Coastal High Hazard Area”, “Critical Action”, and “Emergency Actions”;
- g. Adding in alphabetical order definitions for “Federal Flood Risk Management Standard (FFRMS)”, “Federal Flood Risk Management Standard (FFRMS) floodplain”, “Federally funded project”, and “FEMA Resilience”;
- h. Removing the definitions of “FIA” and “Five Hundred Year Floodplain”;
- i. Revising the definition of “Flood or flooding”;
- j. Removing the definitions of “Flood Fringe”, “Flood Hazard Boundary Map (FHBM)”, “Flood Insurance Rate Map (FIRM)”, and “Flood Insurance Study (FIS)”;
- k. Revising the definitions of “Floodplain”, “Functionally Dependent Use”, and “Mitigation”;
- l. Removing the definition of “Mitigation Directorate”;
- m. Adding in alphabetical order definitions for “National security”, “Nature-based approaches”, “Natural and beneficial values of floodplains and wetlands”, and “Natural features”;
- n. Removing the definition of “Natural Values of Floodplains and Wetlands”;
- o. Revising the definition of “New Construction”;
- p. Removing the definition of “New Construction in Wetlands”;
- q. Revising the definitions of “Orders”, “Practicable”, “Regulatory

Floodway”, “Restore”, “Structures”, and “Substantial Improvement”;

- r. Adding in alphabetical order a definition for “Support of floodplain and wetland development”;
- s. Removing the definition of “Support”; and
- t. Revising the definition of “Wetlands”.

The additions and revisions read as follows:

§ 9.4 Definitions.

0.2 percent annual chance flood elevation means the elevation to which floodwater is anticipated to rise during the 0.2 percent annual chance flood (also known as the 500-year flood).

0.2 Percent annual chance floodplain means the area subject to flooding by the 0.2 percent annual chance flood (also known as the 500-year floodplain).

1 percent annual chance flood elevation—see the definition of *base flood elevation* in this section.

1 percent annual chance floodplain means the area subject to flooding by the 1 percent annual chance flood (also known as the 100-year floodplain or base floodplain).

Action means

- (1) Acquiring, managing, and disposing of Federal lands and facilities;
- (2) Providing federally undertaken, financed, or assisted construction and improvements; and
- (3) Conducting Federal activities and programs affecting land use, including, but not limited to, water and related land resources, planning, regulating, and licensing activities.

Actions affecting or affected by floodplains or wetlands means actions which have the potential to result in the long- or short-term impacts associated with:

- (1) The occupancy or modification of floodplains, and the direct or indirect support of floodplain development, or
- (2) The destruction and modification of wetlands and the direct or indirect support of new construction in wetlands.

Action subject to the Federal Flood Risk Management Standard (FFRMS) means any action where FEMA funds are used for new construction, substantial improvement, or to address substantial damage to a structure or facility.

* * * * *

Base flood elevation means the elevation to which floodwater is anticipated to rise during the 1 percent annual chance flood (also known as the base flood or 100-year flood). The terms “base flood elevation,” “1 percent annual chance flood elevation,” and “100-year flood elevation” are

synonymous and are used interchangeably.

Coastal high hazard area means an area of flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

Critical action means any action for which even a slight chance of flooding is too great. Critical actions include, but are not limited to, those which create or extend the useful life of structures or facilities:

(1) Such as those which produce, use or store highly volatile, flammable, explosive, toxic or water-reactive materials;

(2) Such as hospitals and nursing homes, and housing for the elderly, which are likely to contain occupants who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events;

(3) Such as emergency operation centers, or data storage centers which contain records or services that may become lost or inoperative during flood and storm events; and

(4) Such as generating plants, and other principal points of utility lines.

* * * * *

Emergency actions means emergency work essential to save lives and protect property and public health and safety performed under sections 403 and 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. 5170b and 5192).

* * * * *

Federal Flood Risk Management Standard (FFRMS) means the Federal flood risk management standard to be incorporated into existing processes used to implement Executive Order 11988, as amended.

Federal Flood Risk Management Standard (FFRMS) floodplain means the floodplain established using one of the approaches described in § 9.7(c) of this part.

Federally funded project—see the definition of *Action subject to the Federal Flood Risk Management Standard* in this section.

FEMA Resilience means the organization within FEMA that includes the Federal Insurance and Mitigation Administration, the Grants Program Directorate, and the National Preparedness Directorate.

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Flood or flooding means the general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters, and/or the unusual

and rapid accumulation of runoff of surface waters from any source. *0.2 percent annual chance flood* means the flood which has a 0.2 percent chance of being equaled or exceeded in any given year (also known as the 500-year flood). *1 percent annual chance flood* means the flood which has a 1 percent chance of being equaled or exceeded in any given year (also known as the 100-year flood or base flood). The terms “base flood,” “1 percent annual chance flood,” and “100-year flood” are synonymous and are used interchangeably.

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Floodplain means any land area that is subject to flooding. The term “floodplain,” by itself, refers to geographic features with undefined boundaries. For the purposes of this part, the FFRMS floodplain shall be established using one of the approaches described in § 9.7(c). See the definitions of *0.2 percent annual chance floodplain*, *1 percent annual chance floodplain*, and *Federal Flood Risk Management Standard floodplain* in this section.

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Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water.

* * * * *

Mitigation means steps necessary to minimize the potentially adverse effects of the proposed action, and to restore and preserve the natural and beneficial floodplain values and to preserve and enhance natural values of wetlands.

