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Flooding: Selected Federal Assistance and Programs to Reduce Risk

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Flooding: Selected Federal Assistance and Programs to Reduce Risk

Recent flood disasters and concerns about future flood risks have raised congressional and public interest in communities' ability to adapt to, withstand, and recover rapidly from floods. Federal programs support a range of actions: construction of infrastructure projects such as levees, protection and restoration of natural features that capture floodwaters, purchase of flood-exposed structures, incentives for communities that participate in the National Flood Insurance Program (NFIP) to reduce their risks, and others.

Assistance Programs: Grants, Loans, and Projects

Multiple federal agencies administer programs to assist state, local, tribal, and territorial government entities in reducing flood risks. Assistance takes various forms, as shown in the table below. Each federal program shown in the table has its own objectives, statutory limitations, and rules. For example, the Hazard Mitigation Grant Program is triggered by a major disaster declaration pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§5121 et seq.), and the Building Resilient Infrastructure and Communities Program is funded by a 6% set-aside from the Disaster Relief Fund after every major disaster declaration. In contrast, Congress enacts supplemental appropriations to fund Community Development Block Grant–Disaster Recovery.

Table 1. Selected Federal Programs That May Be Used to Support Reducing Flood Risk and Enhancing Resilience to Floods

Agency or Department	Program or Activity	Type of Federal Assistance
Federal Emergency Management Agency (FEMA)	Flood Mitigation Assistance Program	Grant
	Hazard Mitigation Grant Program	Grant
	Building Resilient Infrastructure and Communities Program	Grant
U.S. Army Corps of Engineers (USACE)	Safeguarding Tomorrow Revolving Loan Fund Program	Grants to capitalize state revolving funds
	Authorized projects and Continuing Authorities Programs	Federal studies and construction projects
U.S. Department of Agriculture (USDA)	Watershed and Flood Prevention Operations Program for rural communities	Grant
	Emergency Watershed Protection—Floodplain Easements	Federal acquisition of easements
National Oceanic and Atmospheric Administration (NOAA)	National Coastal Resilience Fund (with the National Fish and Wildlife Foundation) and coastal zone management and habitat restoration grants or cooperative agreements	Grants and cooperative agreements
Environmental Protection Agency (EPA)	Clean Water Act State Revolving Fund	Grants to capitalize state revolving funds
	Water Infrastructure Finance and Innovation Act	Credit assistance (e.g., direct loans)
U.S. Department of Housing and Urban Development (HUD)	Community Development Block Grant and Community Development Block Grant–Disaster Recovery	Grants

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Nicole T. Carter,
Coordinator

Specialist in Natural Resources Policy

Diane P. Horn,
Coordinator

Specialist in Flood Insurance and Emergency Management

Joseph V. Jaroscak
Analyst in Economic Development Policy

Eva Lipiec
Analyst in Natural Resources Policy

Anna E. Normand
Analyst in Natural Resources Policy

Jonathan L. Ramseur
Specialist in Environmental Policy

Megan Stubbs
Specialist in Agricultural Conservation and Natural Resources Policy

Agency or Department	Program or Activity	Type of Federal Assistance
	Section 108 Loan Guarantee Program	Loan guarantee

Source: Congressional Research Service.

Note: Many of these programs provide assistance for multiple natural hazards or multiple categories of eligible activities; they may not assist exclusively flood-related projects.

Flood Insurance: Incentives for Communities to Reduce Risks

Congress established the NFIP in the National Flood Insurance Act of 1968 (42 U.S.C. §§4001 et seq.). For federal flood insurance to be available to homeowners and business owners in a community, the NFIP requires participating communities to develop and adopt flood maps and enact minimum floodplain standards based on those flood maps. The NFIP encourages communities to adopt and enforce floodplain management regulations such as zoning codes, building codes, subdivision ordinances, and rebuilding restrictions. The federal government also encourages communities to reduce their flood risk by incentivizing risk reduction through the NFIP in three ways: the Flood Mitigation Assistance Program, the Community Rating System, and Increased Cost of Compliance coverage.

Role of Congress and Policy Issues

Congress is engaged in authorization, appropriation, and oversight of these programs. For some programs, House and Senate Appropriations Committees may consider Member requests for specific activities (e.g., U.S. Army Corps of Engineers and Environmental Protection Agency funding for specific projects). Members of Congress and other decisionmakers may face various related policy questions, including the following:

- How effective are these programs at motivating state, local, tribal, and territorial government entities to prepare for floods and manage their current and future flood risks?
- Would program changes improve the nation’s long-term flood resilience, including by reducing risk in economically disadvantaged communities?

Other potential considerations for Congress are discussed in this report.

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Introduction

Recent flood disasters have raised congressional and public interest in reducing flood risks and improving communities' ability to adapt to, withstand, and rapidly recover from floods. Congress has established various federal programs to assist state, local, tribal, and territorial government entities in reducing flood risks. This report provides information about these federal programs. It is organized into the following sections:

- A primer on flood risk;
- Descriptions of selected federal assistance programs; and
- An introduction to the National Flood Insurance Program (NFIP) and related programs intended to incentivize communities to reduce flood risks.

This report covers federal programs available to state, local, tribal, and territorial government entities to reduce flood risk and improve flood resilience in their communities.¹ However, the report is not comprehensive. For example, it discusses programs that assist with funding flood risk reduction infrastructure (e.g., levees) but does not discuss programs targeted at reducing flood risks for specific types of infrastructure (e.g., transportation-specific programs).

Primer on Flood Risk

According to the National Oceanic and Atmospheric Administration (NOAA), from 1980 through 2021, the United States sustained 36 flood events and 57 tropical cyclone events with associated costs of more than \$1 billion per event. The cumulative costs for these events were \$169 billion and \$1,157 billion, respectively.² Although not all cyclone costs are flood-related (e.g., wind damage), these data indicate the effect of flood-related events on the nation.

Components of Flood Risk

Risks associated with floods often are characterized as a combination of the following elements:

- **Hazard**, which is the local threat of a flood (e.g., the probability of a particular community experiencing a storm surge of a specific height);
- **Vulnerability**, which is the pathway that allows a flood to cause consequences (e.g., level of protection, performance of shore-protection measures); and
- **Consequences** of a flood (e.g., loss of life, property damage, economic loss, environmental damage, social disruption).

¹ This report does not cover assistance provided directly to individuals and businesses, such as loans from the Small Business Administration and agricultural conservation programs under the U.S. Department of Agriculture (USDA). With the exception of some funds that may be targeted to specific locations affected by a disaster, this report does not include federal assistance that targets specific geographic regions and/or programs available only to tribes. This report does not address assistance for reducing transportation-related flood risks. Programs to address dam safety are addressed in CRS In Focus IF10606, *Dam Safety: Federal Programs and Authorities*, by Anna E. Normand.

² National Oceanic and Atmospheric Administration (NOAA), National Centers for Environmental Information, "Billion-Dollar Weather and Climate Disasters: Summary Stats," at <https://www.ncei.noaa.gov/access/billions/summary-stats>. These estimates are of insured and uninsured direct costs (e.g., physical damage to buildings; time-related losses such as business interruption and loss of living quarters); the estimates are Consumer Price Index-adjusted.

Floods hazards can take various forms. Inland floods occur when rivers overtop their banks (*fluvial* flooding) or when intense rainfall causes water to accumulate locally (*pluvial* flooding).³ In urban areas, pluvial flooding can result from rainfall exceeding the capacity of drainage infrastructure (often referred to as *stormwater systems* or *storm sewers*). Other flood hazards include rapid seasonal melting of snow and the accumulation of debris, such as vegetation or ice, which stops water from draining away. Coastal flooding can occur from a combination of tides, waves (including tsunamis), and storm surge and may be compounded by contributions from local fluvial and pluvial flooding.

The relationship between climate change and flooding is complex,⁴ and the scientific understanding of the meteorological and hydrological drivers in this relationship is evolving.⁵ For example, the U.S. Global Change Research Program's October 2017 *Climate Science Special Report* stated the following about flooding observations for the United States:

Detectable changes in some classes of flood frequency have occurred in parts of the United States and are a mix of increases and decreases. Extreme precipitation, one of the controlling factors in flood statistics, is observed to have generally increased and is projected to continue to do so across the United States in a warming atmosphere.⁶

Another factor in flood risk for coastal communities is sea level rise. Higher sea levels amplify the impacts of storm surge and high tides. In February 2022, NOAA released the *2022 Sea Level Rise Technical Report*,⁷ which provides sea level rise projections for U.S. coastal waters through 2150. The report indicates that relative sea level along the conterminous U.S. coastline is projected to rise, on average, between 10 and 12 inches over the 30-year period from 2020 to 2050, which would be as much as the rise measured over the previous 100 years (i.e., 1920 to 2020).⁸

³ *Pluvial* flooding occurs when precipitation intensity exceeds the capacity of natural and engineered drainage systems. Recent events, such as the lives lost and damage caused by Hurricane Harvey's rains in Texas in 2017 and extreme rainfall in New York City in 2021, have brought attention to pluvial flooding, particularly in U.S. urbanized areas.

⁴ For example, according to one 2018 study, for the northeastern United States under a midrange emissions pathway (referred to as RCP 4.5), there is an anticipated frequency increase of extratropical storms with tropical characteristics and increased rainfall associated with these storms for the Northeast by the late 21st century (Maofeng Liu et al., "Projection of Landfalling—Tropical Cyclone Rainfall in the Eastern United States Under Anthropogenic Warming," *Journal of Climate*, vol. 31 (2018), pp. 7269-7286). In contrast, for the southeastern United States, it is uncertain whether more or less net precipitation will result due to forecasts of fewer but wetter storms (ibid.).

⁵ The combining of hazards can lead to a *multivariate event*, in which multiple climate drivers or hazards that may not be extreme on their own occur jointly in the same time frame, leading to extreme impacts. Research indicates that conterminous U.S. low-lying coastal areas along the Gulf of Mexico and the southeastern and southwestern coasts may be particularly vulnerable to compound flood hazards (Ahmed A. Nasr et al., "Assessing the Dependence Structure Between Oceanographic, Fluvial, and Pluvial Flooding Drivers Along the United States Coastline," *Hydrology and Earth System Sciences*, vol. 25, no. 12 (2021), pp. 6203-6222).

⁶ Donald J. Wuebbles et al., *Climate Science Special Report: Fourth National Climate Assessment*, vol. I, U.S. Global Change Research Program, 2017, p. 231. This statement is from a key finding. The report classified the confidence in that finding as *medium*, which indicates the evidence is suggestive but competing schools of thought remain (p. 7).

⁷ William V. Sweet et al., *Global and Regional Sea Level Rise Scenarios for the United States: Updated Mean Projections and Extreme Water Level Probabilities Along U.S. Coastlines*, NOAA Technical Report NOS 01, 2022.

⁸ Sea level rise varies regionally because of changes in both land and ocean height. For more information on sea level rise, see CRS Report R44632, *Sea-Level Rise and U.S. Coasts: Science and Policy Considerations*, by Peter Folger and Nicole T. Carter.

Approaches to Managing Flood Risk

Over the decades, U.S. flood policy has evolved from a focus on controlling floodwaters to supporting multiple means to manage flood risks. Early efforts focused on *flood control* and *flood damage reduction* using engineered structures such as dams and levees, with the federal role in such flood control works emerging in the 1910s.⁹ In the late 20th century, the approach shifted to *flood risk reduction* and *mitigation*,¹⁰ which expanded the measures employed to include buyouts, easements,¹¹ elevation of structures, evacuation, and other life-saving and damage-reducing actions. More recently, the concept of *flood resilience*—the ability to adapt to, withstand, and rapidly recover from floods—and federal assistance to support it have become prominent.¹²

Approaches to address flooding can be grouped into three general categories: protect, accommodate, and retreat.

- The *protect* approach most commonly relies on reducing the pathways for a flood to cause consequences. Protect approach responses can include hard engineering structures such as levees, dams, seawalls, groins, and storm surge barriers. This approach also may incorporate dune construction and beach nourishment. A protect approach may support protection or development of natural features that provide flood management benefits (e.g., coastal wetlands creation, coastal mangrove protection, undeveloped floodplains, living shorelines).¹³ These features are referred to as *natural and nature-based features*,¹⁴ or *green infrastructure* in stormwater applications (e.g., bioswales, which consist of narrow rain gardens often between a sidewalk and curb or in a parking lot).
- The *accommodate* strategy aims to reduce the impact of flooding through changes in human behavior while maintaining the use of flood-prone areas. Accommodation implies accepting the occurrence of flooding and preparing for it (e.g., through development of evacuation routes). Accommodation activities frequently involve land use planning, building codes, floodplain regulations, and flood proofing of structures.
- Some communities may make a decision to retreat from certain locations or to relocate particular assets. A *relocation* or *retreat* strategy can be implemented through various policy approaches, such as acquisition of flood-vulnerable structures (often referred to as *buyouts*) and zoning or other policies aimed at preventing development or rebuilding in high-risk areas.

⁹ Flood Control Act of 1917 (39 Stat. 948).

¹⁰ *Mitigation* is a term most commonly used by the Federal Emergency Management Agency (FEMA) and is less frequently used to describe the programs administered by other agencies described in this report. FEMA defines *mitigation* as “any sustained action to reduce or eliminate long-term risk to people and property from natural hazards and their effects” (FEMA, *Hazard Mitigation Assistance Guidance*, February 27, 2015, p.1).

¹¹ A *floodplain* or *flowage easement* is a right granted by a landowner to allow the land to be temporarily inundated.

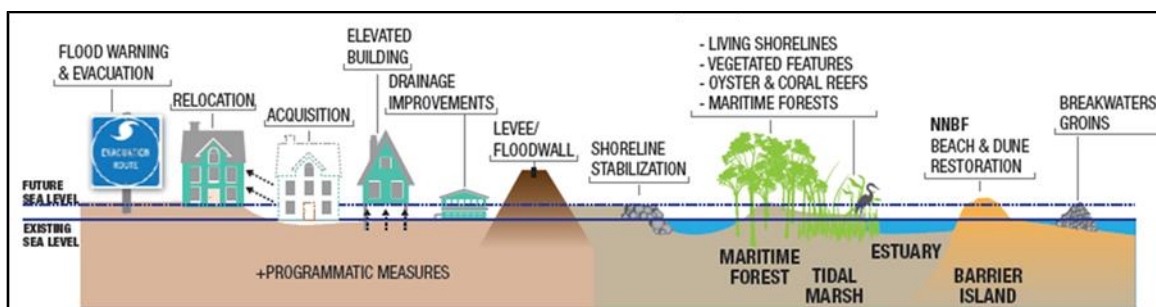
¹² Numerous definitions and understandings of *resilience* and *resiliency* exist. Many of the federal programs described herein may use unique definitions of resilience and resiliency or may use the terms without defining them.

¹³ Living shorelines provide nature-based erosion control and shoreline stabilization by incorporating vegetation or other natural elements alone or in combination with some type of harder shoreline structure (e.g., oyster reefs) for added stability.

¹⁴ For more background on natural and nature-based features, see CRS Report R46328, *Flood Risk Reduction from Natural and Nature-Based Features: Army Corps of Engineers Authorities*, by Nicole T. Carter and Eva Lipiec.

Figure 1 illustrates a suite of flood resilience and risk reduction improvements, including both structural and nonstructural measures, for coastal communities. A similar suite of options may be available for communities along rivers. Urban communities may employ various measures to manage stormwater in addition to their stormwater collection and retention infrastructure; these measures may include bioswales, permeable pavement, green streets and alleys, and green roofs.¹⁵

Figure 1. Examples of Measures to Reduce Coastal Flood Risk



Source: U.S. Army Corps of Engineers, *North Atlantic Coast Comprehensive Study: Resilience Adaptation to Increasing Risk*, January 2015, p. 7, at http://www.nad.usace.army.mil/Portals/40/docs/NACCS/NACCS_main_report.pdf.

Notes: Other options to reduce risk are available, including various forms of zoning and building codes (e.g., flood proofing of structures' lower floors). NNBF = natural and nature-based features.

Policy Considerations

Floods remain a significant hazard in the United States, and flood mitigation, protection, emergency response, and recovery roles and responsibilities are shared. Local governments are responsible for land use and zoning decisions that shape floodplain, coastal, and urban and suburban development. State and federal programs, policies, and investments influence community decisions on managing flood risk. Increasing flood hazards in some parts of the country are increasing the risk to existing developments. In addition, new development in flood-prone areas increase the assets and people exposed to flood hazards, also increasing overall flood risk.

Recent major flood events have renewed concerns about the nation's and the federal government's financial exposure to flood losses, as well as the economic, social, and public health impacts of floods on individuals and communities. Part of the challenge for Congress and other policymakers in reducing flood risks and improving resilience is the distribution of responsibilities among federal entities and state, local, tribal, and territorial government entities. Some tension exists between the broader interest in reducing the federal government's exposure to costs for disaster response and recovery, on the one hand, and nonfederal (including private) roles in shaping how structures and facilities are built in coastal areas, floodplains, and elsewhere, on the other. In the United States, local and state governments have the primary responsibility for guiding land use in floodplains, establishing and enforcing building codes and ordinances, and constructing public works to protect communities. At the same time, Congress has authorized the executive branch agencies to take action on numerous aspects of flood resilience and risk reduction and disaster response and recovery. Because flood risk may be reduced or exacerbated by decisions and actions made by state, local, tribal, and territorial governmental entities, the

¹⁵ These measures and others are described and illustrated at Environmental Protection Agency (EPA), "What Is Green Infrastructure?" at <https://www.epa.gov/green-infrastructure/what-green-infrastructure>.

demand on federal programs (e.g., disaster assistance, federal risk reduction and mitigation projects) faces considerable uncertainty.

Some potential questions for Congress and other policymakers include the following:

- How do federal programs provide incentives or disincentives for states, local governments, territories, and tribes to prepare for flood and manage flood risks?
- How cost-effective are the level, type, and geographic distribution of federal actions for flood resilience and risk reduction?
- To what extent do federal flood programs reduce or exacerbate flood risk for economically disadvantaged communities, minority populations, and communities with more low-income residents?
- How do federal programs shape how state, local, tribal, and territorial government entities combine or select flood control infrastructure, natural or nature-based features, removal of people and structures from harm's way, and adaptations to coexist with floods?
- Is the current suite of federal assistance programs overlapping and potentially redundant, or complementary?
- How would changing implementation or funding of federal flood-related assistance programs and the NFIP affect long-term net benefits in avoided federal disaster assistance, lives lost, and economic disruption?
- What cost-effective changes to federal programs could support communities in addressing both current and future flood risks, as flood hazards change in different watersheds and communities with a warming climate?

In addressing the nation's flood risk and resilience, policymakers may choose to prioritize some federal roles over others, increase or redistribute activities and funding across existing federal programs, reorient or eliminate existing programs, or establish new programs.

