



Building Resilient Infrastructure and Communities Natural Infrastructure Projects for FY 2020

February 3, 2023

Fiscal Year 2022 Report to Congress



**Homeland
Security**

Federal Emergency Management Agency

Message from the FEMA Administrator

February 3, 2023

I am pleased to present the following report, “Building Resilient Infrastructure and Communities Natural Infrastructure Projects for FY 2020,” prepared by the Federal Emergency Management Agency (FEMA).



This document was compiled pursuant to direction in the Joint Explanatory Statement accompanying the Fiscal Year (FY) 2022 Department of Homeland Security (DHS) Appropriations Act (P.L. 117-103).

The Building Resilient Infrastructure and Communities (BRIC) grant program makes federal funds available to states, U.S. territories, federally recognized tribal governments, and local governments for hazard mitigation activities. FY 2020 was the inaugural year of the BRIC program, and data related to projects selected will be used as a baseline for further analysis in subsequent years. In FY 2020, BRIC had \$500 million appropriated, and one BRIC program priority was the “incorporation of nature-based solutions” (NBS). NBS continued to be a BRIC program priority in FY 2021 and FY 2022. As demonstrated in the “Data Report” section of this report, FEMA:

- Received almost \$1.1 billion in requests to fund NBS.
- Selected more than 90 percent of NBS projects submitted in the State/Territory Allocation and Tribal Set-Aside pools.
- Selected 22 projects in the National Competition, 18 of which, or more than 80 percent, were NBS projects.

Pursuant to congressional requirements, this report is being provided to the following Members of Congress:

The Honorable David Joyce
Chair, House Appropriations Subcommittee on Homeland Security

The Honorable Henry Cuellar
Ranking Member, House Appropriations Subcommittee on Homeland Security

Chair, Senate Appropriations Subcommittee on Homeland Security

Ranking Member, Senate Appropriations Subcommittee on Homeland Security

Inquiries relating to this report may be directed to FEMA's Office of External Affairs, Congressional and Intergovernmental Affairs Division, at (202) 646-4500.

Sincerely,

A handwritten signature in black ink that reads "Deanne Criswell". The signature is written in a cursive style with a large initial "D" and "C".

Deanne Criswell
Administrator
Federal Emergency Management Agency

Executive Summary

The BRIC grant program makes federal funds available to states, U.S. territories, federally recognized tribal governments, and local governments for predisaster hazard mitigation activities. It does so with a recognition of the growing hazards associated with climate change and of the need for natural hazard risk mitigation activities that promote climate adaptation and resilience with respect to those hazards. These include extreme weather events that have been observed and that are expected to increase in intensity and frequency in the future.

The BRIC Program was authorized in the FY 2019 DHS Appropriations Act (P.L. 116-6) and in Section 203(i) of the Stafford Act, as amended (P.L. 93-288) (42 U.S.C. § 5133). The BRIC Program began in FY 2020 with \$500 million available and received almost \$3.6 billion in requested funds.

This report was compiled in response to congressional direction in the Joint Explanatory Statement accompanying the FY 2022 DHS Appropriations Act (P.L. 117-103) and is focused primarily on the NBS¹ submitted in subapplications to the BRIC Program for the FY 2020 funding cycle. For the purposes of this report, FEMA uses the term NBS to determine if a subapplication is a “natural infrastructure project” as articulated by Congress.

As mentioned, FEMA received a total of nearly \$1.1 billion in requested funds for NBS and selected almost \$312 million for FY 2020. Requests were made to BRIC’s three funding categories: the State/Territory Allocation, the Tribal Set-Aside, and the National Competition. Since FY 2020 was the inaugural year of the BRIC program, there are no prior-year trends for data comparison.

¹ FEMA defines “nature-based solutions” as sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience. Source: <https://www.fema.gov/emergency-managers/risk-management/nature-based-solutions>.