* * * * *

National security means:

(1) A condition that is provided by either:

(i) A military or defense advantage over any foreign nation or group of nations;

(ii) A favorable foreign relations position; or

(iii) A defense posture capable of successfully resisting hostile or destructive action from within or without, overt or covert.

(2) National security encompasses both national defense and foreign relations of the United States.

Nature-based approaches means the features (sometimes referred to as “green infrastructure”) designed to mimic natural processes and provide specific services such as reducing flood risk and/or improving water quality. Nature-based approaches are created by human design (in concert with and to accommodate natural processes) and generally, but not always, must be

maintained in order to reliably provide the intended level of service.

Natural and beneficial values of floodplains and wetlands means features or resources that provide environmental and societal benefits. Water and biological resources are often referred to as “natural functions of floodplains and wetlands.” These values include, but are not limited to:

(1) Water resource values (storing and conveying floodwaters, maintaining water quality, and groundwater recharge);

(2) Living resource values (providing habitats and enhancing biodiversity for fish, wildlife, and plant resources);

(3) Cultural resource values (providing open space, natural beauty, recreation, scientific study, historic and archaeological resources, and education; and

(4) Cultivated resource values (creating rich soils for agriculture, aquaculture, and forestry).

Natural features means characteristics of a particular environment (e.g., barrier islands, sand dunes, wetlands) that are created by physical, geological, biological, and chemical processes and exist in dynamic equilibrium. Natural features are self-sustaining parts of the landscape that require little or no maintenance to continue providing their ecosystem services (functions).

New construction means the construction of a new structure or facility or the replacement of a structure or facility which has been totally destroyed. New construction includes permanent installation of temporary housing units. New construction in wetlands includes draining, dredging, channelizing, filling, diking, impounding, and related activities.

* * * * *

Orders means Executive Order 11988, Floodplain Management, as amended, and Executive Order 11990, Protection of Wetlands.

Practicable means capable of being done within existing constraints. The test of what is practicable depends on the situation and includes consideration of all pertinent factors, such as natural environment, social concerns, economic aspects, legal constraints, and agency authorities.

* * * * *

Regulatory floodway means the area regulated by Federal, State, or local requirements to provide for the discharge of the base flood so the cumulative rise in the water surface is no more than a designated amount above the base flood elevation.

Restore means to reestablish a setting or environment in which the natural functions of the floodplain can operate.

Structure means a walled and roofed building, including a temporary housing unit (manufactured housing) or a gas or liquid storage tank.

Substantial improvement means any repair, reconstruction or other improvement of a structure or facility, which has been damaged in excess of, or the cost of which equals or exceeds, 50 percent of the pre-disaster market value of the structure or replacement cost of the facility (including all “public facilities” as defined in the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988) before the repair or improvement is started, or if the structure or facility has been damaged and is proposed to be restored. Substantial improvement includes work to address substantial damage to a structure or facility. If a facility is an essential link in a larger system, the percentage of damage will be based on the cost of repairing the damaged facility relative to the replacement cost of the portion of the system which is operationally dependent on the facility. The term “substantial improvement” does not include any alteration of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places.

* * * * *

Support of floodplain and wetland development means to, directly or indirectly, encourage, allow, serve, or otherwise facilitate development in floodplains or wetlands. Development means any man-made change to improved or unimproved real estate, including but not limited to new construction, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials. Direct support results from actions within floodplains or wetlands, and indirect support results from actions outside of floodplains or wetlands.

Wetlands means those areas which are inundated or saturated by surface or ground water with a frequency sufficient to support, or that under normal hydrologic conditions does or would support, a prevalence of vegetation or aquatic life typically adapted for life in saturated or seasonally saturated soil conditions, including wetlands areas separated from their natural supply of water as a result of construction activities such as structural flood protection methods or solid-fill road beds, and activities such as mineral extraction and navigation improvements. Examples of wetlands include, but are not limited to, swamps, fresh and salt water marshes, estuaries, bogs, beaches, wet meadows, sloughs,

potholes, mud flats, river overflows, and other similar areas. This definition is intended to be consistent with the definition utilized by the U.S. Fish and Wildlife Service.

■ 6. Amend § 9.5 by revising paragraph (a)(3), the first sentence of paragraph (b)(1), and paragraphs (c) through (g) to read as follows:

§ 9.5 Scope.

(a) * * *

(3) The amendments to this part made on September 9, 2024 apply to new actions for which assistance is made available pursuant to declarations under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 on or after September 9, 2024 and new actions for which assistance is made available pursuant to notices of funding opportunities published on or after September 9, 2024. For ongoing actions for which assistance was made available prior to that date, legacy program regulations (available at <http://www.fema.gov>) shall apply.

(b) * * *

(1) Executive Order 11990, Protection of Wetlands, contains a limited exemption not found in Executive Order 11988, Floodplain Management, as amended. * * *

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(c) *Decision-making involving certain categories of actions.* The provisions set forth in this part are not applicable to the actions enumerated in paragraphs (c)(1) through (10) of this section except that the Regional Administrators shall comply with the spirit of Executive Order 11988, as amended, and Executive Order 11990 to the extent practicable. For any action which is excluded from the actions enumerated below, the full 8-step process applies (see § 9.6) (except as indicated at paragraphs (d), (e), and (g) of this section regarding other categories of partial or total exclusion). The provisions of this part do not apply to the following (all references are to the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, except as noted):

(1) Assistance provided for emergency work essential to save lives and protect property and public health and safety performed pursuant to sections 403 and 502;