Selected Federal Assistance

Congress has created various federal programs that may be able to assist state, local, territorial, and tribal entities with flood risk reduction and flood resilience for communities. Actions and investments to reduce flood risk by state, local, tribal, and territorial government entities have received support from hazard mitigation assistance programs administered by the Federal Emergency Management Agency (FEMA) as well as the Community Development Block Grant (CDBG) programs of the Department of Housing and Urban Development (HUD). The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA) has acquired floodplain easements and has supported the construction of small levees and dams in rural areas. NOAA supports coastal zone management and habitat restoration and coastal resilience projects that may contribute to flood risk reduction. The U.S. Army Corps of Engineers (USACE) is the principal federal agency engaged in construction of federally authorized flood control measures (e.g., levees, engineered coastal dunes).¹⁶ The U.S. Environmental Protection Agency (EPA) supports loans for stormwater infrastructure.

¹⁶ Other federal entities operating flood-related infrastructure include the Bureau of Reclamation in the Department of the Interior, which operates multipurpose water projects in 17 western states; the Tennessee Valley Authority, which has multipurpose dams; the International Boundary and Water Commission, which operates U.S.-Mexico border dams

Table 2 summarizes selected federal programs.¹⁷ The table organizes the programs into three sets: flood-specific programs, resilience programs and multi-hazard mitigation programs, and multipurpose programs (i.e., programs with broader objectives, such as water quality, for which flood-related activities may be a component). Each program described in **Table 2** was created for a specific purpose and has statutory limitations. For example, some programs are triggered only after certain disaster declarations, whereas others are part of regular agency operations. Program-specific discussions later in this report provide more information on programs listed in **Table 2**. The table also identifies funding provided for the various programs by the Infrastructure Investment and Jobs Act (IIJA),¹⁸ one of the largest investments in infrastructure, including for flood-related work, in many years. **Table 2** provides information on annual appropriations for FY2022 and funding that was enacted in FY2022 that may be available beyond FY2022.¹⁹

and levees; the Bureau of Indian Affairs; and the four federal land management agencies—Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service (FWS), and U.S. Forest Service.

¹⁷ See footnote 1 for a description of the scope of the programs discussed in this report.

¹⁸ P.L. 117-58.

¹⁹ The majority of the funds discussed in this report do not expire. Exceptions are noted in the more detailed tables.

Table 2. Selected Federal Programs That Support Flood Risk Reduction and Resilience

(dollars in millions (M))

Program	Agency/ Dept.	Type of Assistance	FY2022 Funding	FY2022 Supp. Funding, Other Than IJJA ^a	IJJA Funding, by FY of IJJA Funding
Flood-Specific Programs					
Flood Mitigation Assistance	FEMA	Grant	\$800 M ^b	—	FY2022 through FY2026: \$700 M per year
Flood Damage Reduction Projects	USACE	Federal share of project	\$866 M	\$3,000 M for flood-related construction, of which \$1,500 M is for states affected by Hurricane Ida; \$130 M for flood-related studies	FY2022: \$4,950 M for flood-related construction projects. \$120 M for studies, including flood-related studies FY2023: \$50 M for construction of coastal shore protection projects. \$30 M for flood pilot program for rural and economically disadvantaged community feasibility studies FY2024: \$50 M for construction of coastal shore protection projects
Flood-Related Continuing Authorities Programs	USACE	Federal share of project	\$19.5 M	Up to \$65 M for flood-related Continuing Authorities Programs	FY2022: \$465 M available for all Continuing Authorities Programs, including flood-related and non-flood related programs
Emergency Watershed Protection—Floodplain Easements	USDA	Floodplain easement	—	\$275 M	FY2022: \$300 M to remain available until expended
Resilience Programs and Multi-hazard Mitigation Programs^c					
Building Resilient Infrastructure and Communities	FEMA	Grant	\$2,295 M	Not directly; see program description	FY2022 through FY2026: \$200 M per year
Hazard Mitigation Grant Program	FEMA	Grant	Determined per disaster	Not directly; see program description	—

Program	Agency/ Dept.	Type of Assistance	FY2022 Funding	FY2022 Supp. Funding, Other Than IJJA^a	IJJA Funding, by FY of IJJA Funding
Safeguarding Tomorrow Revolving Loan Fund Program	FEMA	Grants to capitalize state revolving funds	FY2022 through FY2026: \$100 M per year	—	FY2022 through FY2026: \$100 M per year
Watershed and Flood Prevention	USDA	Grant	\$100 M (discretionary) \$47 M (mandatory)	—	FY2022: \$500 M to remain available until expended
Multipurpose Programs^c					
National Coastal Resilience Fund	NOAA ^d	Cooperative agreement	\$34 M	\$25 M	FY2022 through FY2026: \$98.4 M per year
IRA 2022 Funding, NOAA Program—Not Specified ^e	NOAA	Grant or cooperative agreement	—	IRA 2022: \$2,600 M	—
Coastal Zone Management	NOAA	Formula-based grant, competitive grant, or cooperative agreement	\$79 M	—	FY2022 through FY2026: \$41.4 M per year
IJJA Habitat Restoration	NOAA	Cooperative agreement	—	—	FY2022 through FY2026: \$98.2 M per year
Clean Water State Revolving Fund ^f	EPA	Grants to capitalize state revolving funds	\$1,195 M	—	FY2022: \$1,902 M FY2023: \$2,202 M FY2024: \$2,403 M FY2025: \$2,603 M FY2026: \$2,603 M
Water Infrastructure Finance and Innovation Act Program	EPA	Credit assistance (e.g., loan or loan guarantee)	\$63.5 M to cover subsidy costs to provide an estimated of \$5,500 M of credit assistance	—	—
Community Development Block Grant	HUD	Grant	\$3,300 M	—	—
Section 108 Loan Guarantees	HUD	Loan guarantee	\$300 M loan-commitment ceiling	—	—

Program	Agency/ Dept.	Type of Assistance	FY2022 Funding	FY2022 Supp. Funding, Other Than IJJA ^a	IJJA Funding, by FY of IJJA Funding
Community Development Block Grant –Disaster Recovery	HUD	Grant	—	\$5,000 M [§]	—

Source: CRS.

Notes: EPA = Environmental Protection Agency; FEMA = Federal Emergency Management Agency; FY = Fiscal Year; HUD = U.S. Department of Housing and Urban Development; IJJA = Infrastructure Investment and Jobs Act (P.L. 117-58); IRA 2022 = P.L. 117-169, which is commonly referred to as the Inflation Reduction Act of 2022; NOAA = National Oceanic and Atmospheric Administration; USACE = U.S. Army Corps of Engineers; USDA = U.S. Department of Agriculture. Subsidy costs are the present value of estimated future government losses from loans and loan guarantees.

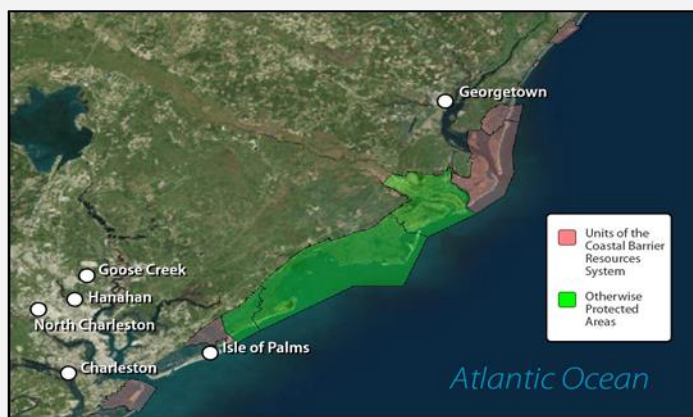
- a. Supplemental appropriations in this column were provided in P.L. 117-43 unless shown otherwise (e.g., IRA 2022). This column does not include IJJA funding available in FY2022.
- b. FEMA announced that the Flood Mitigation Assistance Program saw a five-fold increase in annual appropriations with the FY2022 annual appropriations level of \$800 million. The source of the additional \$100 million was not identified in the notice of funding opportunity. See Department of Homeland Security, *Flood Mitigation Assistance, Notice of Funding Opportunity Fiscal Year 2022*, August 12, 2021, pp. 5-7.
- c. These programs provide assistance for multiple natural hazards or multiple categories of eligible activities. Therefore, funding levels provided may not be exclusively for flood-related projects.
- d. Congress authorized NOAA to work with the National Fish and Wildlife Foundation to administer this program.
- e. Congress directed NOAA to use these funds “for the conservation, restoration, and protection of coastal and marine habitats, resources, Pacific salmon and other marine fisheries, to enable coastal communities to prepare for extreme storms and other changing climate conditions, and for projects that support natural resources that sustain coastal and marine resource dependent communities, marine fishery and marine mammal stock assessments, and for related administrative expenses.”
- f. States implement this program. Historically, the majority of the program’s funding has supported wastewater infrastructure activities; the program also can support stormwater and green infrastructure. P.L. 117-103 set aside 27% (\$444 million) of the FY2022 CWSRF appropriation (\$1.639 billion) to Community Project Funding/Congressional Directed Spending. Such funds will be distributed directly to recipients instead of to states’ revolving fund programs. Thus, the reservation of funds effectively decreases the total amount available for allotment as state capitalization grants to \$1.195 billion.
- g. FY2023 began with a continuing resolution, P.L. 117-180. In addition to continuing FY2022 appropriations amounts through December 16, 2022, P.L. 117-180. provided an additional \$2,000 M for the Community Development Block Grant–Disaster Recovery for major disasters in 2021 and 2022.

In some instances, various activities supported by the programs in **Table 2** may be conducted in a coordinated manner. Each state and territory has a Hazard Mitigation Officer who helps compile a state or territorial mitigation plan, administers certain mitigation funding, and generally has knowledge of the state’s or territory’s existing mitigation resources and its history of programs and funding awards in this area. A few federal programs also allow for funds provided through them to be used to satisfy the nonfederal cost-sharing requirement for another federal program (e.g., see **Table 16** on CDBG). Although the subsequent discussions examine geographic eligibility generally, some programs may not be eligible in certain areas designated under the Coastal Barrier Resources Act (CBRA; P.L. 97-348); for a discussion of CBRA, see the box titled “Coastal Barrier Resources Act.”²⁰ The descriptions of the programs in **Table 2** are grouped by the federal agency or department administering them. The program descriptions are presented by agency in the following order: FEMA, USACE, USDA, NOAA, Environmental Protection Agency (EPA), and HUD.

Coastal Barrier Resources Act

Congress enacted the Coastal Barrier Resources Act of 1982 (CBRA; P.L. 97-348) to address development pressures on undeveloped coastal barriers and adjacent areas. Administered by the U.S. Fish and Wildlife Service, CBRA and subsequent amendments to it designated undeveloped or relatively undeveloped coastal barriers and other coastal areas as CBRA *system units* and *otherwise protected areas*. Most federal spending that would support additional development is prohibited in the CBRA system units. CBRA does not prohibit or regulate any nonfederal activity; it only prohibits funds from the federal government and federal programs from being used to support additional development within any system unit. Additionally, CBRA does not preclude federal expenditures to restore system units to former levels of development after natural disasters (e.g., reconstruction of roads and water or sewer systems to former dimensions and capacity). Unlike the broader spending prohibitions that apply to system units, the only CBRA prohibition that applies to otherwise protected areas is a prohibition on federal flood insurance. **Figure 2** illustrates example system units and otherwise protected areas.

Figure 2. Coastal Barrier Resource Designations near Charleston, SC



Source: Congressional Research Service (CRS), using data from U.S. Fish and Wildlife Service.

Table 2 provides information on regular funding for FY2022 (i.e., annual appropriations for some programs), supplemental appropriations related to disasters, and funding from the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58). For example, IIJA funds become available for multiple programs in FY2022; some IIJA funds also become available in subsequent fiscal years. Each supplemental act often establishes specific conditions, requirements, or uses for funds

²⁰ For maps of all the areas designated by the Coastal Barrier Resource Act (CBRA; P.L. 97-348) as CBRA system units, see mapping tools available at FWS, “Coastal Barrier Resources Act,” at <https://www.fws.gov/program/coastal-barrier-resources-act/maps-and-data>.

provided therein. Act-specific criteria and detailed information is not shown in **Table 2** but may be discussed in the more detailed program-specific summaries.

The federal financial assistance programs shown in **Table 2** are not the only way in which federal agencies assist state, local, tribal, and territorial government entities. The federal government works to reduce flood risks in part through federal efforts to improve knowledge of flood hazards and risks. The box titled “Federal Flood Information: Example of Flood Mapping” provides an example of how federal investments in science, monitoring, and modeling help communities understand their flood risks.

Federal Flood Information: Example of Flood Mapping

The federal government, along with nonfederal entities, is involved in monitoring and modeling flood risk. Federal entities engaged in understanding flood hazards and mapping inundation include the Federal Emergency Management Agency (FEMA), the Department of the Interior’s U.S. Geological Survey, the National Oceanic and Atmospheric Administration, and the U.S. Army Corps of Engineers, among others. Federal agencies survey coastlines and conduct research to understand coastal processes, hazards, and resources and report on weather-related hazards, including hurricane-related storm surge. The National Science Foundation also supports research on related topics. FEMA’s Risk Mapping, Assessment, and Planning (Risk MAP) program plays a key role in flood risk reduction by providing information to identify flood hazards and assess flood risks and by partnering with states and communities to provide flood hazard and risk data to guide risk-reduction and resilience-enhancing actions.

Technological advancements have improved understanding of weather, climate, hydrology, and hydraulics. Of the many types of data used to estimate flood risk and produce flood maps, elevation data are fundamental to producing refined estimates and maps. Federal agencies and state, local, and private entities use remote sensing and other technologies to collect more accurate and precise elevation data for various applications, including maps related to flood risk.

Actions by the Administration shape how these programs are administered and how federal funding can be used. In 1977, President Carter signed Executive Order (E.O.) 11988 (“Floodplain Management”), which required federal actions (including the programs shown in **Table 2**) to avoid supporting development in the 100-year floodplain if alternatives were available.²¹ In 2015, President Obama signed E.O. 13690, which, among other things, established a Federal Flood Risk Management Standard (FFRMS) for federally funded projects that required a higher level of flood resilience than E.O. 11988.²² Federally funded projects were to be flood resilient (through elevation of structures and facilities or other means) if located within a floodplain determined pursuant to criteria in E.O. 13690. In addition to complying with E.O. 11988 and the FFRMS, federal agencies and departments may adopt policies consistent with their authorities that address flood risk for their programs and activities (e.g., establishing elevation requirements for program-funded structures, defining flood mitigation and flood control projects eligible for authorized programs).

²¹ The 100-year floodplain is the area that will be inundated by a flood event having a 1% chance of occurring in any given year (also referred to as the *100-year flood*). The 100-year floodplain also would be inundated by floods that are larger (and less likely to occur in a given year) than the 100-year flood.

²² The Federal Flood Risk Management Standard (FFRMS) was first published on January 30, 2015. It was updated and published on October 8, 2015, as Appendix G to the interagency implementing guidance for E.O. 11988 and E.O. 13690. E.O. 13690 required federal agencies to apply the FFRMS as a minimum flood resilience standard for federally funded projects. *Federally funded projects* were defined as actions in which federal funds were used for new construction, substantial improvement, or measures addressing substantial damage to structures and facilities. On August 15, 2017, President Trump signed E.O. 13807 in an effort to streamline federal infrastructure approval. Among other actions, E.O. 13807 revoked E.O. 13690. President Biden reinstated the FFRMS as part of E.O. 14030, “Climate-Related Financial Risk,” May 20, 2021.

Community Project Funding and Congressionally Directed Spending

The program-specific summaries that follow provide information on whether the House and Senate Appropriations Committees have accepted Member requests for specific activities under each program in the 117th Congress (this information is not addressed in **Table 2**). Such requests are referred to as Community Project Funding (CPF) requests in the House and as Congressional Directed Spending (CDS) requests in the Senate. From the 112th to the 116th Congresses, moratorium policies limited congressionally directed funding of site-specific studies and projects, sometimes referred to as *earmarks*. During the 117th Congress, the House and Senate Appropriations Committees solicited CPF/CDS requests for certain accounts and programs for FY2022 and FY2023. Some CPF/CDS requests were included in enacted FY2022 appropriations and accompanying congressional reports and have been included in deliberations for FY2023 appropriations.²³

Additional Resources

In addition to this report, other resources that may be helpful in identifying federal assistance for communities include the following:

- A search tool for federal programs that provide financial or technical assistance or data and tools to support flood risk and management activities: USACE, Federal Flood Risk Management Program, “Federal Flood Risk Management Resources,” at <https://ffrmp.nfrmp.us/resources.cfm>
- A guide to federal programs (including both national programs and programs that are specific to the southeastern United States, Puerto Rico, and the U.S. Virgin Islands) to assist with reducing coastal flood risk: USACE, *South Atlantic Coastal Study: Coastal Program Guide*, October 2021, at https://www.sad.usace.army.mil/Portals/60/siteimages/SACS/FinalDraft_SACS_CoastalProgramGuide_print.pdf
- The federal Coastal Resilience Interagency Working Group provides an overview of funding opportunities supporting coastal resilience, including some opportunities not included in the scope of this report: Coastal Resilience Interagency Working Group, “Bipartisan Infrastructure Law funding opportunities to support coastal resilience,” at <https://www.noaa.gov/coastal-resilience-interagency-working-group>

Federal Emergency Management Agency²⁴

FEMA administers four mitigation grant and loan programs that can be used for flood resilience and risk reduction:

- Hazard Mitigation Grant Program (HMGP);
- Building Resilient Infrastructure and Communities (BRIC) grant program;
- Flood Mitigation Assistance (FMA) Grant Program; and

²³ For a listing of the specific accounts that were eligible for Community Project Funding requests for FY2023 annual appropriations, see House Committee on Appropriations, “Appropriations Requests,” at <https://appropriations.house.gov/transparency/appropriations-requests-2023>. For a listing of accounts eligible for Congressional Directed Spending requests for FY2023 annual appropriations, see Senate Committee on Appropriations, “Appropriations Requests—General Guidance,” at https://www.appropriations.senate.gov/download/appropriations-requests_website.

²⁴ This section was prepared by Diane P. Horn, Specialist in Flood Insurance and Emergency Management.

- Safeguarding Tomorrow Revolving Loan Fund Program (Safeguarding Tomorrow RLF Program).²⁵

Collectively, FEMA refers to these programs as Hazard Mitigation Assistance (HMA).²⁶ **Table 3, Table 4, Table 5, and Table 6** include information on these programs.