Building Resilient Infrastructure and Communities Natural Infrastructure Projects for FY 2020

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I. Legislative Language

The Joint Explanatory Statement accompanying the Fiscal Year (FY) 2022 Department of Homeland Security Appropriations Act (P.L. 117-103) includes the following direction:

Natural Infrastructure Activities.—Within 180 days of the selection of fiscal year 2020 BRIC projects, FEMA shall provide the Committees with a report on the number, dollar amount, and percentage of BRIC applications received to fund natural infrastructure projects. The report shall be disaggregated by the applications that were awarded funding and those that were not, and describe the types of natural infrastructure activities funded including those that were for living shorelines projects.

II. Background

For FY 2020, the Building Resilient Infrastructure and Communities (BRIC) Program priorities were to incentivize public infrastructure projects, projects that mitigate risk to one or more lifelines, and projects that incorporate nature-based solutions (NBS), and to increase funding to applicants that facilitate the adoption and enforcement of the latest published editions of building codes.

The program's \$500 million in funding was available through three categories: 1) the State/Territory Allocation, 2) the Tribal Set-Aside, and 3) the National Competition. The Federal Emergency Management Agency (FEMA) received a total of 991 subapplications, from 53 states and territories and 38 federally recognized tribal governments, accounting for almost \$3.6 billion in requested federal share. Of this amount, about \$1.1 billion in federal share was requested for projects incorporating NBS.

On July 1, 2021, FEMA announced the selections of subapplications for the \$500 million available in FY 2020 for BRIC funding (the application period opened on September 30, 2020, and closed on January 29, 2021). In all funding categories, projects that included NBS were very successful. Almost \$312 million of total dollars in selected projects, or 62 percent of selections overall, included NBS. Common factors of unsuccessful subapplications in any category include incomplete scope of work, unclear conformance with program requirements, insufficient documentation, application inconsistencies, cost estimate issues, incorrect benefit-cost analysis approach, issues with recurrence intervals, and unclear basis for estimating damages.

State/Territory Allocation and Tribal Set-Aside

In FY 2020, the State/Territory Allocation and the Tribal Set-Aside made \$600,000 available to each state, territory, the District of Columbia, or a federally recognized tribal government for:

- Capability- and capacity-building activities—including project scoping, building codes, partnerships, mitigation planning (up to \$300,000), and other planning-related activities;
- Mitigation projects; and
- 10 percent of any subapplication for information dissemination.

The majority of requests in this funding category were for capability- and capacity-building, mitigation planning, or information dissemination. Because of the nature of these requests, NBS was not the focus. However, 12 requests did include NBS projects, one of which was ineligible. All other eligible FY 2020 submissions in this funding category, which included NBS, were selected. See the “Data Report” section of this report for more details.

National Competition

The National Competition's intent is to fund competitively all mitigation projects that meet the program priorities of each fiscal year, with awards up to \$50 million per project. In FY 2020,

\$446,400,000 of BRIC funds were offered within the National Competition, representing the majority of the total BRIC funding amount, or about 90 percent. Subapplications submitted to the National Competition that passed the programmatic review’s eligibility and completeness were scored with technical evaluation criteria and qualitative evaluation criteria.

To incentivize elements valued by FEMA, a set of technical evaluation criteria was used to evaluate eligible subapplications. NBS was one of eight technical evaluation criteria and continued to be a technical evaluation criterion in FY 2021 and FY 2022. Eligible subapplications that included NBS were awarded points in the National Competition; projects that incorporated NBS were significantly more competitive than those that did not. Of the selections, 82 percent in the National Competition (or 18 out of 22 subapplications) included NBS. See the next section, “Data Report,” for more details.

III. Data Report

Table 1 FY 2020 BRIC Subapplications Overall details dollars available per funding category and dollars, count, and status of subapplications received.

FY 2020 BRIC Subapplications Overall		Subapplications Submitted		Subapplications Selected		% Selected (by subapplication count)
Funding Category	Total Amount Available (\$)	Dollars (\$)	Count	Dollars (\$)	Count	
State/Territory Allocation + Tribal Set-Aside	\$53,600,000	\$55,982,754	351	\$48,508,443	315	90%
National Competition	\$446,400,000	\$3,197,525,186	571	\$377,721,964	22	4%
Management Costs	<i>Variable, up to 10% per subapplication</i>	\$344,672,546	69	\$78,395,252	69	100%
Total	\$500,000,000	\$3,598,180,486	991	\$504,625,659	406	41%

Table 2 BRIC Subapplication with NBS details subapplications per funding category, dollars, count, and status.