(2) Emergency Support Teams (section 303);

(3) Emergency Communications (section 418);

(4) Emergency Public Transportation (section 419);

(5) Fire Management Assistance (section 420), except for hazard

mitigation assistance under sections 404 and 420(d);

(6) Community Disaster Loans (section 417), except to the extent that the proceeds of the loan will be used for repair of facilities or structures or for construction of additional facilities or structures;

(7) The following Federal Assistance to Individuals and Households Program (section 408) categories of assistance:

(i) Financial assistance for temporary housing (section 408(c)(1)(A));

(ii) Lease and repair of rental units for temporary housing (section 408(c)(1)(B)(ii)), except that Step 1 (§ 9.7) shall be carried out;

(iii) Repairs (section 408(c)(2));

(iv) Replacement (section 408(c)(3)); and

(v) Financial assistance to address other needs (section 408(e)).

(8) Debris clearance and removal (sections 403 and 502), except those grants involving non-emergency disposal of debris within a floodplain or wetland (section 407);

(9) Actions under sections 406 and 407 of less than \$18,000. Such \$18,000 amount will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor;

(10) Placement of families in existing resources and Temporary Relocation Assistance provided to those families so placed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Public Law 96–510.

(d) *Abbreviated decision-making process applying steps 1, 4, 5, and 8.* The Regional Administrator shall apply steps 1, 4, 5, and 8 of the decision-making process (§§ 9.7, 9.10, and 9.11) to repairs under section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, between \$18,000 and \$91,000. Such \$18,000 and \$91,000 amounts will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor. For any action which is excepted from the actions listed below (except as otherwise provided in this section regarding other categories of partial or total exclusion), the full 8-step process applies (See § 9.6). The Regional Administrator may also require certain other portions of the decision-making process to be carried out for individual actions as is deemed necessary. Steps 1, 4, 5, and 8 of the decision-making process apply to actions under section 406 of the Stafford Act referenced above except for:

(1) Actions in a floodway or coastal high hazard area; or

(2) New construction, substantial improvement, or repairs to address substantial damage of structures or facilities; or

(3) Facilities or structures which have previously sustained damage from flooding due to a major disaster or emergency or on which a flood insurance claim has been paid; or

(4) Critical actions.

(e) *Abbreviated decision-making process applying steps 1, 2, 4, 5, and 8.* The Regional Administrator shall apply steps 1, 2, 4, 5, and 8 of the decision-making process (§§ 9.7, 9.8, 9.10, and 9.11, see § 9.6) to certain actions under Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, Public Law 93–288, as amended, provided in paragraphs (e)(1) and (2) of this section. Steps 3 and 6 (§ 9.9) shall be carried out except that alternative sites outside the floodplain or wetland need not be considered. After assessing impacts of the proposed action on the floodplain or wetlands and of the site on the proposed action, alternative actions to the proposed action, if any, and the “no action” alternative shall be considered. The Regional Administrator may also require certain other portions of the decision-making process to be carried out for individual actions as is deemed necessary. For any action which is excluded from the actions listed below (except as otherwise provided in this section regarding other categories of partial or total exclusion), the full 8-step process applies (see § 9.6). The Regional Administrator shall apply steps 1, 2, 4, 5, and 8 of the decision-making process (§§ 9.7, 9.8, 9.10, and 9.11, see § 9.6) to:

(1) Replacement of building contents, materials, and equipment (section 406).

(2) Repairs under section 406 to damaged facilities or structures, except any such action for which one or more of the following is applicable:

(i) FEMA estimated cost of repairs is more than 50 percent of the estimated reconstruction cost of the entire facility or structure or is more than \$364,000. Such \$364,000 amount will be adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor; or

(ii) The action is located in a floodway or coastal high hazard area; or

(iii) Facilities or structures which have previously sustained structural damage from flooding due to a major disaster or emergency or on which a flood insurance claim has been paid; or

(iv) The action is a critical action.

(f) *Other categories of actions.* Based upon the completion of the 8-step decision-making process (§ 9.6), the Regional Administrator may find that a specific category of actions either offers no potential for carrying out the purposes of the Orders and shall be treated as those actions listed in paragraph (c) of this section, or has no practicable alternative sites and shall be treated as those actions listed in paragraph (e) of this section, or has no practicable alternative actions or sites and shall be treated as those actions listed in paragraph (d) of this section. This finding will be made in consultation with FEMA Resilience and the Council on Environmental Quality as provided in section 2(d) of Executive Order 11988, as amended. Public notice of each of these determinations shall include publication in the **Federal Register** and a 30-day comment period.

(g) *The National Flood Insurance Program (NFIP).* (1) FEMA Resilience shall apply the 8-step decision-making process to program-wide actions under the NFIP, including all regulations, procedures, and other issuances making or amending program policy, and the establishment of programmatic standards or criteria. FEMA Resilience shall not apply the 8-step decision-making process to the application of programmatic standards or criteria to specific situations. Thus, for example, FEMA Resilience would apply the 8-step process to a programmatic determination of categories of structures to be insured, but not to whether to insure each individual structure.

(2) The provisions set forth in this part are not applicable to the actions enumerated below except that FEMA Resilience shall comply with the spirit of the Orders to the extent practicable:

(i) The issuance of individual flood insurance policies and policy interpretations;

(ii) The adjustment of claims made under the Standard Flood Insurance Policy;

(iii) The hiring of independent contractors to assist in the implementation of the NFIP;

(iv) The issuance of individual flood insurance maps, Map Information Facility map determinations, and map amendments; and

(v) The conferring of eligibility for emergency or regular program (NFIP) benefits upon communities.