HMGP assistance is available on a formula funding basis after a major disaster declaration by the President under the authorities of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act; 42 U.S.C. §§5121 et seq.). BRIC and FMA grants are awarded annually on a competitive basis. FEMA expects to issue the first notice of funding opportunity for the Safeguarding Tomorrow RLF Program in December 2022.²⁷

Hazard Mitigation Grant Program

HMGP is authorized by Section 404 of the Stafford Act (“Hazard Mitigation”) and is funded through the Disaster Relief Fund (DRF).²⁸ HMGP’s key purpose is to ensure the opportunity to take critical mitigation measures is not lost during the reconstruction process following a disaster. HMGP funding is available to all areas of a state, territory, or tribal land where a governor or tribal chief executive requests such funding following a major disaster declaration from the President or a Fire Management Assistance Grant declaration.²⁹ The HMGP program is considered post-disaster funding.

The level of HMGP funding available for a given disaster is based on a percentage of the estimated total federal assistance under the Stafford Act for the declaration, awarded on a sliding scale as a percentage of the estimated amount of total federal assistance for the disaster:

- Up to 15% of the first \$2 billion of estimated aggregate amounts of disaster assistance;
- Up to 10% of amounts between \$2 billion and \$10 billion;
- Up to 7.5% of amounts between \$10 billion and \$35.333 billion; and
- 20% for any state with an approved Enhanced State Mitigation Plan in effect before the disaster.³⁰

²⁵ Flood mitigation measures also can be funded by FEMA Public Assistance under §406 of the Stafford Act and by FEMA Individual Assistance under §408 of the Stafford Act. The U.S. Department of Housing and Urban Development’s Community Development Block Grant-Disaster Recovery (CDBG-DR) authorities for disaster recovery and its mitigation variant (CDBG-MIT), as well as the Small Business Administration Disaster Loan Program, also can fund flood mitigation activities. These programs may work cooperatively with FEMA programs but are outside the scope of this report.

²⁶ For further information on FEMA Hazard Mitigation Assistance, see CRS Report R46989, *FEMA Hazard Mitigation: A First Step Toward Climate Adaptation*, by Diane P. Horn.

²⁷ FEMA, “Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Revolving Loan Program,” at <https://www.fema.gov/grants/mitigation/storm-rlf>, last updated August 3, 2022.

²⁸ 42 U.S.C. §5170c. For more information on the Disaster Relief Fund, see CRS Report R45484, *The Disaster Relief Fund: Overview and Issues*, by William L. Painter.

²⁹ For more information about disaster declarations, see FEMA, *How a Disaster Gets Declared*, at <https://www.fema.gov/disaster/how-declared>; and CRS Report R43784, *FEMA’s Disaster Declaration Process: A Primer*, by Bruce R. Lindsay. For more information on Fire Management Assistance Grant declarations, see FEMA, *Fire Mitigation Assistance Grants*, at <https://www.fema.gov/assistance/public/fire-management-assistance>; and CRS Report R43738, *Fire Management Assistance Grants: Frequently Asked Questions*, by Diane P. Horn, Katie Hoover, and Bruce R. Lindsay.

³⁰ 42 U.S.C. §5170c(a) and 44 C.F.R. §206.432(b); 44 C.F.R. §201.5.

HMGP funding initially goes to a state, federally recognized tribe, or territory. States can use HMGP funds for any eligible activity for any type of hazard and are not limited to the hazard or area for which the grant was awarded. For example, funding allocated for flooding in one county could be used for wildfire mitigation in a different county, as long as the activity is eligible. The state decides where the funding can best be used and how to allocate HMGP funds to sub-applicants.³¹

Table 3. FEMA: Hazard Mitigation Grant Program (HMGP)

Purpose	The program supports entities that reduce risk to individuals and property in order to alleviate reliance on future federal disaster response and recovery funds. HMGP provides funding to address flood and other natural hazards.
Authorization	§404 of the Stafford Act, 42 U.S.C. §5170c.
Program Trigger	Triggered by a Stafford Act major disaster declaration by the President or a Fire Management Assistance Grant declaration by a FEMA Regional Director.
Geographic Eligibility	Recipients include states, federally recognized tribes, and territories. Funds typically are made available statewide in the state that received the declaration, not just in the declared counties.
Eligible Flood-Related Improvements	Eligible projects may include, but are not limited to, property acquisition, structure demolition, flood proofing of structures, structure relocation, structure elevation, mitigation, flood control projects, and localized and non-localized flood risk reduction projects. In §1210(b) of P.L. 115-254, Congress authorized HMGP funds to be used toward the federal share of construction for authorized U.S. Army Corps of Engineers water resource projects if such activities are eligible under HMGP.
Type of Federal Assistance	Grants to state agencies, federally recognized tribes, local governments, and certain private nonprofit organizations for mitigation projects and mitigation planning.
Nonfederal Cost Share	25% ^a
Maximum Federal Project Assistance	The total amount of HMGP funding is based on a percentage of the total amount of other grant assistance provided through the Stafford Act (§404(s) of the Stafford Act, 42 U.S.C. §5170c), which ranges from 7.5% to 20%. States with an Enhanced State Hazard Mitigation Plan under §322(e) of the Stafford Act receive 20% of the total amount. ^b
Community Project Funding/Congressionally Directed Spending	None.
FY2022 Funding	HMGP is one of many activities funded by appropriations to the DRF. DRF appropriations normally are provided for general disaster relief rather than for specific disasters or programs. ^c
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	None.

³¹ Eligible sub-applicants include state, local, and territorial governments; federally recognized tribes or tribal organizations; and certain nonprofit organizations. Additionally, certain nonprofit organizations may apply for Hazard Mitigation Grant Program (HMGP) funding. State agencies and federally recognized tribes applying for HMGP funding must have a FEMA-approved State or Tribal Mitigation Plan at the time of the presidential major disaster declaration and at the time the HMGP funding is obligated. All sub-applicants for HMGP must have a FEMA-approved Local or Tribal Mitigation Plan at the time of grant fund obligation. See 44 C.F.R. §206.434.

FY2023 Budget Request	The DRF budget request does not specifically identify projected obligations of HMGP funding as the request is developed.
Action Needed to Access Program	Governor or tribal chief executive must request HMGP within 60 days of the disaster declaration.
Websites	https://www.fema.gov/grants/mitigation/hazard-mitigation https://www.fema.gov/sites/default/files/2020-10/fema_hazard_mitigation_grant_program_admin_plan_checklist_03-29-19.pdf https://www.fema.gov/disaster/coronavirus/disaster-declarations

Source: CRS.

Notes: DRF = Disaster Relief Fund; FEMA = Federal Emergency Management Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); Stafford Act = Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§5121 et seq.).

- a. The Consolidated Appropriations Act, 2022 (P.L. 117-103), granted a minimum 90% federal cost share (and thus a 10% nonfederal cost share) for any emergency declaration or disaster declaration declared from or having an incident period beginning between January 1, 2020, and December 31, 2021.
- b. For a list of states with enhanced mitigation plans, see FEMA, “Hazard Mitigation Plan Status,” at <https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning/status>.
- c. See CRS Report R45484, *The Disaster Relief Fund: Overview and Issues*, by William L. Painter.

Building Resilient Infrastructure and Communities

BRIC is authorized by Section 203 of the Stafford Act (“Pre-disaster Hazard Mitigation”).³² Before 1997, federal hazard mitigation funding was available only after a disaster, through HMGP and FEMA Public Assistance, and was intended to ensure the reconstruction process following a disaster addressed opportunities to include mitigation measures. From FY1997 to FY2018, the funding available for the Pre-Disaster Mitigation Grant Program (PDM) was appropriated on an annual basis.³³ Funding for pre-disaster mitigation changed significantly with the passage of the Disaster Recovery Reform Act of 2018 (DRRA; P.L. 115-254, Division D), which authorized a new source of funding for pre-disaster mitigation, the National Public Infrastructure Pre-Disaster Mitigation Fund (NPIPDMF). DRRA allows the President to set aside from the DRF an amount equal to 6% of the estimated aggregate amount of funding awarded under seven sections of the Stafford Act.³⁴ The amount set aside in the NPIPDMF shall not reduce the amounts otherwise available for the relevant sections of the Stafford Act.³⁵ FEMA’s expectation was that the NPIPDMF would receive \$300-\$500 million per year on average, based on historical disaster expenditures.³⁶ The disaster assistance associated with the Coronavirus

³² 42 U.S.C. §5170c.

³³ The Pre-Disaster Mitigation Grant Program (PDM) began in FY1997. In FY2020, FEMA introduced the Building Resilient Infrastructure and Communities grant program (BRIC) but did not end the PDM program. In this report, terms with capital letters—Pre-Disaster Mitigation and PDM—refer to the Pre-Disaster Mitigation Grant Program or a title in a bill. The term *pre-disaster mitigation* in lowercase letters refers to mitigation activities carried out to reduce damage from future disasters.

³⁴ Stafford Act §§403 (“Essential Assistance”), 406 (“Repair, Restoration, and Replacement of Damaged Facilities”), 407 (“Debris Removal”), 408 (“Federal Assistance to Individuals and Households”), 410 (“Unemployment Assistance”), 416 (“Crisis Counseling Assistance and Training”), and 428 (“Public Assistance Program Alternative Program Procedures”). See CRS Report R45819, *The Disaster Recovery Reform Act of 2018 (DRRA): A Summary of Selected Statutory Provisions*, for further details.

³⁵ 42 U.S.C. §5133(i)(3).

³⁶ U.S. Congress, House Committee on Transportation and Infrastructure, Subcommittee on Economic Development, Public Buildings, and Emergency Management, *Disaster Preparedness: DRRA Implementation and FEMA Readiness*, Serial No. 116-17 (House Hearing), 116th Cong., 1st sess., May 22, 2019, p. 90, at <https://www.congress.gov/116/chrg/>

Disease 2019 (COVID-19) major disaster declarations,³⁷ however, has resulted in significant additional funding for pre-disaster mitigation. As of August 31, 2022, a total of \$3.814 billion has been set aside in the DRF for pre-disaster mitigation.³⁸

In FY2020, FEMA introduced the BRIC program to award funding from the NPIPDMF.³⁹ Any state that has had a major disaster declaration under the Stafford Act in the seven years prior to the application start date is eligible to apply for BRIC funding. Any federally recognized tribe that has had a major disaster declaration or is entirely or partially located in a state or territory that has had a major disaster declaration in the seven years prior to the application start date also is eligible. All states, territories, and recognized tribal governments are eligible for BRIC at least through FY2026 due to the COVID-19 pandemic disaster declarations.⁴⁰

The IJA appropriated \$1 billion for BRIC, with \$200 million for each of FY2022-FY2026. This funding is in addition to the 6% set-aside. President Biden announced on July 20, 2022, that \$2.3 billion would be available for BRIC in FY2022.

FY2020 was the first year of operation for BRIC. A total of \$500 million was available in FY2020, with \$1 billion available for BRIC in FY2021. A total of \$2.295 billion is available for BRIC in FY2022 in three categories: (1) state/territory allocation (\$112 million), (2) tribal set-aside (\$50 million), and (3) national competition (\$2.133 billion).⁴¹ Applicants are able to submit an unlimited number of mitigation project applications in category (3), each valued up to \$50 million. BRIC’s \$50 million per project cap for a mitigation project represents a significant increase in pre-disaster mitigation funding.

Table 4. FEMA: Building Resilient Infrastructure and Communities (BRIC) Program

Purpose	The program helps applicants implement a sustained natural hazard mitigation program prior to disasters. BRIC provides funding to address flood and other natural hazards, including tornadoes, earthquakes, and wildfires.
Authorization	§203 of the Stafford Act, 42 U.S.C. §5133.
Program Trigger	6% set-aside for every major disaster declaration for the estimated aggregate amount of the grants made pursuant to Stafford Act §§403, 406, 407, 408, 410, 416, and 428. BRIC also will receive appropriations in FY2022-FY2026 from the IJA.
Geographic Eligibility	Any state or territory that has had a major disaster declaration under the Stafford Act in the seven years prior to the application start date is eligible to apply for BRIC funding. Any federally recognized tribe that has had a major disaster declaration or is entirely or partially located in a state or territory that has had a major disaster declaration under the Stafford Act in the seven years prior to the application start date also is eligible.

CHRG-116hhrhg40590/CHRG-116hhrhg40590.pdf.

³⁷ FEMA, “COVID-19 Disaster Declarations,” at <https://www.fema.gov/disasters/coronavirus/disaster-declarations>.

³⁸ FEMA, *Disaster Relief Fund: Monthly Report as of August 31, 2022, Fiscal Year 2022 Report to Congress*, September 8, 2022, p. 24, at https://www.fema.gov/sites/default/files/documents/fema_september-2022-disaster-relief-fund-report.pdf.

³⁹ FEMA, “Building Resilient Infrastructure and Communities (BRIC),” at <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>.

⁴⁰ Eligible applicants for BRIC funding include states, the District of Columbia, U.S. territories, and federally recognized Indian tribal governments. Federally recognized Indian tribal governments also are eligible sub-applicants. Local government entities also are eligible subapplicants.

⁴¹ Department of Homeland Security, *Building Resilient Infrastructure and Communities, Notice of Funding Opportunity Fiscal Year 2022*, August 12, 2021, pp. 7-8, at https://www.fema.gov/sites/default/files/documents/fema_fy22-bric-nofo_08052022.pdf.

Eligible Flood-Related Improvements	Eligible projects may include, but are not limited to, property acquisition, structure demolition, structure relocation, flood proofing of structures, structure elevation, mitigation, and localized and non-localized flood risk reduction projects.
Type of Federal Assistance	Grants to states or territories and federally recognized tribes for mitigation projects as well as mitigation planning. Local governments apply through the state or territory.
Nonfederal Cost Share	25%, or up to 10% if the applicant is a small, impoverished community.
Maximum Federal Project Assistance	States, territories, and tribes can apply for up to \$2 million in the state/territory and tribal set-asides. Applicants can submit an unlimited number of mitigation project applications in the national competition, each valued up to \$50 million.
Community Project Funding/Congressionally Directed Spending	For FY2022 and FY2023 appropriations, the House and Senate Appropriations Committees accepted Member requests for funding for Pre-Disaster Mitigation (PDM) grants.
FY2022 Funding	\$2.295 billion.
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	\$1 billion: \$200 million for each of FY2022-FY2026. This funding is in addition to the 6% set-aside.
FY2023 Budget Request	Pursuant to §1234 of P.L. 115-254, estimates include a 6% set-aside for pre-disaster mitigation.
Action Needed to Access Program	Grant application process.
Websites	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities https://www.fema.gov/sites/default/files/documents/fema_fy22-bric-nofo_08052022.pdf

Source: CRS.

Notes: FEMA = Federal Emergency Management Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); Stafford Act = Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§5121 et seq.).

Flood Mitigation Assistance

The FMA Program is authorized by the National Flood Insurance Act of 1968 (NFIA; 42 U.S.C. §§4001 et seq.). Until FY2022, the FMA Program was funded entirely through revenue collected by the National Flood Insurance Program (NFIP).⁴² The FMA Program awards grants for various purposes, including state and local mitigation planning; the elevation, relocation, demolition, or flood proofing of structures; the acquisition of properties; and other activities.⁴³ FMA grants are available only to communities that participate in the NFIP, to assist in efforts to reduce or eliminate flood damage to buildings and structures insurable under the NFIP, particularly

⁴² 42 U.S.C. §4104c.

⁴³ For additional information on the Flood Mitigation Assistance Program, see 44 C.F.R. Part 78; FEMA’s website at <https://www.fema.gov/grants/mitigation/floods>; and CRS Report R44593, *Introduction to the National Flood Insurance Program (NFIP)*, by Diane P. Horn and Baird Webel.

repetitive loss and severe repetitive loss properties.⁴⁴ The FMA Program had \$200 million available in FY2020 and \$160 million in FY2021.

The IJJA appropriated \$3.5 billion for the FMA Program, with \$700 million for each of FY2022-FY2026. This appropriation represents a significant increase in the amount of funding available for flood mitigation and the first time that funding has been appropriated for the FMA Program. The funding appropriated to FMA under the IJJA will provide a 90% federal cost share for a property that is (1) located in a census tract with a Centers for Disease Control and Prevention Social Vulnerability Index score of not less than 0.5001 or (2) that serves as a primary residence for individuals with a household income of not more than 100% of the applicable area median income.⁴⁵

A total of \$800 million is available for FMA in FY2022. FEMA will allocate up to \$340 million for localized flood risk projects that address community flood risk, up to \$60 million for capability and capacity building activities, and at least \$400 million for projects that reduce the risk of flooding to individual NFIP-insured structures.⁴⁶

Table 5. FEMA: Flood Mitigation Assistance (FMA) Program

Purpose	The program supports efforts to reduce the risk of flooding to structures that flood repetitively and to lessen future insurance claims for the NFIP.
Authorization	§1366 of the National Flood Insurance Act, 42 U.S.C. §4104c.
Program Trigger	Annual appropriations: FMA receives funding through an offsetting collection of NFIP premiums in annual appropriations acts. FMA also will receive appropriations from the IJJA in FY2022-FY2026.
Geographic Eligibility	Funding is available to communities that participate in the NFIP in the states, DC, American Samoa, Guam, Northern Marianas, Puerto Rico, the U.S. Virgin Islands, and to federally recognized tribes.
Eligible Flood-Related Improvements	Eligible projects may include, but are not limited to, property acquisition, structure demolition, flood proofing of structures, structure relocation, structure elevation, mitigation, and localized and non-localized flood risk reduction projects.

⁴⁴ 42 U.S.C. §4121(a)(7) defines *repetitive loss structure* as a structure covered by a contract for flood insurance that (1) has incurred flood-related damage on two occasions, in which the cost of repair, on the average, equaled or exceeded 25% of the value of the structure at the time of each such flood event; and (2) at the time of the second incidence of flood-related damage, the contract for flood insurance contained increased cost-of-compliance coverage. *Severe repetitive loss properties* are those that have incurred four or more claim payments exceeding \$5,000 each, with a cumulative amount of such payments over \$20,000, or at least two claims with a cumulative total exceeding the value of the property. See 42 U.S.C. §4014(h) and 44 C.F.R. §79.2(h).

⁴⁵ The Centers for Disease Control/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI) uses U.S. Census data to determine the social vulnerability of every census tract, ranked on 15 social factors. SVI scores range from 0 to 1, with 1 representing the highest level of social vulnerability. For example, a SVI ranking of 0.75 means that 75% of census tracts in the nation are less vulnerable than the tract of interest. See Agency for Toxic Substances and Disease Registry, “CDC/ATSDR SVI Fact Sheet,” at https://www.atsdr.cdc.gov/placeandhealth/svi/fact_sheet/fact_sheet.html; and Agency for Toxic Substances and Disease Registry, *CDC SVI 2018 Documentation*, at <https://www.atsdr.cdc.gov/placeandhealth/svi/documentation/pdf/SVI2018Documentation-H.pdf>.