■ 7. Revise § 9.6 to read as follows:

§ 9.6 Decision-making process.

(a) *Purpose.* This section sets out the floodplain management and wetlands protection decision-making process to be followed by the Agency in applying

the Orders to its actions. The numbering of Steps 1 through 8 does not require that the steps be followed sequentially. As information is gathered through the decision-making process, and as additional information is needed, reevaluation of lower numbered steps may be necessary.

(b) *Decision-making process.* Except as otherwise provided in § 9.5 regarding categories of partial or total exclusion when proposing an action, the Agency shall apply the 8-step decision-making process. FEMA shall:

(1) *Step 1.* Determine whether the proposed action is located in a floodplain and/or a wetland as established by § 9.7; and whether it has the potential to affect or be affected by a floodplain or wetland (see § 9.7);

(2) *Step 2.* Notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process (see § 9.8);

(3) *Step 3.* Identify and evaluate practicable alternatives to locating the proposed action in a floodplain or wetland (including alternative sites, actions, natural features, nature-based approaches, and the “no action” option) (see § 9.9). If a practicable alternative exists outside the floodplain or wetland FEMA must locate the action at the alternative site.

(4) *Step 4.* Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action (see § 9.10);

(5) *Step 5.* Minimize the potential adverse impacts to or within floodplains and wetlands and minimize support of floodplain and wetland development identified under Step 4. Restore and preserve the natural and beneficial values served by floodplains, and preserve and enhance the natural and beneficial values served by wetlands. Integrate nature-based approaches where appropriate (see § 9.11);

(6) *Step 6.* Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate hazards to others, and its potential to disrupt floodplain and wetland values; and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain or wetland unless it is the only practicable location (see § 9.9);

(7) *Step 7.* Prepare and provide the public with a finding and public explanation of any final decision that the floodplain or wetland is the only practicable alternative (see § 9.12); and

(8) *Step 8.* Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in § 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

■ 8. Amend § 9.7 by revising paragraphs (a), (b), (c), and (d)(3) and (4) to read as follows:

§ 9.7 Determination of proposed action's location.

(a) *Purpose.* This section establishes Agency procedures for determining whether any action as proposed is located in or affects a floodplain established in paragraph (c) of this section or a wetland.

(b) *Information needed.* (1) The Agency shall obtain enough information so that it can fulfill the requirements in this part to:

(i) Avoid Federal action in floodplain and wetland locations unless they are the only practicable alternatives; and
(ii) Minimize harm to and within floodplains and wetlands.

(2) In all cases, FEMA shall determine whether the proposed action is located in a floodplain or wetland. Information about the floodplain as established by paragraph (c) of this section and the location of floodways and coastal high hazard areas may also be needed to comply with this part, especially § 9.11.

(3) The following additional current and future flooding characteristics may be identified by the Regional Administrator as applicable:

- (i) Velocity of floodwater;
- (ii) Rate of rise of floodwater;
- (iii) Duration of flooding;
- (iv) Available warning and evacuation time and routes;
- (v) Special problems:
 - (A) Levees;
 - (B) Erosion;
 - (C) Subsidence;
 - (D) Sink holes;
 - (E) Ice jams;
 - (F) Debris load;
 - (G) Pollutants;
 - (H) Wave heights;
 - (I) Groundwater flooding;
 - (J) Mudflow.
- (vi) Any other applicable flooding characteristics.

(c) *Floodplain determination.* In the absence of a finding to the contrary, FEMA will determine that a proposed action involving a facility or structure that has been flooded previously is in the floodplain. In determining if a proposed action is in the floodplain:

(1) FEMA shall determine whether the action is an action subject to the FFRMS as defined in § 9.4.

(i) If the action is an action subject to the FFRMS, FEMA shall establish the FFRMS floodplain area and associated flood elevation by using the process specified in (c)(3) of this section and one of the following approaches:

(A) *Climate-Informed Science Approach (CISA):* Using a climate-informed science approach that uses the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. This approach will also include an emphasis on whether the action is a critical action as one of the factors to be considered when conducting the analysis;

(B) *Freeboard Value Approach (FVA):* Using the freeboard value, reached by adding an additional 2 feet to the base flood elevation for non-critical actions and by adding an additional 3 feet to the base flood elevation for critical actions;

(C) *0.2-Percent-Annual-Chance Flood Approach (0.2PFA):* The 0.2 percent annual chance flood; or

(D) Any other method identified in an update to the FFRMS.

(ii) FEMA may select among and prioritize the approaches in this paragraph (c)(1) by policy.

(iii) FEMA may provide an exception to using the FFRMS floodplain and corresponding flood elevation for an action subject to the FFRMS and instead use the 1 percent annual chance (base) floodplain for non-critical actions or the 0.2 percent annual chance floodplain for critical actions where the action is in the interest of national security, where the action is an emergency action, or where the action is a mission-critical requirement related to a national security interest or an emergency action.

(2) If the action is not an action subject to the FFRMS as defined in § 9.4, FEMA shall use, at a minimum:

(i) The 1 percent annual chance (base) floodplain and flood elevation for non-critical actions; and

(ii) The 0.2 percent annual chance floodplain and flood elevation for critical actions.

(3) FEMA shall establish the floodplain and corresponding elevation using the best available information. The floodplain and corresponding elevation determined using the best available information must be at least as restrictive as FEMA's regulatory determinations under the NFIP where such determinations are available. In obtaining the best available information, FEMA may consider other FEMA information as well as other available information, such as information from:

(i) Department of Agriculture: Natural Resources Conservation Service, U.S. Forest Service;

(ii) Department of Defense: U.S. Army Corps of Engineers;

(iii) Department of Commerce: National Oceanic and Atmospheric Administration;

(iv) Department of the Interior: Bureau of Land Management, Bureau of Reclamation, National Park Service, U.S. Fish and Wildlife Service, United States Geological Survey;

(v) Tennessee Valley Authority;

(vi) Department of Transportation;

(vii) Environmental Protection

Agency;

(viii) General Services Administration;

(ix) Agencies of State, Regional, and Indian Tribal governments; or

(x) Local sources such as Floodplain Administrators, Regional Flood Control Districts, or Transportation Departments.

(4) If the sources listed in paragraph (c)(3) of this section do not have or know of the information necessary to comply with the requirements in this part, the Regional Administrator may seek the services of a professional registered engineer.

(5) If a decision involves an area or location within extensive Federal or state holdings or a headwater area and FEMA's regulatory determinations under the National Flood Insurance Program are not available, the Regional Administrator shall seek information from the land administering agency before information and/or assistance is sought from the sources listed in paragraph (c)(3) of this section.

(d) * * *

(3) If the identified sources do not have adequate information upon which to base the determination, the Agency shall carry out an on-site analysis performed by a representative of the FWS or other qualified individual for wetlands characteristics based on the definition of a wetland in § 9.4.

(4) If an action constitutes new construction and is in a wetland but not in a floodplain, the provisions of this part shall apply. If the action is not in a wetland, the Regional Administrator shall determine if the action has the potential to result in indirect impacts on wetlands. If so, all potential adverse impacts shall be minimized. For actions which are in a wetland and the floodplain, completion of the decision-making process is required. (See § 9.6). In such a case, the wetland will be considered as one of the natural and beneficial values of the floodplain.

■ 9. Amend § 9.8 by revising paragraphs (a) and (c)(1), the first sentence of

paragraph (c)(2), and paragraphs (c)(3) introductory text, (c)(3)(v), and (c)(4) and (5) to read as follows:

§ 9.8 Public notice requirements.

(a) *Purpose.* This section establishes the initial notice procedures to be followed when the Agency proposes any action in or affecting floodplains or wetlands.

* * * * *

(c) * * *

(1) For an action for which an environmental impact statement is being prepared, the Notice of Intent to File an EIS constitutes the early public notice if it includes the information required under paragraph (c)(5) of this section.

(2) For each action having national significance for which notice is being provided, the Agency at a minimum shall provide notice by publication in the **Federal Register** and shall provide notice by mail to national organizations reasonably expected to be interested in the action. * * *

(3) The Agency shall determine whether it has provided appropriate notices, adequate comment periods, and whether to issue cumulative notices (paragraphs (c)(4), (6), and (7) of this section) based on factors which include, but are not limited to:

* * * * *

(v) Anticipated potential impact of the action.

(4) For each action having primarily local importance for which notice is being provided, notice shall be made in accordance with the criteria under paragraph (c)(3) of this section, and shall include, as appropriate:

- (i) Notice through the internet or another comparable method.
- (ii) Notice to Indian tribes when effects may occur on reservations.
- (iii) Information required in the affected State's public notice procedures for comparable actions.
- (iv) Publication in local newspapers.
- (v) Notice through other local media including newsletters.
- (vi) Notice to potential interested community organizations.
- (vii) Direct mailing to owners and occupants of nearby or affected property.
- (viii) Posting of notice on and off site in the area where the action is to be located.
- (ix) Public hearing.

(5) The notice shall:

- (i) Describe the action, its purposes, and a statement of the intent to carry out an action affecting or affected by a floodplain or wetland;
- (ii) Based on the factors in paragraph (c)(3) of this section, include a map of

the area and other identification of the floodplain and/or wetland areas which is of adequate scale and detail; alternatively, FEMA may state that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information or may provide a link to access the map online;

(iii) Based on the factors in paragraph (c)(3) of this section, describe the type, extent, and degree of hazard involved and the floodplain or wetland values present; and

(iv) Identify the responsible official or organization for implementing the proposed action, and from whom further information can be obtained.

* * * * *

- 10. Amend § 9.9 by:
 - a. Revising paragraphs (a)(1), (b)(2), and (c)(1) through (4);
 - b. Adding paragraph (c)(5);
 - c. Revising paragraphs (d), (e)(1)(i), (iii), and (iv), (e)(2) introductory text, (e)(3) introductory text, and (e)(4); and
 - d. Lifting the suspension of paragraph (e)(6) and removing the paragraph.

The revisions and additions read as follows:

§ 9.9 Analysis and reevaluation of practicable alternatives.

(a) * * * *

(1) This section expands upon the directives set out in § 9.6 of this part in order to clarify and emphasize the requirements to avoid floodplains and wetlands unless there is no practicable alternative.

* * * * *

(b) * * *

(2) Alternative actions which serve essentially the same purpose as the proposed action, but which have less potential to affect or be affected by the floodplain or wetlands. In developing the alternative actions, the Agency shall use, where possible, natural systems, ecosystem processes, and nature-based approaches; and

* * * * *

(c) * * *

- (1) Natural environment (including, but not limited to topography, habitat, hazards, when applicable);
- (2) Social concerns (including, but not limited to aesthetics, historical and cultural values, land patterns, when applicable);
- (3) Economic aspects (including, but not limited to costs of space, technology, construction, services, relocation, when applicable);
- (4) Legal constraints (including, but not limited to deeds and leases, when applicable); and
- (5) Agency authorities.