⁴⁶ Department of Homeland Security, *Flood Mitigation Assistance, Notice of Funding Opportunity Fiscal Year 2022*, August 12, 2021, pp. 5-7, at https://www.fema.gov/sites/default/files/documents/fema_fy22-fma-nofo_08052022_0.pdf.

Type of Federal Assistance	Grants to state or territory agencies and federally recognized tribes and governments for mitigation projects as well as mitigation planning. Local governments apply through the state or territory. FMA is available only to communities that participate in the NFIP.
Nonfederal Cost Share	25% for NFIP-insured properties and planning grants. 10% for repetitive loss properties. 90%/10% for a property that (1) is located in a census tract with a CDC SVI score of not less than 0.5001, or (2) serves as a primary residence for individuals with a household income of not more than 100% of the applicable area median income. 0% for severe repetitive loss properties.
Maximum Federal Project Assistance	Maximum amount for localized flood risk reduction projects is \$50 million.
Community Project Funding/Congressionally Directed Spending	None.
FY2022 Funding	\$800 million.
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	\$3.5 billion: \$700 million for each of FY2022-FY2026.
FY2023 Budget Request	Administration budget request of \$175 million in offsetting collections.
Action Needed to Access Program	Grant application process.
Websites	https://www.fema.gov/grants/mitigation/floods https://www.fema.gov/sites/default/files/documents/fema_fy22-fma-nof-fact-sheet_08122022.pdf

Source: CRS.

Notes: CDC SVI = Centers for Disease Control and Prevention Social Vulnerability Index; FEMA = Federal Emergency Management Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NFIP = National Flood Insurance Program.

Safeguarding Tomorrow Revolving Loan Fund Program

The newest source of hazard mitigation funding will be available through the Safeguarding Tomorrow through Ongoing Risk Mitigation Act of 2020 (STORM Act; P.L. 116-284). This law amends the Stafford Act by authorizing FEMA to enter into agreements with eligible entities to establish hazard mitigation RLFs.⁴⁷ Funds made available through the STORM Act may be used to assist homeowners, businesses, certain nonprofit organizations, and communities to reduce risk in order to decrease the loss of life and property, the cost of flood insurance, and federal disaster payments. The legislation aims to provide eligible entities with funding that will help them carry out their own hazard mitigation projects by making loans available to local governments.⁴⁸ Eligible entities include states,⁴⁹ tribal governments that have received a major disaster

⁴⁷ 42 U.S.C. §5135.

⁴⁸ U.S. Congress, Senate Committee on Homeland Security and Governmental Affairs, *Safeguarding Tomorrow Through Ongoing Risk Mitigation Act of 2020*, report to accompany S. 3418, 116th Cong., 2nd sess., S.Rept. 116-249, August 10, 2020, p. 3, at <https://www.congress.gov/congressional-report/116th-congress/senate-report/249>.

⁴⁹ The Safeguarding Tomorrow through Ongoing Risk Mitigation Act of 2020 (STORM Act; P.L. 116-284) defines

declaration during a five-year period ending on the date of enactment of the STORM Act (January 1, 2021), and insular areas.⁵⁰ Loans may not exceed an interest rate of 1%.

An RLF is a self-replenishing financial mechanism that starts with a base level of capital, often consisting of grants from the federal government or a state or private investment. RLFs can make loans targeted to specific types of borrowers or specific types of activities and are designed to use loan repayments to recapitalize the fund and make additional loans.⁵¹ Federally supported state RLFs have been operating for many years through the Clean Water State Revolving Fund, established in 1987, and the Drinking Water State Revolving Fund, established in 1996.⁵² However, the STORM Act represents the first time that such a fund has been set up to fund hazard mitigation.

The STORM Act authorized the appropriation of \$100 million annually for FY2022 and FY2023 to make grants to capitalize new revolving funds to be administered by states or insular areas. The IIJA appropriated \$500 million for the revolving loan program, with \$100 million for each of FY2022-FY2026. Following the appropriation of funding in the IIJA, FEMA is working on implementation of the Safeguarding Tomorrow RLF Program; its goal is for a program launch and notice of funding opportunity to be published toward the end of calendar year 2022.⁵³

**Table 6. FEMA: Safeguarding Tomorrow Revolving Loan Fund Program
(Safeguarding Tomorrow RLF Program)**

Purpose	The program provides capitalization grants to states, insular areas, and federally recognized tribes to establish RLFs that provide hazard mitigation assistance for local governments to reduce risks from natural hazards. Reducing these risks decreases the loss of life and property, the cost of insurance, and federal disaster payments. The RLFs will provide funding to address flood and other natural hazards.
Authorization	§205 of the Stafford Act, 42 U.S.C. §5135.
Program Trigger	The IIJA provided appropriations for the Safeguarding Tomorrow RLF Program in FY2022-FY2026.
Geographic Eligibility	States, DC, insular areas, and federally recognized tribal governments that have received a major disaster declaration during a five-year period ending on the date of enactment of the STORM Act (January 1, 2021).
Eligible Flood-Related Improvements	Eligible projects in the statute may include, but are not limited to, zoning and land use planning changes; establishment and implementation of building code enforcement; and activities that mitigate the impacts of natural hazards such as hurricanes, cyclones, floods, shoreline erosion, high water levels, and storm surges, including the construction, repair, or replacement of a nonfederal levee or other flood control structure.
Type of Federal Assistance	Grants to capitalize the RLFs

states as the 50 states, the District of Columbia, and Puerto Rico. See 42 U.S.C. §5135(m)(10).

⁵⁰ The STORM Act defines the term *insular area* to mean Guam, American Samoa, Northern Marianas, and the U.S. Virgin Islands. See 42 U.S.C. §5135(m)(5).

⁵¹ For additional information on revolving loan funds, see CRS Report R46471, *Federally Supported Projects and Programs for Wastewater, Drinking Water, and Water Supply Infrastructure*, coordinated by Jonathan L. Ramseur; and CRS In Focus IF11449, *Economic Development Revolving Loan Funds (ED-RLFs)*, by Julie M. Lawhorn.

⁵² For additional information on the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund, see CRS Report R46464, *EPA Water Infrastructure Funding in the American Recovery and Reinvestment Act of 2009*, by Jonathan L. Ramseur and Elena H. Humphreys.

⁵³ FEMA, *Safeguarding Tomorrow Revolving Loan Fund Program*, September 26, 2022, at <https://www.fema.gov/grants/mitigation/storm-rlf>.

Nonfederal Cost Share	10%; all participating entities are required to provide matching funds from nonfederal sources in an amount equal to 10% of the amount they receive for the revolving fund.
Maximum Federal Project Assistance	A single project may receive no more than \$5 million.
Community Project Funding/Congressionally Directed Spending	None.
FY2022 Funding	\$100 million from the IIJA.
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	\$500 million: \$100 million for each of FY2022-FY2026.
FY2023 Budget Request	None.
Action Needed to Access Program	Eligible entities must submit applications to FEMA including (1) project proposals comprising local government hazard mitigation projects; (2) an assessment of recurring major disaster vulnerabilities impacting the entity; (3) a description of how the entity's hazard mitigation plan has accounted for these vulnerabilities; (4) a description of how the projects conform with the hazard mitigation plan; and (5) a proposal of how to achieve resilience through regional approaches where there may be shared vulnerable areas that could be affected by a single natural disaster event.
Websites	https://www.fema.gov/grants/mitigation/storm-rlf https://www.congress.gov/congressional-report/116th-congress/senate-report/249 https://www.congress.gov/116/plaws/publ284/PLAW-116publ284.pdf

Source: CRS.

Notes: FEMA = Federal Emergency Management Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); RLF = Revolving Loan Fund; Stafford Act = Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§5121 et seq.); STORM Act = Safeguarding Tomorrow through Ongoing Risk Mitigation Act of 2020 (P.L. 116-284).

CRS Contact and Products

CRS Expert

- Diane P. Horn, Specialist in Flood Insurance and Emergency Management

Relevant CRS Products

- CRS Insight INI 1733, *Recent Funding Increases for FEMA Hazard Mitigation Assistance*, by Diane P. Horn
- CRS Report R46989, *FEMA Hazard Mitigation: A First Step Toward Climate Adaptation*, by Diane P. Horn

U.S. Army Corps of Engineers⁵⁴

USACE is the primary federal agency constructing projects to provide flood damage reduction. Its projects are primarily along rivers and coasts. For example, **Figure 3** illustrates how a USACE project may re-nourish sand to reduce coastal flood risk by widening the beach.

⁵⁴ This section was prepared by Nicole T. Carter, Specialist in Natural Resources Policy.

Although state, local, tribal, and territorial government entities maintain significant flood management responsibilities, since the early 1900s, Congress has tasked USACE with constructing many dams, levees, and other water resource projects to reduce riverine flood damages.⁵⁵ Starting in the mid-1950s, Congress also tasked USACE with undertaking coastal flood risk reduction projects consisting of engineered coastal dunes and beaches and some storm surge barriers. Nonfederal entities (e.g., municipalities, irrigation districts, county flood control entities) often share in the cost of these flood control projects.

USACE conducts its flood risk reduction studies and projects through project-specific and programmatic authorities.⁵⁶ Typically, most of this work requires the study and construction costs to be shared with a nonfederal sponsor, such as a municipality or levee district. Generally, federal involvement has been limited to projects that are determined to have national economic benefits exceeding their costs or that address a public safety concern.⁵⁷ USACE currently is reviewing and updating its policies on assessing project benefits and costs and arriving at a federal investment decision. The rate of annual federal appropriations for USACE projects has not kept pace with the rate of construction authorization for these projects; therefore, there is competition for USACE construction funds.

Table 7 and **Table 8** include information on USACE flood risk reduction projects and programs. **Table 7** provides information on projects that require Congress to specifically authorize their study and construction in legislation. For projects of a limited size and scope, Congress has provided USACE with programmatic authorities to participate in planning and construction of some projects without project-specific congressional authorization; these authorities are known as continuing authorities programs (CAPs). **Table 8** provides information on four flood-related CAPs. CAPs are known by the section of the law in which they were authorized.

⁵⁵ Prior to the lower Mississippi River flood of 1927, the federal role in flood control was limited. The federal role has expanded over the decades, often in response to catastrophic and regional flood events. Examples include construction by the U.S. Army Corps of Engineers (USACE) of levees and floodways as part of the Mississippi River and Tributaries project, which Congress authorized in 1928, and drainage structures of the Central and Southern Florida project in and around the Florida Everglades, which Congress authorized in 1948.

⁵⁶ In 2014, Congress enacted the Water Infrastructure Finance and Innovation Act (WIFIA; 33 U.S.C. §§3901 et seq.), which authorized USACE to provide credit assistance to water infrastructure projects, including riverine and coastal flood damage reduction projects. USACE has received funding for the program, but the program is not yet providing assistance. For more information, see CRS Insight IN11577, *U.S. Army Corps of Engineers Civil Works Infrastructure Financing Program (CWIFP): Status and Issues*, by Nicole T. Carter, Anna E. Normand, and Elena H. Humphreys.

⁵⁷ Congress established this policy in the Flood Control Act of 1936 (49 Stat. 1470), which states, “the Federal Government should improve or participate in the improvement of navigable waters or their tributaries including watersheds thereof, for flood control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected.”

Figure 3. Example of Beach Engineered to Reduce Flood Damages

(Ocean City, NJ, before and after engineered beach project)



Source: U.S. Army Corps of Engineers, 2012 and 2013.

Congress also authorized USACE to fund the repair of certain nonfederal flood control works (e.g., levees, dams) and federally constructed hurricane or shore protection projects that are damaged by “other than ordinary” water, wind, or wave action (e.g., storm surge rather than high tide). To be eligible for this assistance, damaged flood control works must be eligible for and active in the agency’s damage rehabilitation program, and the flood control work must have been in an acceptable condition at the time of damage according to regular inspections by USACE. Currently, 1,100 active nonfederal flood risk management systems participate in rehabilitation program. The damage rehabilitation program does not fund repairs associated with regular (i.e. ordinary) operation, maintenance, repair, and rehabilitation (i.e., rehabilitation not associated with damage).

Congress also has authorized USACE to provide credit assistance to specified eligible entities, in the form of secured or direct loans, for various types of water resource projects including reduction of riverine or coastal storm flood damage. The authority was enacted in the Water Infrastructure Finance and Innovation Act of 2014 (WIFIA 2014, Title V, Subtitle C of P.L. 113-121; 33 U.S.C. §§3901-3914, as amended). USACE’s program is called the Corps Water Infrastructure Financing Program (CWIFP). Congress first funded CWIFP to provide credit assistance in FY2021. Of the \$96.4 million in CWIFP funding through FY2022, Congress has indicated that \$81.0 million is specifically to support dam safety projects for nonfederally owned dams (based on ownership information in the National Inventory of Dams). In June 2022, USACE proposed a rule for CWIFP implementation that reflected the appropriations’ limitation of lending only to nonfederal dam safety projects.⁵⁸ USACE anticipates accepting preliminary loan applications in spring 2023 following publication of a final rule, and for the first loans to close a roughly two years later. The proposed rule indicates that nonfederal costs associated with congressionally authorized USACE projects are ineligible for CWIFP credit assistance. WIFIA 2014 also authorized an analogous program for the U.S. Environmental Protection Agency (EPA)

⁵⁸ U.S. Army Corps of Engineers, “Credit Assistance and Related Fees for Water Resources Infrastructure Projects,” 87 *Federal Register* 35473-35489, June 10, 2022.

for other types of water projects (see **Table 15** discussion of EPA’s WIFIA program for more information).

Supplemental Appropriations

USACE also has a role in responding to natural disasters, especially floods. Since the mid-2000s, Congress has regularly provided USACE with supplemental appropriations to study and construct flood control projects as part of post-disaster recovery efforts. For more than a decade, Congress has often directed that most or some of USACE disaster-related supplemental funds be used to construct new or ongoing USACE flood risk reduction projects in states and territories affected by specified disasters or for flood disasters occurring during a specified period. In addition, Congress has provided USACE with supplemental appropriations to fund flood response and recovery activities. At times, Congress also has funded USACE through broader economy- and infrastructure-related supplemental appropriations bills, such as IJA.

Congress generally has tailored USACE’s use of supplemental appropriations to reflect specific characteristics of the disaster or the economic, infrastructure, or security concern. For example, Congress also may include exemptions to requirements that typically apply to USACE projects. Such exemptions may include waiving requirements that limit USACE proceeding with projects that exceed their authorization of appropriations and waiving some required nonfederal cost sharing. In addition, Congress allowed some projects to receive disaster-related supplemental appropriations to move from a feasibility study to construction with approval of the Assistant Secretary of the Army (Civil Works)—rather than requiring project-specific congressional construction authorization—if the construction is funded using supplemental appropriations. After supplemental appropriations bills are enacted, USACE selects the specific projects to receive funding from among the qualifying projects, unless Congress has specified which projects are to be funded.

Table 7. USACE: Flood Damage Reduction Projects

Purpose	These projects are for making improvements that reduce riverine and coastal storm damages. These improvements are pursued as individual projects rather than under an authorized national program.
Authorization	Studies and project construction are individually authorized by Congress, typically in a WRDA.
Program Trigger	Authorization: Study and project construction authorizations. Appropriations: Annual or supplemental appropriations.
Geographic Eligibility	Project-specific congressional authorization determines the project’s geographic scope. USACE has constructed projects in all states, some Indian Reservations, DC, American Samoa, Guam, the Northern Marianas, Puerto Rico, and the U.S. Virgin Islands.
Eligible Flood-Related Improvements	Flood damage reduction measures, which typically consist of engineered works (e.g., levees, engineered dunes and beaches, storm surge gates, dams) but also may include natural and nature-based features and buyouts of structures. Projects historically have been required to have national benefits exceeding costs or to address public safety concerns. Projects generally are limited to those that reduce riverine flood damage and coastal storm flood damage. Projects generally do not address drainage within a community or flooding from groundwater or high tides.

Type of Federal Assistance	USACE performs a cost-shared study and manages construction, or USACE provides credit or reimbursement for the federal portion of a nonfederally led, congressionally authorized study and construction project.
Nonfederal Cost Share	<p>Study: Typically 50%.</p> <p>Construction: Typically 35%.</p> <p>Coastal Periodic Nourishment: 50%.^a</p> <p>O&M: Typically 100%, O&M is a nonfederal responsibility for most projects (some legacy projects and dams have O&M provided by USACE).</p> <p>Territories and tribes have the first ≈\$0.6 million in costs associated with studies and construction activities waived pursuant to 33 U.S.C. §2310.</p>
Maximum Federal Project Assistance	Amount depends on project-specific authorization of appropriations.
CPF/CDS	For FY2022 and FY2023 appropriations, House and Senate Appropriations Committees accepted Member requests for funding for congressionally authorized USACE studies and construction projects as part of the USACE Investigation and Construction accounts.
FY2022 Funding	<p>\$866 million for flood-related study and construction (\$143 million for coastal studies and construction, \$723 million for riverine studies and construction).^b</p> <p>(Annual appropriations typically are provided in annual Energy and Water Development appropriations acts. Division D of P.L. 117-103 added onto the budget request to include funds for CPFs/CDSs, of which \$10 million was for flood-related studies and \$119 million was for flood-related construction.</p>
FY2022 Supplemental Funding, Other Than IIJA	<p>P.L. 117-43: \$3.0 billion for flood-related construction, of which \$1.5 billion was for states affected by Hurricane Ida.</p> <p>\$130 million for flood-related studies. USACE had not assigned all of these funds to specific studies and projects as of September 2022.</p>
IIJA Funding	<p>FY2022: \$4.95 billion for flood-related construction projects, of which \$2.50 billion is for inland flood risk management and \$2.45 billion for coastal storm risk management. \$120 million for studies, including flood-related studies.</p> <p>FY2023: \$50 million for construction of coastal shore protection projects. \$30 million for flood pilot program for rural and economically disadvantaged community feasibility studies.</p> <p>FY2024: \$50 million for construction of coastal shore protection projects.</p>
FY2023 Budget Request	\$479 million for flood-related study and construction (\$25 million for coastal studies and \$454 million for riverine studies and construction). ^c
Action Needed to Access Program	<p>Congressional study or project authorization and appropriations are required, typically through a WRDA. Nonfederal project sponsors can submit proposals for WRDA authorization through §7001 annual report process. Authorizing committees also may solicit authorization proposals from Members of Congress during WRDA development.</p> <p>Once a study or project is authorized, most studies and projects require federal and nonfederal funding to proceed. The Administration can identify the study or project for federal funding in the President's budget request or in the Administration's work plan for enacted appropriations. Congress may identify studies and projects for funding through annual appropriations processes, including CPF/CDS requests.</p>

Websites

<https://www.usace.army.mil/Missions/Civil-Works/Budget/>
<http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/WRRDA-7001-Proposals/>
<http://www.iwr.usace.army.mil/Missions/Flood-Risk-Management/Flood-Risk-Management-Program/>
 To identify a USACE district: <https://www.usace.army.mil/Missions/Locations/>

Source: CRS.

Notes: Amounts shown in table do not include funding for O&M of USACE projects or funding for the study, construction, operation, maintenance, and repair of projects for the USACE's MR&T account. CPF/CDS = Community Project Funding/Congressionally Directed Spending; IJJA = Infrastructure Investment and Jobs Act (P.L. 117-58); MR&T = Mississippi River and Tributaries; O&M = Operation and Maintenance; USACE = U.S. Army Corps of Engineers; WRDA = Water Resources Development Act.

- a. For beach and dune nourishment elements of coastal storm damage reduction projects, the construction is often authorized to include regular re-nourishments (i.e., sand replenishment) over 50 years.
- b. Amount does not include \$837 million in USACE flood-related O&M spending; much of this is for existing projects that USACE owns and operates. Amount does not include \$266 million associated with the MR&T account.
- c. Amount does not include \$868 million associated with the MR&T account.

Table 8. USACE: Flood-Related Continuing Authorities Programs (CAPs)

Purpose	Under authorized CAPs, USACE may study and construct certain improvements without additional project-specific congressional authorization. CAPs are known by the section number of the law in which they were authorized. The four flood-related CAPs are for projects that <ul style="list-style-type: none"> • reduce flood damages using structural and nonstructural approaches (§205); • reduce beach erosion and hurricane storm damage (§103); • protect public works and nonprofit services affected by streambank and shoreline erosion (§14); or • mitigate shore damage from federal navigation projects (§111).
Authorization	<p>§205: 33 U.S.C. §701s</p> <p>§103: 33 U.S.C. §426g</p> <p>§14: 33 U.S.C. §701r</p> <p>§111: 33 U.S.C. §426i</p>
Program Trigger	Annual appropriations (including CPF/CDS requests); supplemental appropriations.
Geographic Eligibility	<p>§§205, 14, and 111 projects can be in U.S. states or on lands of federally recognized tribes, and the authorities have been interpreted as being open to projects in territorial possessions.</p> <p>§103 is open to projects on the shores and beaches of U.S. states, federally recognized tribes, and U.S. territories and possessions.</p>
Eligible Flood-Related Improvements	<p>Flood damage reduction measures, which typically consist of engineered works (e.g., levees, engineered dunes and beaches, storm surge gates, dams) but also may include natural and nature-based features and buyouts of structures.</p> <p>Projects generally are required to have national benefits exceeding costs or to address public safety concerns, as well as to be technically feasible and to comply with federal environmental and resource statutes.</p>
Type of Federal Assistance	USACE study and construction of cost-shared projects.

Nonfederal Cost Share	<p>Study:</p> <ul style="list-style-type: none"> • §§205, 103, and 14: 50% after first \$100,000, which is 100% federal. • §111: Same as the federal project causing the damage. <p>Construction:</p> <ul style="list-style-type: none"> • §§205, 103, and 14: 35%. • §111: Same as the federal project causing the damage. <p>Operation and Maintenance: 100%, operation and maintenance are nonfederal responsibilities.</p> <p>Waiver: Territories and tribes have the first ≈\$0.6 million in costs associated with these activities waived pursuant to 33 U.S.C. §2310.</p>
Maximum Federal Project Assistance	<p>Federal assistance for a project cannot exceed the following.</p> <ul style="list-style-type: none"> • §205: \$10.0 million • §103: \$10.0 million • §14: \$5.0 million • §111: \$10.0 million
CPF/CDS	<p>For FY2022 and FY2023 appropriations, House and Senate Appropriations Committees accepted Member requests for funding for CAP projects as part of the USACE Construction account.</p>
FY2022 Funding	<p>Annual appropriations typically are provided in annual Energy and Water Development appropriations acts. Division D of P.L. 117-103 funded CAPs at the following amounts and, of these funds, specified some for specific CPF/CDS requests.</p> <ul style="list-style-type: none"> • §205: \$10.0 million, of which \$0.5 million was for five CPF/CDS requests • §103: \$1.0 million, of which \$0.3 million was for four CPF/CDS requests • §14: \$8.0 million, of which \$2.0 million was for four CPF/CDS requests • §111: \$2.5 million, with no CPF/CDS requests
FY2022 Supplemental Funding, Other Than IIJA	<p>P.L. 117-43: Congress stipulated that USACE could allocate up to \$65.0 million of the \$3 billion provided for FY2022 construction appropriations to CAP projects for flood and storm risk reduction (at 100% federal expense if an ongoing project). As of July 2022, USACE reported no allocation of funding to CAP projects in its P.L. 117-43 spend plan.</p>
IIJA Funding	<p>Of the \$11.615 billion provided by IIJA to the USACE Construction account, IIJA indicates that \$465.0 million was for seven CAPs (not including §111) and WRDA 2020 §165(a) CAP pilot program,^a of which \$115.0 million is for certain non-flood-related CAP projects. As of October 2022, USACE reported assigning \$215.5 million of the \$465.0 million to specific CAP projects, including the following amounts for projects performed pursuant to three flood-related CAPs:</p> <ul style="list-style-type: none"> • §205: \$51.4 million across 36 projects • §103: \$12.1 million across 12 projects • §14: \$14.3 million across 38 projects
FY2023 Budget Request	<p>Administration budget request for §205 was \$1.0 million. No funding was requested for the other flood-related CAPs.</p>
Action Needed to Access Program	<p>State, tribal, or local government agency may submit to the local USACE district a written request for work under a CAP authority. USACE identifies and selects eligible projects for funding using enacted appropriations for the CAP program. Congress may identify funding for specific CAP projects through annual appropriations processes, including CPF/CDS requests.</p>

Websites

No national USACE CAP website.

USACE’s Engineering Pamphlet 1105-2-58 provides more information on USACE CAPs, at https://www.publications.usace.army.mil/Portals/76/EP_1105-2-58.pdf.

USACE district websites may provide information on initiating CAP projects; to identify a USACE district, use <https://www.usace.army.mil/Missions/Locations/>.

Source: CRS.

Notes: CPF/CDS = Community Project Funding/Congressionally Directed Spending; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); USACE = U.S. Army Corps of Engineers; WRDA = Water Resources Development Act; WRDA 2020 = Division AA of P.L. 116-260.

- a. §165(a) of WRDA 2020 authorized a pilot program for USACE to conduct 10 CAP projects at full federal expense for small or economically disadvantaged communities. In October 2022, USACE allocated \$3 million of IIJA construction funding to initiate 10 Section 165(a) CAP projects. USACE did not specify whether these 10 projects are limited to flood-related projects.

CRS Contacts and Products

CRS Experts

- Nicole T. Carter, Specialist in Natural Resources Policy
- Anna E. Normand, Analyst in Natural Resources Policy

Relevant CRS Products

- CRS Insight INI1810, *U.S. Army Corps of Engineers Civil Works: Primer and Resources*, by Anna E. Normand and Nicole T. Carter
- CRS Insight INI1723, *Infrastructure Investment and Jobs Act (IIJA) Funding for U.S. Army Corps of Engineers (USACE) Civil Works: Policy Primer*, by Nicole T. Carter and Anna E. Normand
- CRS In Focus IF11106, *Army Corps of Engineers: Continuing Authorities Programs*, by Anna E. Normand
- CRS Report R46320, *U.S. Army Corps of Engineers: Annual Appropriations Process*, by Anna E. Normand and Nicole T. Carter

U.S. Department of Agriculture⁵⁹

Congress established USDA’s role in flood control and risk reduction decades ago, as it did with USACE.⁶⁰ The general differences between the two agencies are the size, scope, location, and authorization of projects. USDA’s Natural Resources Conservation Service (NRCS) administers two programs that provide flood damage reduction—the Watershed and Flood Prevention Operations (WFPO) Program and floodplain easements within the Emergency Watershed Protection (EWP) Program.⁶¹ These programs provide assistance to states, territories, tribes, and

⁵⁹ This section was prepared by Megan Stubbs, Specialist in Agricultural Conservation and Natural Resources Policy.

⁶⁰ The Flood Control Act of 1936 (P.L. 74-738) authorized USDA to examine and survey measures of controlling runoff, soil erosion, and water flow in watersheds upstream from the rivers and tributaries under USACE’s jurisdiction. This authority was expanded in the Flood Control Act of 1944 (P.L. 78-534) and again in the Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566), which provided authority and funding for structural practices. Congress intended for USDA to conduct smaller flood control works upstream of larger USACE projects as an extension of USDA’s current on-farm conservation work. For additional information, see CRS Report R46471, *Federally Supported Projects and Programs for Wastewater, Drinking Water, and Water Supply Infrastructure*, coordinated by Jonathan L. Ramseur.

⁶¹ Emergency Watershed Protection (EWP) is an emergency recovery program that provides financial and technical assistance to project sponsors following a natural disaster. Congress amended the program in 1996 (§382, P.L. 104-127) to include the purchase of floodplain easements “in lieu of recovery.” Since then, the Natural Resources

local organizations; projects generally originate at the local level and do not require congressional approval. Annual appropriations vary greatly from year to year, resulting in a number of authorized but unfunded projects. **Table 9** and **Table 10** include information on USDA flood risk reduction and mitigation programs. **Figure 4** provides an example of an EWP floodplain easement, and **Figure 5** provides an example of a WFPO project.

Figure 4. Example of an Emergency Watershed Protection (EWP) Floodplain Easement



Source: Natural Resources Conservation Service, May 1, 2013.

Note: Floodplain easement near the Red River east of Bowsmont, ND.

Conservation Service (NRCS) has enrolled over 1,760 easements on nearly 200,000 acres. For additional information, see CRS Report R42854, *Emergency Assistance for Agricultural Land Rehabilitation*, by Megan Stubbs. NRCS also may conduct flood control activities under the Regional Conservation Partnership Program (RCPP). RCPP leverages federal funding for specific areas and resource concerns defined by project sponsors using authorities of other NRCS conservation programs, including the Watershed and Flood Prevention Operations (WFPO) Program. Watershed projects under RCPP operate similarly to WFPO projects and therefore are not included in this report. For additional information on watershed projects under RCPP, see the *FY2022 Regional Conservation Partnership Program-Classic*, Notice of Funding Opportunity, January 13, 2022, at <https://www.grants.gov/web/grants/view-opportunity.html?oppId=337340>. NRCS also administers a number of agricultural conservation programs that provide technical and financial assistance to individual producers to implement conservation measures. These measures can include flood risk reduction and erosion strategies. Because these programs are administered directly to individuals and not to state or local entities, they are not included in this report. For additional information on these programs, see CRS Report R40763, *Agricultural Conservation: A Guide to Programs*, by Megan Stubbs.

Figure 5. Example of a Watershed and Flood Prevention Operations (WFPO) Project



Source: Natural Resources Conservation Service, May 1, 2013.

Notes: Snake River diversion structure at Warren, MN. The diversion structure is one component of a larger WFPO project to address flooding. Other components (not pictured) include a four-mile floodway, 550-acre impoundment, and wetlands mitigation.

Supplemental Appropriations

Supplemental appropriations can vary from year to year for WFPO and EWP. In general, WFPO activities are appropriated funding annually through the Agriculture appropriations act.⁶² In the past, WFPO's ongoing list of authorized but unfunded projects has led to the program's inclusion in periodic infrastructure (e.g., IIFA) and economic stimulus acts (e.g., American Recovery and Reinvestment Act, P.L. 111-5) that provide the program with occasional supplemental funding. In addition to annual appropriations, WFPO is authorized to receive \$50 million annually in permanent mandatory funding.⁶³ WFPO funding is generally available until expended.

⁶² The Agriculture appropriations act is formally called the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act and funds most of USDA, except the U.S. Forest Service. Recently, the enacted FY2022 Consolidated Appropriations Act (P.L. 117-103, Division A) included a policy provision that waives WFPO's 250,000-acre project upper limit when the project's primary purpose is something other than flood prevention. This provision did not amend the WFPO authorization; therefore, it is effective only for the funds provided during the FY2022 appropriation year. For additional information on annual WFPO appropriations, see CRS Report R46971, *Agricultural Conservation: FY2022 Appropriations*, by Megan Stubbs.

⁶³ Authority for WFPO to receive mandatory funding was included in the Agriculture Improvement Act of 2018 (2018 farm bill; P.L. 115-334). For additional information on changes in the 2018 farm bill, see CRS Report R45698, *Agricultural Conservation in the 2018 Farm Bill*, by Megan Stubbs.

Unlike WFPO, EWP receives funding almost exclusively through supplemental appropriations. Most EWP funding is designated as emergency spending and occasionally includes language directing funding to a named disaster event (e.g., hurricane) or calendar year. EWP funding generally remains available until expended and does not require a disaster declaration.⁶⁴

Table 9. NRCS: Watershed and Flood Prevention Operations (WFPO)

Purpose	WFPO provides technical and financial assistance to states, territories, Indian tribes or tribal organizations, ^a and local organizations to plan and install watershed projects. WFPO originally required flood prevention and protection as a function of all projects. The program has been amended to include other water quality and water resources purposes. ^b
Authorization	The program consists of projects built under two authorities—the Watershed Prevention and Flood Protection Act of 1954 (P.L. 83-566) and the Flood Control Act of 1944 (P.L. 78-534). 33 U.S.C. §701b-1 and 16 U.S.C. §§1001-1008.
Program Trigger	Program appropriations in enacted legislation and permanently authorized mandatory funding.
Geographic Eligibility	Projects in states, Indian Reservations, DC, American Samoa, Guam, Northern Marianas, Puerto Rico, and the U.S. Virgin Islands.
Eligible Flood-Related Improvements	Eligible projects include land treatment and nonstructural and structural facilities for flood prevention and erosion reduction. Structural measures can include dams, levees, canals, and pumping stations.
Type of Federal Assistance	Partial project grants, plus provision of technical advisory services.
Nonfederal Cost Share	<p>Cost-share requirements vary by project purpose and type of cost.^c</p> <p>Flood Prevention. TA: 0%; C: 0%; P: 100%.</p> <p>Watershed Protection (including flood control). TA: 0%; C: varies (i.e., nonfederal share is up to the amount of funding required for similar practices under other NRCS conservation programs); P: 100%.</p> <p>Public Recreation and Fish and Wildlife. TA: 0%; C: up to 50%; P: up to 50%.</p> <p>Agricultural Water Management. TA: as low as 0%; C: up to 75%; P: 100%.</p> <p>Municipal and Industrial Water Supply. TA: 100%; C: up to 50%; P: 100%.</p> <p>Water Quality Management (including reservoir structures). TA: as low as 0%; C: varies (i.e., nonfederal share is set at the discretion of the Secretary of Agriculture); P: 100%.</p>
Maximum Federal Project Assistance	No project may exceed 250,000 acres, ^d and no structure may exceed more than 12,500 acre-feet of floodwater detention capacity, or 25,000 acre-feet of total capacity without congressional approval. Congressional approval is also required when a project includes an estimated federal contribution of more than \$25 million for construction or a storage structure with a capacity in excess of 2,500 acre-feet. There are no population or community income-level limits on applications for WFPO; however, at least 20% of the project's total benefit must directly relate to agriculture (including rural communities).
Community Project Funding/Congressionally Directed Spending	In FY2022 and FY2023, the Senate Appropriations Committee accepted request for funding for WFPO projects. The enacted FY2022 appropriation included \$23.3 million of Congressionally Directed Spending from the WFPO account.

⁶⁴ For additional information on EWP, see CRS Report R42854, *Emergency Assistance for Agricultural Land Rehabilitation*, by Megan Stubbs.

FY2022 Funding	<p>\$147 million total. \$100 million (discretionary), \$10 million of which is required to be allocated to projects and activities that can (1) “commence promptly”; (2) address regional priorities for flood prevention, agricultural water management, inefficient irrigation systems, fish and wildlife habitat, or watershed protection; or (3) address watershed protection projects authorized under the Flood Control Act of 1944 (P.L. 78-534).</p> <p>(Annual appropriations typically are provided in annual Agricultural and Related Agencies appropriations acts.)</p> <p>\$47 million (mandatory), authorization of \$50 million is reduced by sequestration.</p> <p>(Mandatory funding is provided annually and is permanently authorized.)</p>
FY2022 Supplemental Funding, Other Than IIJA	No supplemental appropriations.
IIJA Funding	\$500 million available in FY2022 to remain available until expended.
FY2023 Budget Request	<p>Discretionary: \$125 million</p> <p>Mandatory: \$50 million (authorization to be reduced by an unknown amount of sequestration)</p>
Action Needed to Access Program	A local project sponsor is required for all projects. The project sponsor submits a formal request for NRCS assistance, which allows NRCS to develop a preliminary investigation and feasibility report. If found feasible, the project sponsor submits a request for federal assistance. Following development of a work plan and NRCS authorization, funds for implementation are awarded as available. Congressional approval is not required unless the project meets criteria described above.
Website	https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/landscape/wfpo/

Source: CRS.

Notes: C = installation/construction; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NRCS = Natural Resources Conservation Service; P = real property rights; TA = engineering/technical assistance.

- a. This includes any Indian tribe or tribal organization, as defined in 25 U.S.C. §5304, having authority under federal, state, or Indian tribal law to carry out, maintain, and operate the works of improvement.
- b. Other improvements can include agricultural water management, public recreation development, fish and wildlife habitat development, and municipal or industrial water supplies.
- c. Local sponsors agree to operate and maintain all completed projects.
- d. The FY2022 Consolidated Appropriations Act (P.L. 117-103) temporarily waives the 250,000-acre limitation for all authorized WPF0 activities in FY2022 unless the primary purpose is flood prevention.

Table 10. NRCS: Emergency Watershed Protection (EWP)—Floodplain Easements

Purpose	Separate from the general EWP program, floodplain easements are meant to safeguard lives and property from future floods, drought, and the products of erosion through the restoration and preservation of the land’s natural values.
Authorization	33 U.S.C. §701b-1 and 16 U.S.C. §§2203-2205.
Program Trigger	Program appropriations in enacted legislation.
Geographic Eligibility	Projects in states, Indian Reservations, DC, American Samoa, Guam, Northern Marianas, Puerto Rico, and the U.S. Virgin Islands.
Eligible Flood-Related Improvements	NRCS has authority to restore and enhance floodplain function and natural values. This includes removing all structures, including buildings, within easement boundaries. Land must be within an eligible floodplain.