(d) * * *

(1) The Agency shall not locate the proposed action in the floodplain as established by § 9.7(c) or in a wetland if a practicable alternative exists outside the floodplain or wetland.

(2) If no practicable alternative exists outside the floodplain or wetland, in order to carry out the action the floodplain or wetland must itself be a practicable location in light of the review required in this section.

(e) * * *

(1) * * *

(i) The action is still practicable at a floodplain or wetland site, considering the flood risk and the ensuing disruption of natural values;

* * * * *

(iii) The scope of the action can be limited to increase the practicability of previously rejected non-floodplain or wetland sites and alternative actions; and

(iv) Harm to or within the floodplain can be minimized using all practicable means.

(2) Take no action in a floodplain unless the importance of the floodplain site clearly outweighs the requirements to:

* * * * *

(3) Take no action in a wetland unless the importance of the wetland site clearly outweighs the requirements to:

* * * * *

(4) In carrying out this balancing process, give the factors in paragraphs (e)(2) and (3) of this section great weight.

* * * * *

■ 11. Amend § 9.10 by revising paragraph (a), the second sentence of paragraph (b), and paragraphs (c) and (d) to read as follows:

§ 9.10 Identify impacts of proposed actions.

(a) This section ensures that the effects of proposed Agency actions are identified.

(b) * * * Such identification of impacts shall be to the extent necessary to comply with the requirements of this part to avoid floodplain and wetland locations unless they are the only practicable alternatives to minimize harm to and within floodplains and wetlands.

(c) This identification shall consider whether the proposed action will result in an increase in the useful life of any structure or facility in question, maintain the investment at risk and exposure of lives to the flood hazard or forego an opportunity to restore the natural and beneficial values served by floodplains or wetlands.

(d) In the review of a proposed or alternative action, the Regional Administrator shall consider and evaluate: impacts associated with modification of wetlands and floodplains regardless of its location; additional impacts which may occur when certain types of actions may support subsequent action which have additional impacts of their own; adverse impacts of the proposed actions on lives and property and on natural and beneficial floodplain and wetland values; and the three categories of factors listed below:

(1) *Flood hazard-related factors.* These include, but are not limited to, the factors listed in § 9.7(b)(3);

(2) *Natural values-related factors.* These include, but are not limited to: water resource values, as in storing and conveying floodwaters, maintaining water quality, and groundwater recharge; living resource values, as in providing habitats and enhancing biodiversity for fish and wildlife and plant resources; cultural resource values, as in providing open space, natural beauty, recreation, scientific study, historical and archaeological resources, and education; and cultivated resource values, as in creating rich soils for agriculture, aquaculture, and forestry.

(3) *Factors relevant to a proposed action's effects on the survival and quality of wetlands.* These include, but are not limited to: Public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion; maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

- 12. Amend § 9.11 by:
- a. Revising paragraphs (a) and (c)(1);
- b. Revising the first sentence of paragraph (d) introductory text and revising paragraphs (d)(1) introductory text, (d)(2) through (4), (d)(5) introductory text, and (d)(9);
- c. Lifting the suspension of paragraph (e)(4) and removing paragraph (e); and
- d. Redesignating paragraph (f) as paragraph (e) and revising it.

The revisions read as follows:

§ 9.11 Mitigation.

(a) *Purpose.* This section expands upon the directives set out in § 9.6 of this part and sets out the mitigative actions required if the preliminary

determination is made to carry out an action that affects or is in a floodplain or wetland.

* * * * *

(c) * * *

(1) Potential harm to lives and the investment from flooding based on flood elevations as established by § 9.7(c);

* * * * *

(d) *Minimization standards.* The Agency shall apply, at a minimum, the following standards to its actions to comply with the requirements of paragraphs (b) and (c) of this section (except as provided in § 9.5(c), (d), and (g) regarding categories of partial or total exclusion). * * *

(1) There shall be no new construction or substantial improvement in a floodway and no new construction in a coastal high hazard area, except for:

* * * * *

(2) For a structure which is a functionally dependent use or which facilitates an open space use, the following applies: Any construction of a new or substantially improved structure in a coastal high hazard area must be elevated on adequately anchored pilings or columns, and securely anchored to such piles or columns so that the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) is elevated to or above the floodplain as established by § 9.7(c). The structure shall be anchored so as to withstand velocity waters and hurricane wave wash.

(3) The following applies to elevation of structures:

(i) There shall be no new construction or substantial improvement of structures unless the lowest floor of the structures (including basement) is at or above the elevation of the floodplain as established by § 9.7(c).

(ii) If the subject structure is nonresidential, instead of elevating the structure, FEMA may approve the design of the structure and its attendant utility and sanitary facilities so that the structure is watertight below the flood elevation with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(iii) The provisions of paragraphs (d)(3)(i) and (ii) of this section do not apply to the extent that FEMA Resilience has granted an exception under § 60.6(b) of this chapter, or the community has granted a variance which the Regional Administrator determines is consistent with § 60.6(a) of this chapter. In a community which

does not have a FEMA regulatory product in effect, FEMA may approve a variance from the standards of paragraphs (d)(3)(i) and (ii) of this section, after compliance with the standards of § 60.6(a).