Type of Federal Assistance	Floodplain easements are voluntarily purchased and held by NRCS in perpetuity when in agricultural areas. In areas with residential properties, local project sponsors are required to acquire the underlying land, in fee title, after the easement closes. USDA also provides technical assistance and restoration costs.
Nonfederal Cost Share	<p>Restoration: As low as 0%.</p> <p>Building/Structure Removal: Up to 25%.</p> <p>Easement Payment: Varies, see valuation methods described below under “Maximum Federal Project Assistance.”</p>
Maximum Federal Project Assistance	Landowners receive the smallest of the following values as an easement payment: (1) a geographic area rate established by NRCS; (2) the fair-market value based on an area-wide market analysis or an appraisal completed according to the Uniform Standards of Professional Appraisal Practices; or (3) the landowner’s offer.
Community Project Funding/Congressionally Directed Spending	None. Not part of annual appropriations.
FY2022 Funding	None. Not part of annual appropriations.
FY2022 Supplemental Funding, Other Than IJJA	P.L. 117-43, Division B: general EWP program received \$275 million. Unspecified amount for floodplain easements.
IJJA Funding	General EWP program received \$300 million in FY2022 to remain available until expended. Unspecified amount for floodplain easements.
FY2023 Budget Request	Not part of annual budget requests.
Action Needed to Access Program	Participants must own the land. EWP floodplain easements generally do not require a project sponsor if on agricultural or open lands. However, a project sponsor is required for lands primarily used for residential housing. In the case of land with residential housing, NRCS will purchase a floodplain easement only as part of a larger strategy intended to minimize future flood damage. A project sponsor is required to purchase the land after structures are removed. Eligible landowners must apply through NRCS, and funds for implementation are awarded as available. Congressional approval is not required.
Website	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/

Source: CRS.

Notes: IJJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NRCS = Natural Resources Conservation Service; USDA = U.S. Department of Agriculture.

CRS Contact and Products

CRS Expert

- Megan Stubbs, Specialist in Agricultural Conservation and Natural Resources Policy

Relevant CRS Products

- CRS In Focus IFI 1990, *Infrastructure Investment and Jobs Act (IJJA): Funding for USDA Broadband, Watershed, and Bioproduct Programs*, by Lisa S. Benson, Megan Stubbs, and Kelsi Bracmort
- CRS Report R40763, *Agricultural Conservation: A Guide to Programs*, by Megan Stubbs
- CRS Report R42854, *Emergency Assistance for Agricultural Land Rehabilitation*, by Megan Stubbs
- CRS Report R46971, *Agricultural Conservation: FY2022 Appropriations*, by Megan Stubbs

National Oceanic and Atmospheric Administration⁶⁵

NOAA supports a variety of activities, including scientific research, data collection and monitoring, planning, habitat conservation and restoration, outreach and education, coastal and ocean management, and others, to address flooding, especially coastal flooding. While some of NOAA’s flood-related activities are internal to the agency, NOAA also supports the implementation of nonfederal on-the-ground projects to address flooding, primarily through the National Coastal Resilience Fund, the National Coastal Zone Management (CZM) Program, and various funding opportunities related to habitat restoration.

In 2016, Congress established the National Oceans and Coastal Security Fund (NOCSF, also known as the Title IX Fund)⁶⁶ and authorized NOAA to work with the National Fish and Wildlife Foundation (NFWF) to “better understand and utilize ocean and coastal resources and coastal infrastructure, including baseline scientific research, ocean observing, and other programs and activities carried out in coordination with Federal and State departments or agencies.”⁶⁷ In 2018, NOAA and NFWF created the National Coastal Resilience Fund (NCRF) to meet that law’s requirements. The fund provides grants to nonfederal entities to create, expand, and restore natural systems in areas that will (1) increase protection for communities from coastal storms, sea and lake level changes, flooding, and/or coastal erosion; and (2) improve valuable habitats for fish and wildlife species. As described in **Table 11**, the program funds community capacity building and planning, site assessment and preliminary design, final design and permitting, and restoration and monitoring.⁶⁸ Congress has provided funding to NOAA for NOCSF; other federal agencies, such as the Department of Defense and the Environmental Protection Agency (EPA), and nonfederal partners also have provided funding to NFWF for NCRF.

Congress also authorized the Secretary of Commerce, through NOAA, to provide technical and financial assistance to eligible states and territories for coastal resilience activities.⁶⁹ For example, NOAA provides CZM grants through authorities established in the Coastal Zone Management Act of 1972, as amended (CZMA). (See box titled “Coastal Zone Management Act” for more information on CZMA.) Congress historically has funded these grant programs through annual appropriations. NOAA has allocated funding to states and territories for activities such as protecting and restoring coastal habitat, mitigating coastal hazards, and conducting ocean and coastal planning, among other actions.⁷⁰ States and territories may then disburse a portion of this

⁶⁵ This section was prepared by Eva Lipiec, Analyst in Natural Resources Policy.

⁶⁶ Congress has referred to the National Oceans and Coastal Security Fund as the Title IX Fund in some explanatory statements accompanying appropriations bills (e.g., U.S. Congress, House Committee on Appropriations, *Committee Print on H.R. 1158/P.L. 116-93 (Legislative Text and Explanatory Statement)*, committee print, 116th Cong., 2nd sess., January 2020, H.Prt. 38-678, p. 508).

⁶⁷ P.L. 114-113, 16 U.S.C. §§7501-7507. Congress established the National Fish and Wildlife Foundation (NFWF; 16 U.S.C. §§3701-3710) as a charitable and nonprofit corporation to further the conservation of fish, wildlife, plants, and other natural resources. For more information, see CRS Report R44740, *National Fish and Wildlife Foundation (NFWF): History, Function, and Funding*, by R. Eliot Crafton.

⁶⁸ NFWF, “National Coastal Resilience Fund,” fact sheet, November 2021, at <https://www.nfwf.org/sites/default/files/2021-11/NFWFncrf20211117FSfinal.pdf>.

⁶⁹ P.L. 92-532; 16 U.S.C. §§1451-1464. 16 U.S.C. §1453(4) defines *coastal state* as “a state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean; the Gulf of Mexico; Long Island Sound; or one or more of the Great Lakes.... The term also includes Puerto Rico, the U.S. Virgin Islands, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territories of the Pacific Islands, and American Samoa.”

⁷⁰ NOAA, “NOAA’s National Coastal Zone Management Program,” at <https://coast.noaa.gov/data/czm/media/funding-summary.pdf>, and NOAA, “About the National Coastal Zone Management Program,” at <https://coast.noaa.gov/czm/about/>.

funding to nonfederal entities through competitive grant opportunities. **Table 12** includes information about CZM grants.

Coastal Zone Management Act

In 1972, Congress enacted the Coastal Zone Management Act of 1972 (CZMA; P.L. 92-532, 16 U.S.C. §§1451-1464) as there was “national interest in the effective management, beneficial use, protection, and development of the coastal zone.” CZMA recognizes that states (and, in some states, local governments) have the lead responsibility for planning and managing their coastal zones. Under CZMA, the Secretary of Commerce approves coastal zone management programs developed by coastal states and U.S. territories. Thirty states and five territories are eligible to participate in the National Coastal Zone Management Program under CZMA. One eligible entity (Alaska) is not participating. States and territories have developed widely varying programs that emphasize different elements of coastal management. Secretarial approval of the programs provides some benefits to the states and territories, including funding for coastal zone planning and projects and the ability to review, and potentially alter, federal activities that may affect their coastal uses or resources. CZMA grants can be used for CZMA-defined coastal zone objectives, including managing the effects of sea level rise and reducing threats to life and property. For more information, see CRS Report R45460, *Coastal Zone Management Act (CZMA): Overview and Issues for Congress*, by Eva Lipiec.

Supplemental Appropriations

In recent years, Congress has provided additional funding to NOAA through supplemental appropriations acts, such as those passed after destructive hurricanes or for other purposes. Examples include IJA and P.L. 117-169, which is commonly referred to as the Inflation Reduction Act of 2022 (IRA 2022).

IJA provided additional funding and direction for the existing NOCSF and established a new CZM grant program, the Coastal Zone Management Habitat Protection and Restoration IJA Competition.⁷¹ **Table 11** and **Table 12** provide more information about these two grant programs. Additionally, in IJA, Congress appropriated funds for NOAA to establish two funding opportunities to support its habitat restoration and coastal resilience goals—Transformational Habitat Restoration and Coastal Resilience Grants and Coastal Habitat Restoration and Resilience Grants for Underserved Communities (see **Table 13** for more information).⁷²

In IRA 2022 (as shown in **Table 2**), Congress provided NOAA with \$2.6 billion to “enable coastal communities to prepare for extreme storms and other changing climate conditions,” among other activities;⁷³ Congress did not specify a specific NOAA program when providing these funds. NOAA has not released information on financial assistance opportunities related to the IRA 2022 funding.

Table 11. NOAA and NFWF: National Coastal Resilience Fund (NCRF)

Purpose	The program supports planning, design, and restoration of natural and nature-based solutions to help protect coastal communities from the impacts of storms, floods, and other natural hazards and to enable them to recover quickly and enhance habitats for fish and wildlife.
Authorization	National Oceans and Coastal Security Act (P.L. 114-113, 16 U.S.C. §§7501-7507) and IJA (P.L. 117-58).

⁷¹ NOAA, “Coastal Zone Management,” at <https://www.noaa.gov/infrastructure-law/infrastructure-law-climate-ready-coasts/coastal-zone-management>.

⁷² NOAA, “Habitat Restoration,” at <https://www.noaa.gov/infrastructure-law/infrastructure-law-climate-ready-coasts/habitat-restoration>.

⁷³ P.L. 117-169, §40001.

Program Trigger	Annual or supplemental appropriations to NOAA. Program is administered by NFWF.
Geographic Eligibility	Projects must be located within coastal areas of the United States and certain territories (Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and Northern Marianas). For the purpose of this funding opportunity, the eligible project area is defined as all coastal Hydrologic Unit Code (HUC) 8 watersheds that drain to the sea and any adjacent HUC 8 watersheds that are particularly low-lying or tidally influenced. States bordering the Great Lakes are considered coastal states.
Eligible Flood-Related Improvements	Nonfederal community capacity building and planning, site assessment and preliminary design, final design and permitting, and implementation and monitoring. Projects must show clear benefits in reducing current and projected threats to communities from coastal hazards including, but not limited to, sea level rise, lake level change, coastal erosion, increased frequency and intensity of storms, and impacts from other chronic or episodic factors (e.g., nuisance flooding during high tides).
Type of Federal Assistance	Cooperative agreements.
Nonfederal Cost Share	Nonfederal match is encouraged but not required. Proposals that offer a higher match ratio with contributions from nonfederal sources are expected to be more competitive during review of proposals.
Maximum Federal Project Assistance	No maximum limit on the award amount.
Community Project Funding/Congressionally Directed Spending	Not applicable.
FY2022 Funding	\$34 million (expiring at the end of FY2023).
FY2022 Supplemental Funding, Other Than IIJA	\$25 million.
IIJA Funding	FY2022 through FY2026: \$98.4 million per year (expiring at the end of the following fiscal year, e.g. FY2022 funds expiring at the end of FY2023).
FY2023 Budget Request	\$0 ^a
Action Needed to Access Program	Proposal from an eligible entity, including nonprofit 501(c) organizations, state and territorial government agencies, local governments, municipal governments, tribal governments, educational institutions, or commercial (for-profit) organizations. Tribal governments include all Indian tribal governments (i.e., federally recognized tribes and those tribes that are not federally recognized).
Website	https://www.nfwf.org/programs/national-coastal-resilience-fund

Source: NFWF, *National Coastal Resilience Fund, 2022 Request for Proposals*, at https://www.nfwf.org/sites/default/files/2022-03/2022_NCRF_RFP.pdf.

Notes: IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NFWF = National Fish and Wildlife Foundation; NOAA = National Oceanic and Atmospheric Administration.

- a. According to NOAA's FY2023 budget request, NOAA proposes to terminate agency funding for the program and will maintain its partnership with NFWF using IIJA funds (NOAA, *Budget Estimates: Fiscal Year 2023*, p. NOS-68, at <https://www.noaa.gov/sites/default/files/2022-04/NOAAFY23CJ.pdf>).

Table 12. NOAA: Coastal Zone Management (CZM)
(Annual CZM Grants and Coastal Zone Management Habitat Protection and Restoration IIJA Competition)

Purpose	<p>CZM federal assistance is broadly for supporting effective management, beneficial use, protection, and development of the coastal zone.</p> <p>IIJA specified that the IIJA assistance be for protecting and restoring ecologically significant habitats within the coastal zone, including conserving lands that protect coastal habitat or lands that play a critical role in helping coastal communities build resilience to storms, flooding, inundation, erosion, tsunamis, sea level rise and lake level changes, and other climate-related hazards affecting U.S. coastlines.</p>
Authorization	Coastal Zone Management Act, as amended (16 U.S.C. §§1451 et seq.) and IIJA (P.L. 117-58).
Program Trigger	Annual and supplemental appropriations.
Geographic Eligibility	<p>Annual: Coastal states and territories with NOAA-approved CZM programs. <i>Coastal states</i> are defined as a state of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean; the Gulf of Mexico; Long Island Sound; or one or more of the Great Lakes. The term also includes Puerto Rico, the U.S. Virgin Islands, Guam, Northern Marianas, and American Samoa.</p> <p>IIJA: Coastal states and territories with NOAA-approved CZM programs. NOAA will prioritize the geographic distribution of funding.</p> <p>For CZM grants, tribal entities are not eligible as applicants but can receive assistance through states and territories. DC is not eligible.</p>
Eligible Flood-Related Improvements	<p>Annual: States and territories may support activities under several categories, including habitat conservation and restoration, redevelopment of urban waterfronts and ports, and prevention or reduction of threats to life and destruction of property, among others.</p> <p>IIJA: Habitat restoration and land conservation projects that are “shovel ready” or reasonably advanced in the acquisition due diligence process, as well as habitat restoration planning, engineering, and design projects that will create a pipeline of future projects. Proposals that include on-the-ground implementation will be given priority compared with those that include only pre-implementation activities.</p>
Type of Federal Assistance	<p>Annual: Formula-based and competitive grants.</p> <p>IIJA: Competitive grants or cooperative agreements.</p>
Nonfederal Cost Share	<p>Annual: None or 1:1 match requirement, depending on the CZM grant program and annual appropriations legislation.</p> <p>IIJA: No nonfederal matching requirement. Applicants are strongly encouraged to combine NOAA funding with formal matching contributions or informal leverage from a broad range of sources in the public and private sectors to implement restoration. Such cost sharing is an element considered in the evaluation criteria.</p>
Maximum Federal Project Assistance	<p>Annual: Each year NOAA uses a formula to determine how much each participating state is to receive for the various CZM grant opportunities and recommends amounts for underlying project activities (e.g., for Section 306A projects, NOAA recommends up to \$200,000 for coastal preservation, restoration, redevelopment, access and coordination; and up to \$1 million for land acquisition).</p> <p>IIJA: \$6 million.</p>
Community Project Funding/Congressionally Directed Spending	Not applicable.

FY2022 Funding	Annual: \$79 million (expiring at the end of FY2023).
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	FY2022 through FY2026: \$41.4 million per year; for FY2022, \$35 million of this amount is allocated to grants (expiring at the end of the following fiscal year, e.g. FY2022 funds expiring at the end of FY2023).
FY2023 Budget Request	Annual: \$78.5 million.
Action Needed to Access Program	Annual: Approved CZM program and satisfactory progress in implementing program. IIJA: Letter of intent and proposal from an approved coastal state or territorial CZM program.
Websites	https://coast.noaa.gov/czm/guidance/ https://www.grants.gov/web/grants/view-opportunity.html?oppId=341538

Source: NOAA Office for Coastal Management, National Coastal Zone Management Program: Coastal Management Program Guidance,” at <https://coast.noaa.gov/czm/guidance/>; and Grants.gov, “Coastal Zone Management (CZM) Habitat Protection and Restoration IIJA Competition,” at <https://www.grants.gov/web/grants/view-opportunity.html?oppId=341538>; and 16 U.S.C. §§1451 et seq.

Notes: IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NOAA = National Oceanic and Atmospheric Administration.

Table 13. NOAA: IIJA Habitat Restoration

(Transformational Habitat Restoration and Coastal Resilience Grants and Coastal Habitat Restoration and Resilience Grants for Underserved Communities)

Purpose	Transformational assistance is for supporting projects that restore marine, estuarine, coastal, or Great Lakes ecosystems, using approaches that enhance community and ecosystem resilience to climate hazards. Assistance for underserved communities supports opportunities for underserved communities, tribes, and/or tribal entities to engage meaningfully in coastal habitat restoration activities.
Authorization	Fish and Wildlife Coordination Act (16 U.S.C. §661); Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (16 U.S.C. §1891a); Endangered Species Act (16 U.S.C. §1535); and IIJA (P.L. 117-58).
Program Trigger	Annual or supplemental appropriations.
Geographic Eligibility	Projects must be located within the coastal areas of U.S. coastal states, including the Great Lakes states, and certain territories (Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, and Northern Marianas). <i>Coastal areas</i> are defined as those within coastal shoreline counties (or parishes) or within coastal watershed counties (or parishes). Coastal shoreline counties are directly adjacent to the open ocean, estuaries, or the Great Lakes. Coastal watershed counties are located along inland rivers and streams with a significant impact on coastal and ocean resources.

Eligible Flood-Related Improvements	<p>Transformational: Planning and assessments, feasibility studies, engineering design and permitting, on-the-ground implementation, pre- and/or post-implementation monitoring, or any combination of phases thereof. Proposals that include on-the-ground implementation will be given priority compared with those that include only pre-implementation activities.</p> <p>Underserved: Capacity building, including participation in municipal or regional-scale resilience planning, project planning and feasibility studies, stakeholder engagement, proposal development for future funding, and outreach and education. Restoration project activities, including engineering and design, permitting, on-the-ground restoration, and pre- and post-project implementation monitoring.</p>
Type of Federal Assistance	Cooperative agreements.
Nonfederal Cost Share	<p>No nonfederal matching required; NOAA encourages cost-shared partnerships among government, community, industry, and academia.</p> <p>Transformational: Cost sharing is an element considered within the evaluation criteria.</p>
Maximum Federal Project Assistance	<p>Transformational: \$15 million total for the entire award.</p> <p>Underserved: \$1 million for the entire award.</p>
Community Project Funding/Congressionally Directed Spending	Not applicable.
FY2022 Funding	None.
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	<p>FY2022 through FY2026: Total of \$98.2 million per year (expiring at the end of the following fiscal year, e.g. FY2022 funds expiring at the end of FY2023).</p> <p>FY2022 Transformational: \$85 million.</p> <p>FY2022 Underserved: \$10 million.</p>
FY2023 Budget Request	None.
Action Needed to Access Program	<p>Transformational: Proposal from an eligible applicant, including institutions of higher education; nonprofits; commercial (for-profit) organizations; U.S. territories; and state, local, and Native American tribal governments.</p> <p>Underserved: Proposal from an eligible applicant, including institutions of higher education; nonprofit organizations; commercial (for-profit) organizations; U.S. territories; and state, local, or tribal governments that can demonstrate status as an underserved community, or that partner with underserved communities or tribes or tribal entities, in coastal areas. <i>Underserved communities</i> are defined as populations sharing a particular characteristic, as well as geographic communities that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life. Underserved communities are defined in Executive Order 13985.</p>
Websites	<p>https://www.fisheries.noaa.gov/feature-story/two-habitat-restoration-and-coastal-resilience-funding-opportunities-open-under</p> <p>https://www.grants.gov/web/grants/view-opportunity.html?oppld=341530</p> <p>https://www.grants.gov/web/grants/view-opportunity.html?oppld=341531</p>

Sources: NOAA, “Habitat Restoration,” at <https://www.noaa.gov/infrastructure-law/infrastructure-law-climate-ready-coasts/habitat-restoration>; Grants.gov, “FY2022 NOAA’s Transformational Habitat Restoration and Coastal Resilience Grants Under the IIJA,” at <https://www.grants.gov/web/grants/view-opportunity.html?oppld=341530>; and Grants.gov, “FY22 Coastal Habitat Restoration and Resilience Grants for Underserved Communities, Under the IIJA,” at <https://www.grants.gov/web/grants/view-opportunity.html?oppld=341531>.

Notes: IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); NOAA = National Oceanic and Atmospheric Administration.

CRS Contact and Products

CRS Expert

- Eva Lipiec, Analyst in Natural Resources Policy

Relevant CRS Products

- CRS Report R45460, *Coastal Zone Management Act (CZMA): Overview and Issues for Congress*, by Eva Lipiec
- CRS Report R46145, *Nature-Based Infrastructure: NOAA's Role*, by Eva Lipiec

Environmental Protection Agency⁷⁴

EPA's principal role in stormwater management is regulatory, consisting primarily of a discharge permit program under the Clean Water Act (CWA; 33 U.S.C. §1342). Although EPA's financial role in direct flood risk reduction historically has been limited, several EPA programs support stormwater infrastructure projects, which likely would help reduce flood risk to some degree.

To date, the primary avenue for EPA assistance for stormwater infrastructure has been through the Clean Water State Revolving Fund (CWSRF) program (see **Table 14**).⁷⁵ Each state implements its own CWSRF program, which may support a range of projects and activities; this results in variations in program implementation from state to state. Historically, the majority of CWSRF projects and funding have supported wastewater infrastructure activities, such as construction of sewage treatment plants or related equipment, but interest and support for stormwater projects has increased in recent years.⁷⁶ Pursuant to changes made in 2014 (P.L. 113-121), stormwater management became one of multiple eligible categories of activities for CWSRF loans and other assistance. However, the selection of CWSRF projects for assistance remains prioritized on meeting the pollution-prevention objectives of the CWA.⁷⁷

EPA's Water Infrastructure Finance and Innovation Act program also may provide a source of financial assistance for water infrastructure, which may include stormwater-related activities. As described in **Table 15**, P.L. 113-121 (Title V, Subtitle C) established the WIFIA program; it authorized EPA to provide credit assistance (e.g., direct loans) for a range of wastewater and drinking water projects.⁷⁸ In general, project costs must be \$20 million or more to be eligible for

⁷⁴ This section was prepared by Jonathan L. Ramseur, Specialist in Environmental Policy.

⁷⁵ For additional information, see CRS Report R44963, *Wastewater Infrastructure: Overview, Funding, and Legislative Developments*, by Jonathan L. Ramseur.

⁷⁶ EPA collects data from the Clean Water State Revolving Fund (CWSRF) programs, which allows for an assessment of how and for what purposes the funds have been spent over time. The database indicates that in 2001, stormwater projects accounted for 0.6% of the cumulative funding provided by CWSRF programs. In 2021, that percentage increased to 1.8%. See EPA, "National Information Management System Performance Reports," February 2022, at <https://www.epa.gov/cwsrf/clean-water-state-revolving-fund-cwsrf-results#per>.

⁷⁷ All funds in the CWSRF resulting from federal capitalization grants are first to be used to assure maintenance of progress toward compliance with enforceable deadlines, goals, and requirements of the Clean Water Act (33 U.S.C. §1382(b)(5)).

⁷⁸ For more information, see CRS Report R43315, *Water Infrastructure Financing: The Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Jonathan L. Ramseur and Mary Tiemann.

WIFIA credit assistance and WIFIA loan assistance is generally limited to 49% of eligible costs.⁷⁹ EPA issued its first WIFIA loan in 2018.⁸⁰

In addition, the Sewer Overflow and Stormwater Reuse Municipal Grants Program may play a role in reducing flood risk by supporting stormwater infrastructure projects. In 2018, the America’s Water Infrastructure Act of 2018 (AWIA; P.L. 115-270) amended a grant program in CWA Section 221 that was established in 2000 (P.L. 106-554). AWIA modified the program’s eligibility provisions to include stormwater infrastructure and reauthorized appropriations for the grant program for \$225 million for each of FY2019 and FY2020. In 2021, IJA reauthorized appropriations for \$280 million annually for FY2022-FY2026. Under this program, EPA is to provide grants to states, which will provide sub-awards to eligible entities. The grants to states will be allocated based on a formula prepared by EPA.⁸¹ This program first received appropriations in FY2020 (\$28 million) and continued to receive appropriations in subsequent years (\$40 million in FY2021 and \$43 million in FY2022). For FY2023, the President requested \$280 million for the Sewer Overflow and Stormwater Reuse Municipal Grants Program. As of the date of this report, EPA had not issued any grants for this program.⁸²

Table 14. EPA: Clean Water State Revolving Fund (CWSRF)

Purpose	The program provides financial assistance through state-administered CWSRF programs, supporting wastewater infrastructure and other eligible projects and activities, including stormwater infrastructure. States must use CWSRF monies first to ensure compliance with CWA deadlines, goals, and requirements.
Authorization	CWA, as amended, §§601-607; 33 U.S.C. §§1381-1387. Regulations are codified at 40 C.F.R. §35.3100.
Program Trigger	Annual project selection at state level.
Geographic Eligibility	CWSRF programs operate in 50 states and Puerto Rico. Through a separate process, EPA provides direct grants for DC, the U.S. Virgin Islands, American Samoa, Guam, and the Northern Marianas. EPA also provides direct grants to Indian tribes (33 U.S.C. §1377). The funding for DC, U.S. territories, and Indian tribes is part of the CWSRF appropriation to EPA.
Eligible Flood-Related Improvements	CWSRF programs may support the construction of publicly owned facilities for stormwater management and for measures that would reduce stormwater (e.g., green infrastructure). Eligible projects include measures to manage, reduce, treat, or recapture stormwater, including those that may provide flood resilience and risk reduction benefits.

⁷⁹ The Water Infrastructure Finance and Innovation Act of 2014 (WIFIA) authorized EPA to make available up to 25% of available funds each year for credit assistance in excess of 49% of project costs. Except for certain projects in rural areas, the total amount of federal assistance (i.e., WIFIA and other sources combined) may not exceed 80% of a project’s cost. In rural areas (defined as populations of 25,000 or less), project costs must be \$5 million or more.

⁸⁰ For more information, see EPA’s WIFIA website at <https://www.epa.gov/wifia>.

⁸¹ EPA, “State Formula Allocations for Sewer Overflow and Stormwater Reuse Grants,” 86 *Federal Register* 11287, February 24, 2021, at <https://www.federalregister.gov/documents/2021/02/24/2021-03756/state-formula-allocations-for-sewer-overflow-and-stormwater-reuse-grants>.

⁸² For more up-to-date information, see EPA, “Sewer Overflow and Stormwater Reuse Municipal Grants Program,” at <https://www.epa.gov/cwsrf/sewer-overflow-and-stormwater-reuse-municipal-grants-program>.

Type of Federal Assistance	EPA provides grants to states to capitalize their CWSRFs. States, in turn, provide financial assistance to eligible entities. This financial assistance includes direct loans and loan guarantees, debt purchase or refinance, and other instruments. Under certain conditions, states also may provide “additional subsidization”—such as principal forgiveness, negative interest loans, or a combination—to eligible entities that meet the state’s affordability criteria and for particular projects, including mitigation of stormwater runoff. IIJA amended the CWA to direct states to use at least 10% of their capitalization grants for this additional subsidization.
Nonfederal Cost Share	Most assistance is for loans that have to be 100% repaid to the state CWSRF.
Maximum Federal Project Assistance	Not specified.
Community Project Funding/Congressionally Directed Spending	P.L. 117-103 set aside 27% (\$443.6 million) of the FY2022 CWSRF appropriation (\$1.639 billion) for Community Project Funding/Congressionally Directed Spending. Such funds will be distributed directly to recipients instead of to states’ CWSRF programs.
FY2022 Funding	\$1.195 billion to EPA, which awards grants to states to support their CWSRF programs; states are to provide a 20% match for those funds. Federal funds are distributed by formula to the CWSRF programs. States must use 49% of these funds as loan principal forgiveness or grants. (Annual appropriations typically are provided in annual Interior, Environment, and Related Agencies appropriations acts.)
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	\$1.902 billion in FY2022 to EPA, which awards grants to states to support their CWSRF programs; states are to provide a 10% match for those funds. IIJA provided supplemental appropriations for similar purposes annually for FY2023-FY2026. See CRS Report R46892, <i>Infrastructure Investment and Jobs Act (IIJA): Drinking Water and Wastewater Infrastructure</i> , by Elena H. Humphreys and Jonathan L. Ramseur.
FY2023 Budget Request	\$1.639 billion
Action Needed to Access Program	Eligible entities, which include public, private, or nonprofit entities in the case of stormwater, apply for loans or other funding mechanisms through their relevant state agency.
Website	https://www.epa.gov/cwsrf

Source: CRS.

Notes: CWA = Clean Water Act (33 U.S.C. §1342); EPA = Environmental Protection Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58).

Table 15. EPA:Water Infrastructure Finance and Innovation Act (WIFIA)

Purpose	The program helps finance water infrastructure projects, including projects to build and upgrade wastewater and drinking water treatment systems. WIFIA provides credit assistance to large water projects that otherwise may have difficulty obtaining financing.
Authorization	Water Resources Reform and Development Act of 2014, Title V, codified in 33 U.S.C. §§3901-3914. America’s Water Infrastructure Act of 2018, Title IV, included additional authorization. Regulations are codified at 40 C.F.R. §35.10000.
Program Trigger	Credit assistance awarded by EPA on a competitive basis.
Geographic Eligibility	Projects in 50 states, DC, Indian lands, and U.S. territories.

Eligible Flood-Related Improvements	Eligible projects include all categories eligible for CWSRF assistance, including measures to manage, reduce, treat, or recapture stormwater, which may provide flood resilience and risk reduction benefits.
Type of Federal Assistance	Credit assistance, which to date has involved direct loans.
Nonfederal Cost Share	Most assistance is for loans that have to be 100% repaid.
Maximum Federal Project Assistance	No maximum cost per project, but loan amounts generally are limited to 49% of eligible project cost; total amount of federal assistance (i.e., WIFIA and other federal sources) may not exceed 80% of total project cost.
Community Project Funding/Congressionally Directed Spending	None.
FY2022 Funding	\$63.5 million to cover subsidy costs, which EPA estimates could support \$5.5 billion in direct loans; and \$6 million for administrative costs.
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	Not applicable.
FY2023 Budget Request	\$70.1 million to cover subsidy costs and \$8.2 million for administrative costs.
Action Needed to Access Program	Eligible entities submit letters of interest to EPA when EPA announces funding availability in a <i>Federal Register</i> notice.
Website	https://www.epa.gov/wifia

Source: CRS.

Notes: EPA = Environmental Protection Agency; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58); CWSRF = Clean Water State Revolving Fund.

CRS Contact and Products

CRS Expert

- Jonathan Ramseur, Specialist in Environmental Policy

Relevant CRS Products

- CRS Report R46471, *Federally Supported Projects and Programs for Wastewater, Drinking Water, and Water Supply Infrastructure*, coordinated by Jonathan L. Ramseur
- CRS Report R43315, *Water Infrastructure Financing: The Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Jonathan L. Ramseur, Mary Tiemann, and Elena H. Humphreys
- CRS In Focus IF12103, *U.S. Environmental Protection Agency (EPA) Water Infrastructure Programs and FY2022 Appropriations*, by Elena H. Humphreys and Jonathan L. Ramseur
- CRS Report R46892, *Infrastructure Investment and Jobs Act (IIJA): Drinking Water and Wastewater Infrastructure*, by Elena H. Humphreys and Jonathan L. Ramseur
- CRS Report RL31073, *Allocation of Wastewater Treatment Assistance: Formula and Other Changes*, by Jonathan L. Ramseur

Department of Housing and Urban Development⁸³

Community Development Block Grants

The HUD-administered Community Development Block Grant (CDBG) program is a broad program that, among its various activities, may support some flood resilience and risk reduction

⁸³ This section was prepared by Joseph V. Jaroscak, Analyst in Economic Development Policy.

investments. Under CDBG, public works is one of multiple eligible categories of activities; flood resilience improvements may qualify as public works under CDBG, as shown in **Table 16**. Other eligible activities that may qualify for CDBG assistance and benefit state and local flood resilience are buyouts of damaged properties in a floodplain and relocation of residents to safer areas. Due to the nature of the block-grant program, local and state officials exercise discretion in determining which combination of eligible activities to employ.

Section 108 Loan Guarantees

The Section 108 Loan Guarantee Program (Section 108) enables CDBG entitlement communities,⁸⁴ insular areas, and states (on behalf of non-entitlement communities) to leverage their annual CDBG allocations for private financing with a “full faith and credit” guarantee by the federal government. Typically, the qualified loan amount is five times greater than a CDBG grantee’s annual allocation (minus any outstanding loan balances), which allows borrowers to maximize program funds for projects that would not necessarily be feasible within a given CDBG program year. All eligible activities must meet one of the three national objectives of the conventional CDBG program: principally benefit low- and moderate-income (LMI) persons; aid in eliminating or preventing slums or blight; or address an imminent threat to the health or safety of residents.

As is the case with CDBG program funds, 70% of a borrower’s Section 108 loan funds must meet the objective of principally benefitting LMI persons or areas.⁸⁵ Section 108 activities also must comply with program requirements outlined in 24 C.F.R. §570 Subpart M, as well as with CDBG rules and crosscutting federal regulations (e.g., Davis-Bacon Act; 40 U.S.C. §§3141-3148).⁸⁶ Section 108 eligible activities are broadly consistent with the CDBG program. **Table 17** provides information on the Section 108 program.

Supplemental Appropriations

Unlike CDBG, the CDBG-Disaster Recovery (CDBG-DR) program for disaster relief, mitigation, and recovery activities is not an annually funded HUD program. Instead, Congress has funded CDBG-DR through supplemental appropriations legislation, and the funds are tied to specific disasters or set of disasters, and the areas they affect.⁸⁷ The CDBG-DR program is designed to help communities and neighborhoods that otherwise might not recover after a disaster due to limited resources. Eligible grantees typically include states; units of general local government, such as municipalities or counties; and Indian tribes affected by a covered disaster.

Congress has provided more than \$95 billion in supplemental appropriations since 1992 for CDBG-DR. CDBG-DR has become one of the federal government’s principal instruments in support of long-term economic recovery following human-made or natural disasters, such as

⁸⁴ Community Development Block Grant (CDBG) entitlement communities are defined as (1) principal cities of metropolitan statistical areas; (2) other metropolitan cities with populations of 50,000 or greater; and (3) urban counties with populations of 200,000 or greater (excluding entitlement city populations).

⁸⁵ Typically, *low and moderate income* under CDBG is defined as a family or household income at or below 80% of the area median income.

⁸⁶ For more on the Davis-Bacon Act (40 U.S.C. §§ 3141-3148), see CRS In Focus IF11927, *Federally Funded Construction and the Payment of Locally Prevailing Wages*, by David H. Bradley and Jon O. Shimabukuro.

⁸⁷ See CRS Report R46475, *The Community Development Block Grant’s Disaster Recovery (CDBG-DR) Component: Background and Issues*, by Joseph V. Jaroscak.

floods.⁸⁸ Generally, CDBG-DR grantees must use at least 70% of the funds for activities that principally benefit LMI persons or areas, unless Congress enacts language that allows HUD to waive this LMI targeting requirement. **Table 18** provides information on the CDBG-DR program.

Funding Specifically for Mitigation and Resilience Activities

In recent supplemental appropriations, Congress has used other terms to describe CDBG-DR-type packages to emphasize unique or special purposes. For example, in February 2018, Congress appropriated funds for hazard mitigation activities as part of a larger supplemental appropriation of CDBG-DR funding (P.L. 115-123). This source of targeted funding has come to be known as CDBG-MIT.⁸⁹

Table 16. HUD: Community Development Block Grant (CDBG)

Purpose	Program funds must be used to address one of three national objectives that (1) principally benefit low- or moderate-income persons, (2) aid in eliminating or preventing slums or blight, or (3) address an imminent threat to the health or safety of residents.
Authorization	42 U.S.C. §§5301 et seq.
Program Trigger	Annual appropriations. Formula-based grant.
Geographic Eligibility	Projects in states, DC, American Samoa, Guam, Northern Marianas, Puerto Rico, and the U.S. Virgin Islands. ^a
Eligible Flood-Related Improvements	The block grant nature of the program allows state and local government grant recipients to undertake various eligible activities, including open space acquisition; construction, repair, replacement, or relocation of public facilities; and improvements such as dams and levees.
Type of Federal Assistance	Formula-based block grants with 30% of appropriated funds allocated to states and Puerto Rico for distribution to small communities and 70% of appropriated funds allocated to metropolitan-based cities with populations of 50,000 or more and urban counties with populations of 200,000 or more. Funds also are allocated under a separate formula to the insular areas of American Samoa, Guam, Northern Marianas, and the U.S. Virgin Islands. Indian tribes may compete for funds under a separate competitively awarded CDBG for Indian tribes.
Nonfederal Cost Share	No matching funds required. Program funds may be used to meet the nonfederal matching fund requirement of other federal grant programs.
Maximum Federal Project Assistance	Not specified. Grantees may use CDBG directly to fund mitigation activities such as buyouts.
Community Project Funding/Congressionally Directed Spending	For FY2022 and FY2023 appropriations, House and Senate Appropriations Committees accepted Member requests for funding for congressionally authorized community and economic development projects under the Economic Development Initiative, in the Community Development Fund. Eligible activities include facilities site planning and preparation; facilities construction, renovation, rehabilitation, or purchase; and development or improvement of parks or other public spaces.

⁸⁸ U.S. Department of Housing and Urban Development, *CDBG Disaster Recovery Grant History 1992-2022*, July 1, 2022, at <https://www.hud.gov/sites/dfiles/CPD/documents/CDBG-DR/CDBG-DR-Grant-History-2022-07.pdf>.