(4) There shall be no encroachments, including but not limited to fill, new construction, substantial improvements of structures or facilities, or other development within a designated regulatory floodway that would result in any increase in flood elevation within the community during the occurrence of the 1 percent annual chance (base) flood discharge. Until a regulatory floodway is designated, no fill, new construction, substantial improvements, or other development shall be permitted within the 1 percent annual chance (base) floodplain unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the 1 percent annual chance (base) flood more than the amount designated by the NFIP or the community, whichever is most restrictive.

(5) Even if an action is a functionally dependent use or facilitates open space uses (under paragraph (d)(1) or (2) of this section) and does not increase flood heights (under paragraph (d)(4) of this section), such action may only be taken in a floodway or coastal high hazard area if:

* * * * *

(9) In the replacement of building contents, materials and equipment, the Regional Administrator shall require as appropriate, flood proofing and/or elevation of the building and/or elimination of such future losses by relocation of those building contents, materials, and equipment outside or above the floodplain as established by § 9.7(c).

(e) *Restore and preserve.* (1) For any action taken by the Agency which affects the floodplain or wetland and which has resulted in, or will result in, harm to the floodplain or wetland, the Agency shall act to restore and preserve the natural and beneficial values served by floodplains and wetlands.

(2) Where floodplain or wetland values have been degraded by the proposed action, the Agency shall identify, evaluate, and implement measures to restore the values.

(3) If an action will result in harm to or within the floodplain or wetland, the Agency shall design or modify the action to preserve as much of the natural and beneficial floodplain and wetland values as is possible.

- 13. Amend § 9.12 by:
 - a. Redesignating paragraphs (d) introductory text and (d)(1) through (6) as paragraphs (d)(1) introductory text and (d)(1)(i) through (vi), respectively; and
 - c. Designate the undesignated text after newly redesignated paragraph (d)(1)(vi) as paragraph (d)(2) and revise it.

The revision reads as follows:

§ 9.12 Final public notice.

* * * * *

(d) * * *

(2) When a damaged structure or facility is already being repaired by the State or local government at the time of the project application, the requirements of Steps 2 and 7 (§ 9.8 and this section) may be met by a single notice. Such notice shall contain all the information required by both sections.

- 14. Revise § 9.13 to read as follows:

§ 9.13 Particular types of temporary housing.

- (a) This section sets forth the procedures whereby the Agency will provide certain specified types of temporary housing at a private, commercial, or group site.
- (b) Prior to providing the temporary housing described in paragraph (a) of this section, the Agency shall comply with the provisions of this section. For temporary housing not enumerated above, the full 8-step process (see § 9.6) applies.
- (c) The actions described in paragraph (a) of this section are subject to the following decision-making process:
 - (1) The temporary housing action shall be evaluated in accordance with the provisions of § 9.7 to determine if it is in or affects the 1 percent annual chance (base) floodplain or wetland.
 - (2) No temporary housing unit may be placed on a site in a floodway or coastal high hazard area.
 - (3) An individual or family shall not be housed in the 1 percent annual chance (base) floodplain or wetland unless the Regional Administrator has complied with the provisions of § 9.9 to determine that such site is the only practicable alternative. The following factors shall be substituted for the factors in § 9.9(c) and (e)(2) through (4):
 - (i) Speedy provision of temporary housing;
 - (ii) Potential flood risk to the temporary housing occupant;
 - (iii) Cost effectiveness;
 - (iv) Social and neighborhood patterns;
 - (v) Timely availability of other housing resources; and
 - (vi) Potential harm to the floodplain or wetland.

- (4) For temporary housing units at group sites, Step 4 of the 8-step process shall be applied in accordance with § 9.10.
- (5) An individual or family shall not be housed in a floodplain or wetland (except in existing resources) unless the Regional Administrator has complied with the provisions of § 9.11 to minimize harm to and within floodplains and wetlands. The following provisions shall be substituted for the provisions of § 9.11(d) for temporary housing units:
 - (i) No temporary housing unit may be placed unless it is elevated to the fullest extent practicable up to the base flood elevation and adequately anchored.
 - (ii) No temporary housing unit may be placed if such placement is inconsistent with the criteria of the NFIP (44 CFR parts 59 and 60) or any more restrictive Federal, State, or local floodplain management standard. Such standards may require elevation to the base flood elevation in the absence of a variance.
 - (iii) Temporary housing units shall be elevated on open works (walls, columns, piers, piles, etc.) rather than on fill where practicable.
 - (iv) To minimize the effect of floods on human health, safety and welfare, the Agency shall:
 - (A) Where appropriate, integrate all of its proposed actions in placing temporary housing units for temporary housing in floodplains into existing flood warning or preparedness plans and ensure that available flood warning time is reflected;
 - (B) Provide adequate access and egress to and from the proposed site of the temporary housing unit; and
 - (C) Give special consideration to the unique hazard potential in flash flood and rapid-rise areas.
 - (6) FEMA shall comply with Step 2 Early Public Notice (§ 9.8(c)) and Step 7 Final Public Notice (§ 9.12). In providing these notices, the emergency nature of temporary housing shall be taken into account.
 - (7) FEMA shall carry out the actions in accordance with Step 8, ensuring the requirements of this section and the decision-making process are fully integrated into the provision of temporary housing.
 - (d) The following applies to the permanent installation of a temporary housing unit as part of a sale or disposal of temporary housing:
 - (1) FEMA shall not permanently install temporary housing units in floodways or coastal high hazard areas. FEMA shall not permanently install a temporary housing unit in floodplains as established by 9.7(c) or wetlands unless there is full compliance with the