⁸⁹ See CRS In Focus IF11814, *Disaster Resilience Investments: Community Development Block Grant Authorities for Mitigation (CDBG-MIT)*, by Joseph V. Jaroscak, for information on CDBG-MIT.

FY2022 Funding	\$3.3 billion in CDBG formula grants for local governments, states, and insular areas. (Annual appropriations typically are provided in annual Transportation and Housing and Urban Development appropriations acts.)
FY2022 Supplemental Funding, Other Than IIJA	None.
IIJA Funding	None.
FY2023 Budget Request	The Administration requested \$3.55 billion for CDBG formula grants for local governments, states, and insular areas in its FY2023 budget request.
Action Needed to Access Program	CDBG grantees must develop and submit to HUD annual and multiyear plans outlining the proposed use of funds.
Website	https://www.hudexchange.info/programs/cdbg/

Source: CRS.

Notes: HUD = U.S. Department of Housing and Urban Development; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58).

- a. Federally recognized tribal governments are eligible for funds under the separate Indian Community Development Block Grant program (ICDBG). For information on ICDBG, see CRS In Focus IF11749, *The Indian Community Development Block Grant (ICDBG) Program: An Overview*, by Joseph V. Jaroscak.

Table 17. HUD: Section 108 Loan Guarantees

Purpose	Section 108 loans may be used for most of the CDBG-eligible activities that address one of three national objectives: (1) principally benefit low- and moderate-income persons; (2) aid in eliminating or preventing slums or blight; or (3) address an imminent threat to the health or safety of residents. These loan guarantees can be used to support flood resilience and risk reduction.
Authorization	42 U.S.C. §5308.
Program Trigger	Loan commitment ceiling established by annual appropriations.
Geographic Eligibility	Projects in states, DC, American Samoa, Guam, Northern Marianas, Puerto Rico, and the U.S. Virgin Islands.
Eligible Flood-Related Improvements	Guaranteed loan funds may be used for a number, but not all, of the activities eligible under the regular CDBG, including open space acquisition; construction, repair, replacement, or relocation of public facilities; and improvements such as dams and levees. Funded activities must be part of a large-scale economic development, housing, or public facilities project.
Type of Federal Assistance	Loan guarantee secured by current and future annual allocations of CDBG funds awarded to the state, local government, or insular area.
Nonfederal Cost Share	No matching funds required. This is a fee-based program. HUD is authorized to charge a fee to cover the long-term cost to the Section 108 loan guarantee. HUD establishes the amount of the fee annually based on a percentage of the principal amount of the Section 108 guaranteed loan.
Maximum Federal Project Assistance	Not specified. Grantees may leverage all or some portion of their annual CDBG allocations to access the CDBG Section 108 Loan Guarantee Program, which allows a grantee to borrow up to five times its annual allocation for large-scale economic development, public facilities, or housing projects. Flood resilience and risk reduction activities may be part of such projects.
Community Project Funding/Congressionally Directed Spending	No loan guarantees provided specifically for Community Project Funding/Congressionally Directed Spending.
FY2022 Funding	P.L. 117-103 established a loan guarantee ceiling of \$300 million.

FY2022 Supplemental Funding, Other Than IIJA	No supplemental loan guarantees provided specifically for disaster recovery activities.
IIJA Funding	No loan guarantees included in IIJA.
FY2023 Budget Request	The Administration requested \$300 million in loan guarantee authority for FY2023.
Action Needed to Access Program	Open application process with no specific deadline for submission of application. Proposed activities must meet one of the three national objectives and must be consistent with the state’s or community’s annual and multiyear plans outlining the proposed use of CDBG funds.
Website	https://www.hudexchange.info/programs/section-108/

Source: CRS.

Notes: CDBG = Community Development Block Grant; HUD = U.S. Department of Housing and Urban Development; IIJA = Infrastructure Investment and Jobs Act (P.L. 117-58).

Table 18. HUD: Community Development Block Grant–Disaster Recovery (CDBG-DR)

Purpose	Program funds must be used to address long-term recovery and restoration of infrastructure, housing, and economic activity, including mitigation activities intended to reduce or eliminate damage from future disasters. ^a
Authorization	CDBG-DR funds may be used for various eligible activities to address long-term recovery and restoration of housing, infrastructure, and economic activity at the discretion of the grantee, subject to CDBG program regulations and HUD CDBG-DR rulemaking.
Program Trigger	Supplemental appropriations.
Geographic Eligibility	Projects in the “most impacted and distressed areas” resulting from a major disaster declared pursuant to the Stafford Act for specific years or areas depending on the language enacted in the supplemental appropriations.
Eligible Flood-Related Improvements	The block grant nature of the program allows state and local government grant recipients to undertake a range of eligible activities, including floodplain management planning; open space acquisition; construction, repair, replacement, or relocation of public facilities; and improvements such as dams and levees. Activities must meet one of three national objectives: principally benefit low- and moderate-income persons; aid in eliminating or preventing slums or blight; or address an imminent threat to the health or safety of residents.
Type of Federal Assistance	Determined by language in the legislation providing appropriations.
Nonfederal Cost Share	No matching funds required. Program funds may be used to meet the nonfederal matching fund requirement of other federal grant programs.
Maximum Federal Project Assistance	Not specified. Grantees may use CDBG-DR to fund buyouts.
Community Project Funding/Congressionally Directed Spending	None. Not part of annual appropriations.
FY2022 Funding	None. Not part of annual appropriations.
FY2022 Supplemental Funding, Other Than IIJA	\$5 billion in supplemental funding for disaster relief, long-term recovery, restoration of infrastructure and housing, economic revitalization, and mitigation, in the most impacted and distressed areas resulting from a major disaster that occurred in 2020 or 2021. ^b
IIJA Funding	None.

FY2023 Budget Request	The Administration’s FY2023 budget did not request additional supplemental CDBG-DR funds. The budget did express support for authorization of the CDBG-DR program.
Action Needed to Access Program	CDBG-DR grantees must develop and HUD must approve a disaster recovery action plan.
Website	https://www.hud.gov/program_offices/comm_planning/cdbg-dr

Source: CRS.

Notes: HUD = U.S. Department of Housing and Urban Development; IJA = Infrastructure Investment and Jobs Act (P.L. 117-58); Stafford Act = Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. §§5121 et seq.).

- a. CDBG-DR funds cannot duplicate funding available from federal, state, or local governments; private and nonprofit organizations; insurance proceeds; or any other source of assistance.
- b. FY2023 began with a continuing resolution, P.L. 117-180. In addition to continuing FY2022 appropriations amounts through December 16, 2022, P.L. 117-180. provided an additional \$2,000 M for the Community Development Block Grant–Disaster Recovery for major disasters in 2021 and 2022.

CRS Contact and Products

CRS Expert

- Joseph V. Jaroscak, Analyst in Economic Development Policy

Relevant CRS Products

- CRS Insight INI 1873, *CDBG-DR Expenditure Reporting and Status Designations: Updated Methodology*, by Joseph V. Jaroscak
- CRS In Focus IFI 1814, *Disaster Resilience Investments: Community Development Block Grant Authorities for Mitigation (CDBG-MIT)*, by Joseph V. Jaroscak
- CRS In Focus IFI 1889, *HUD Section 108 Loan Guarantee Program: An Overview*, by Joseph V. Jaroscak
- CRS Report R46733, *Community Development Block Grants: Funding and Allocation Processes*, by Joseph V. Jaroscak
- CRS Report R46475, *The Community Development Block Grant’s Disaster Recovery (CDBG-DR) Component: Background and Issues*, by Joseph V. Jaroscak

National Flood Insurance Program⁹⁰

The National Flood Insurance Program (NFIP) is the primary source of flood insurance coverage for residential properties in the United States. The NFIP has two main policy goals: (1) to provide access to primary flood insurance, thereby allowing for the transfer of some of the financial risk of property owners to the federal government, and (2) to mitigate and reduce the nation’s comprehensive flood risk through the development and implementation of floodplain management standards. A longer-term objective of the NFIP is to reduce federal expenditure on disaster assistance after floods. As of March 31, 2022, the NFIP had nearly five million flood insurance policies providing approximately \$1.26 trillion in coverage, with 22,568 communities in 50 states and 6 other jurisdictions participating.⁹¹

The goals of the NFIP, as a public insurance program, differ from the goals of private-sector companies; the NFIP encompasses social goals to provide flood insurance in flood-prone areas to

⁹⁰ This section was prepared by Diane P. Horn, Specialist in Flood Insurance and Emergency Management.

⁹¹ Detailed information about which communities participate, and where, is available from FEMA, *Community Status Book*, at <https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book>.

property owners who otherwise would not be able to obtain it and to reduce government's cost after floods.⁹² (For more information on the approach and history of the NFIP, see the text box "NFIP History and Primer.") The NFIP also engages in many "noninsurance" activities in the public interest: it identifies and maps flood hazards, disseminates flood risk information through flood maps, requires community land use and building-code standards, contributes to community resilience by providing a mechanism to fund rebuilding after a flood, and offers grants and incentive programs for household- and community-level investments in flood risk reduction.

National Flood Insurance Program (NFIP): History and Primer

Congress added to the federal role in managing flood risks by entering the flood insurance market. Congress established the NFIP in the National Flood Insurance Act of 1968 (NFIA; 42 U.S.C. §§4001 et seq.), after private firms had largely abandoned offering flood insurance. The NFIP aimed to alter development in flood-prone areas identified as the 100-year floodplain; this floodplain also is referred to as the 1% annual-chance floodplain or the floodplain for the Base Flood Elevation for purposes of the NFIP. The NFIP's multipronged regulatory system consists of community flood risk assessment and mapping, purchase requirements for flood insurance for certain residential and commercial structures, and the adoption of minimum local requirements for land use and building codes for vulnerable areas. The NFIP allows for residential and commercial construction in known floodplains, with the proviso that construction must follow building-code regulations that reduce future flood damage and prevent new development from increasing flood risk.

Note: For a more detailed discussion of private flood insurance, see CRS Report R45242, *Private Flood Insurance and the National Flood Insurance Program*, by Diane P. Horn and Baird Webel.

Flood Maps and State and Local Land Use Control

The NFIP accomplishes the goal of reducing comprehensive flood risk primarily by requiring participating communities to collaborate with FEMA to develop and adopt flood maps called *Flood Insurance Rate Maps* (FIRMs) and to enact minimum floodplain standards based on those flood maps. An area of specific focus of the FIRM is the Special Flood Hazard Area (SFHA). FEMA defines the SFHA as an area with a 1% or greater chance of flooding every year. However, over 20% of NFIP claims are for properties outside SFHAs,⁹³ and all states and territories have experienced flood events in the last four years.⁹⁴

Communities that choose to participate in the NFIP are required to adopt land use and control measures with effective enforcement provisions and to regulate development in the floodplain.⁹⁵ FEMA has set forth the minimum standards it requires for participation in the NFIP in federal regulations.⁹⁶ Though the standards appear in federal regulations, the standards have the force of law only when a state or local government adopts them in its floodplain management ordinance. The NFIP encourages communities to adopt and enforce additional floodplain management regulations such as zoning codes, subdivision ordinances, building codes, and rebuilding restrictions. Internal FEMA studies have found that structures built to FEMA standards experience 73% less damage than structures not built to those standards.⁹⁷ According to FEMA,

⁹² See 82 Stat. 573 for text in original statute (§1302(c) of P.L. 90-448). This language remains in statute (see 42 U.S.C. §4001(c)).

⁹³ Government Accountability Office, *Flood Insurance: Comprehensive Reform Could Improve Solvency and Enhance Resilience*, GAO-17-425, April 2017, p. 29, at <https://www.gao.gov/products/GAO-17-425>.

⁹⁴ Email correspondence from FEMA Congressional Affairs staff, August 5, 2019, and CRS analysis.

⁹⁵ 42 U.S.C. §4022(a)(1).

⁹⁶ See 44 C.F.R. Part 60, particularly 44 C.F.R. §60.3.

⁹⁷ U.S. Congress, House Committee on Financial Services, "Flood Insurance Reform: FEMA's Perspective," Statement of Roy E. Wright, Deputy Associate Administrator, Federal Insurance and Mitigation Administration, 115th Cong., 1st

the NFIP's floodplain management standards have saved the nation almost \$2.4 billion annually in flood losses avoided.⁹⁸

Flood maps may require updating when there have been significant new building developments in or near the flood zone, changes to flood protection systems, or environmental changes in the community or when better data become available.⁹⁹

NFIP Flood Mitigation

The NFIP offers three programs that encourage communities to reduce flood risk: the Flood Mitigation Assistance grant program (see "Flood Mitigation Assistance"), the Community Rating System, and Increased Cost of Compliance (ICC) coverage. The latter two programs are funded entirely by premiums and fees paid by NFIP policyholders.¹⁰⁰

Through a program called the Community Rating System, FEMA encourages communities to improve upon the minimum floodplain management standards required to participate in the NFIP. The Community Rating System, as authorized by law, is intended to incentivize the reduction of flood and erosion risk, as well as the adoption of more effective measures to protect natural and beneficial floodplain functions.¹⁰¹ FEMA awards points for measures that increase a community's "class" rating in the Community Rating System in classes one to ten, with Class 1 being the highest ranking. The credits on premium rates for flood insurance coverage are based on the estimated reduction in flood and erosion damage risks resulting from the measures adopted by the community. Points are awarded for an array of improvements in how the community informs its public on flood risk, maps and regulates its floodplain, reduces possible flood damage, and provides immediate warnings and responds to flooding incidents. The highest points are awarded for activities that reduce future flood risk, such as development limitations, preserved open space, retrofitted buildings, and acquisition and relocation of buildings.¹⁰² Starting at Class 9, policyholders in the SFHA within a Community Rating System community receive a 5% discount on their flood insurance premiums, with increasing discounts of 5% per class until reaching Class 1, when policyholders in the SFHA can receive a 45% discount. As of April 1, 2022, 1,738 communities participated in the Community Rating System. This figure represents about 7.7% of eligible NFIP communities that could participate in the Community Rating System program.¹⁰³

The NFIP requires most policyholders to purchase ICC coverage,¹⁰⁴ which is effectively a separate insurance policy to offset the additional expense of restoring a structure to meet more

sess., March 8, 2017, H.Hrg.115-BA04-WrightR-20170309 (Washington: GPO, 2017), p. 1.

⁹⁸ U.S. Congress, Senate Committee on Banking, Housing, and Urban Affairs, *Reauthorization of the National Flood Insurance Program, Part II*, Statement of David Maurstad, Deputy Associate Administrator for Insurance and Mitigation, Federal Insurance and Mitigation Administration, FEMA, 117th Cong., 1st sess., June 17, 2021, p.2, <https://www.banking.senate.gov/imo/media/doc/Maurstad%20Testimony%206-17-21.pdf>.

⁹⁹ Email correspondence from FEMA Congressional Affairs staff, August 5, 2019.

¹⁰⁰ For more on how premiums are set for policyholders, see CRS Report R44593, *Introduction to the National Flood Insurance Program (NFIP)*, by Diane P. Horn and Baird Webel.

¹⁰¹ 42 U.S.C. §4022(b)(1).

¹⁰² For a list of creditable activities in the Community Rating System, see FEMA, *NFIP Community Rating Coordinator's Manual*, May 4, 2017, at https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinators-manual_2017.pdf.

¹⁰³ Calculated by CRS from data downloaded on August 11, 2022, from FEMA, *Community Rating System*, at <https://www.fema.gov/floodplain-management/community-rating-system>.

¹⁰⁴ For example, Increased Cost of Compliance (ICC) coverage is not required on condominium units and policies that cover only the contents of a building.

rigorous building code standards than were required when the structure was originally built. ICC coverage provides an amount up to \$30,000 in payments for certain eligible expenses.¹⁰⁵ ICC coverage is in addition to the building coverage provided by the standard flood insurance policy.

When a community determines that a building is substantially damaged following a flood,¹⁰⁶ floodplain management standards adopted by local communities can require that building to be rebuilt to meet current floodplain management requirements, even if the property previously did not need to do so. For instance, the new compliance standard may require the elevation of the rebuilt building to above the base flood elevation. FEMA also makes ICC coverage available if a building has been declared a repetitive loss by a community's floodplain management regulations.¹⁰⁷

ICC claims payments may be used toward the costs of elevating, demolishing, relocating, or flood-proofing nonresidential buildings or for any combination of these actions. According to ICC data, elevation is the most common form of mitigation.¹⁰⁸ For over 10 years stakeholders have been suggesting that the amount of ICC coverage should be raised.¹⁰⁹

CRS Contact and Products

CRS Expert

- Diane P. Horn, Specialist in Flood Insurance and Emergency Management

Relevant CRS Products

- CRS In Focus IF11023, *Selected Issues for National Flood Insurance Program (NFIP) Reauthorization and Reform*, by Diane P. Horn.
- CRS In Focus IF10988, *A Brief Introduction to the National Flood Insurance Program*, by Diane P. Horn.
- CRS Report R44593, *Introduction to the National Flood Insurance Program (NFIP)*, by Diane P. Horn and Baird Webel.

¹⁰⁵ For ICC premiums, see FEMA, Flood Insurance Manual, Appendix J: Sample Scenarios, revised October 1, 2022, pp. J1-J6, at https://www.fema.gov/sites/default/files/documents/fema_nfip-flood-insurance-full-manual_102022.pdf.

¹⁰⁶ 44 C.F.R. §59.1 defines *substantial damage* as damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damage condition would equal or exceed 50% of the market value of the structure before the damage occurred.

¹⁰⁷ 42 U.S.C. §4011(b)(1).

¹⁰⁸ See FEMA, *NFIP: Use of Increased Cost of Compliance Coverage*, FY2009 Report to Congress, October 2009, p. 6. Report provided to CRS by FEMA Congressional Affairs Staff.

¹⁰⁹ See, for example, FEMA, *NFIP: Use of Increased Cost of Compliance Coverage*, FY2009 Report to Congress, October 2009, p. 32; and Natural Resources Defense Council and the Association of State Floodplain Managers, "Petition Requesting That the Federal Emergency Management Agency Amend Its Regulations Implementing the National Flood Insurance Program," January 5, 2021, p. 48, at <https://www.nrdc.org/sites/default/files/petition-fema-rulemaking-nfip-20210105.pdf>.

Author Information

Nicole T. Carter, Coordinator
Specialist in Natural Resources Policy

Anna E. Normand
Analyst in Natural Resources Policy

Diane P. Horn, Coordinator
Specialist in Flood Insurance and Emergency
Management

Jonathan L. Ramseur
Specialist in Environmental Policy

Joseph V. Jaroscak
Analyst in Economic Development Policy

Megan Stubbs
Specialist in Agricultural Conservation and Natural
Resources Policy

Eva Lipiec
Analyst in Natural Resources Policy

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