- 8-step process. Given the vulnerability of temporary housing units to flooding, a rejection of a non-floodplain location alternative and of the no-action alternative shall be based on:
 - (i) A compelling need of the family or individual to buy a temporary housing unit for permanent housing; and
 - (ii) A compelling requirement to permanently install the unit in a floodplain.
- (2) FEMA shall not permanently install temporary housing units in the floodplain as established by § 9.7(c) unless they are or will be elevated at least to the elevation of the floodplain as established by § 9.7(c).
- (3) The Regional Administrator shall notify FEMA Resilience of each instance where a floodplain location has been found to be the only practicable alternative for permanent installation of a temporary housing unit.
- 15. Amend § 9.14 by revising paragraphs (a), (b)(4), (5), and (6), (b)(7)(ii) and (iii), and (b)(9) to read as follows:
 - § 9.14 Disposal of Agency property.**
 - (a) This section sets forth the procedures whereby the Agency shall dispose of property.
 - (b) * * *
 - (4) Identify the potential impacts and support of floodplain and wetland development associated with the disposal of the property in accordance with § 9.10;
 - (5) Identify the steps necessary to minimize, restore, preserve and enhance in accordance with § 9.11. For disposals, this analysis shall address all four of these components of mitigation where unimproved property is involved, but shall focus on minimization through elevation or floodproofing and restoration of natural values where improved property is involved;
 - (6) Reevaluate the proposal to dispose of the property in light of its exposure to the flood hazard and its natural values-related impacts, in accordance with § 9.9. This analysis shall focus on whether it is practicable in light of the findings from §§ 9.10 and 9.11 to dispose of the property, or whether it must be retained. If it is determined that it is practicable to dispose of the property, this analysis shall identify the practicable alternative that best achieves the Agency's mitigation responsibility.
 - (7) * * *
 - (ii) Properties located inside the floodplain but outside of the floodway and the coastal high hazard area; and
 - (iii) Properties located in a floodway, regulatory floodway, or coastal high hazard area.

* * * * *

(9) The Agency shall ensure that the applicable mitigation requirements are fully implemented in accordance with § 9.11(c).

* * * * *

■ 16. Amend § 9.16 by revising paragraphs (b) introductory text, (b)(2) through (5), and (c) to read as follows:

§ 9.16 Guidance for applicants.

* * * * *

(b) This shall be accomplished primarily through amendment of all Agency instructions to applicants, and also through contact made by agency staff during the normal course of their activities, to fully inform prospective applicants of:

* * * * *

(2) The decision-making process to be used by the Agency in making the determination of whether to take an action in or affecting floodplains or wetlands as set out in § 9.6;

(3) The practicability analysis as set out in § 9.9;

(4) The mitigation responsibilities as set out in § 9.11;

(5) The public notice and involvement process as set out in §§ 9.8 and 9.12; and

* * * * *

(c) Guidance to applicants shall be provided, where possible, prior to the time of application in order to minimize potential delays in the Agency's processing of the application due to failure of applicants to follow the provisions in this part.

■ 17. Amend § 9.17 by revising paragraphs (a), (b) introductory text, (b)(3) through (5), (c), and (d) to read as follows:

§ 9.17 Instructions to applicants.

(a) *Purpose.* In accordance with Executive Orders 11988, as amended, and 11990, the Federal executive agencies must respond to a number of floodplain management and wetland protection responsibilities before carrying out any of their activities, including the provision of Federal financial and technical assistance. This section provides notice to applicants for Agency assistance of both the criteria that FEMA is required to follow, and the applicants' responsibilities under this part.

(b) *Responsibilities of applicants.* Based upon the guidance provided by the Agency under § 9.16, the guidance included in the U.S. Water Resources Council's Guidelines for Implementing Executive Order 11988, Floodplain Management, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input, and based upon the provisions of the Orders and this part, applicants for Agency assistance shall recognize and reflect in their application:

* * * * *

(3) The practicability analysis as set out in § 9.9;

(4) The mitigation responsibilities as set out in § 9.11;

(5) The public notice and involvement process as set out in §§ 9.8 and 9.12; and

* * * * *

(c) *Provision of supporting information.* Applicants for Agency assistance may be required to provide supporting information relative to the various responsibilities set out in

paragraph (b) of this section as a prerequisite to the approval of their applications.

(d) *Approval of applicants.*

Applications for Agency assistance shall be reviewed for compliance with the provisions in this part in addition to the Agency's other approval criteria.

■ 18. Amend § 9.18 by revising paragraph (a)(1), the second sentence of paragraph (b)(1), and the first sentence of (b)(2) to read as follows:

§ 9.18 Responsibilities.

(a) * * *

(1) Implement the requirements of the Orders and this part. Under §§ 9.2 and 9.6 through 9.13 and 9.15 where a direction is given to the Agency, it is the responsibility of the Regional Administrator.

* * * * *

(b) * * *

(1) * * * When a decision of a Regional Administrator relating to disaster assistance is appealed, FEMA Resilience may make determinations under this part on behalf of the Agency.

(2) Prepare and submit to the Office of Chief Counsel reports to the Office of Management and Budget in accordance with section 2(b) of Executive Order 11988, as amended, and section 3 of Executive Order 11990. * * *

Appendix A to Part 9 [Removed]

■ 19. Remove appendix A to part 9.

Deanne Criswell,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2024-15169 Filed 7-10-24; 8:45 am]

BILLING CODE 9111-66-P