FY 2020 BRIC Subapplications with NBS	Submitted Subapplications with NBS		Selected Subapplications with NBS		Not Selected or Ineligible Subapplications with NBS	
Funding Category	Dollars (\$)	Count	Dollars (\$)	Count	Dollars (\$)	Count
State/Territory Allocation + Tribal Set-Aside	\$2,904,774	12	\$2,775,024	11	\$129,750	1
National Competition	\$1,092,227,317	174	\$308,936,487	18	\$783,420,580	156
Total	\$1,095,132,091	186	\$311,711,511	29	\$783,550,330	157

Table 3 Selected BRIC Subapplication with NBS displays selected NBS subapplications as a percentage of all selected BRIC subapplications and as a percentage of all submitted NBS subapplications, by both dollars requested and subapplication count.

Funding Category	% with NBS Selected Compared to all BRIC Subapplications Selected		% with NBS Selected Compared to all BRIC Subapplications Submitted with NBS	
	% of Dollars (\$)	% of Subapplications	% of Dollars (\$)	% of Subapplications
State/Territory Allocation + Tribal Set-Aside	6%	3%	96%	92%
National Competition	82%	82%	28%	10%
Total BRIC program	62%	7%	28%	16%

Table 4 NBS in FY 2020 BRIC NBS Projects Selected describes the types of NBS strategies incorporated in funded NBS projects, including those for living shoreline projects. This information is presented in a matrix because many projects incorporate multiple types of NBS, ranging from vegetation management to floodplain restoration.

NBS	FY 2020 BRIC Projects Selected																													TOTALS						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29							
Living shoreline (including breakwater sills, marsh protection and restoration, shoreline stabilization, and other interventions)									X			X															X									3
Stream enhancement	X																																		1	
Stream restoration					X		X																X												3	
Channel improvement/restored channels				X		X																						X							3	
Acquisition		X	X										X	X	X	X																			6	
Swales				X																															1	
Vegetation management				X			X	X										X			X		X	X		X	X	X							10	
Green roof				X																															1	
Wetland restoration												X									X			X		X									4	
Wetland creation						X											X																		2	
Wetland preservation																									X										1	
Bank stabilization							X	X				X																							3	
Detention basin																				X															1	
Stormwater management					X					X										X															3	
Stormwater pond																									X										1	
Earthen/natural berm							X														X										X				3	
Eco-revetments																					X														1	
Hybrid dune																					X														1	
Dam removal																						X													1	
Habitat restoration/enhancements																	X				X	X	X	X											5	
Habitat creation																			X																1	
Reforestation																						X													1	
Reforested floodplains						X																													1	
Floodplain benching							X	X																											2	
Floodplain restoration											X															X									2	
Bioretention system																																X		1		

IV. Analysis

BRIC's State/Territory Allocation and Tribal Set-Aside funding categories prioritize capability- and capacity-building activities. However, eligible projects of all types submitted through this category were successful at a rate of approximately 90 percent. Of the 12 NBS projects submitted through this category, 11 were selected and 1 was determined ineligible.

The highly competitive National Competition selected approximately 4 percent of all subapplications for projects of all types overall. It is notable that NBS projects in the National Competition were extremely successful, with 18 of the 22 selections including NBS.

As demonstrated in Table 4, vegetation management, acquisition, habitat restoration/ enhancements, and wetland restoration are the NBS strategies that most frequently are incorporated into selected NBS projects. Three NBS projects incorporated living shorelines.

Since FY 2020 was the inaugural year of the BRIC program, there are no prior-year trends to which these data can be compared; however, FEMA is continuing to track and analyze the types of mitigation projects submitted to BRIC. Future iterations of this report will be able to provide an analysis:

- Highlighting trends in subapplications,
- Assessing the effectiveness of the current program strategy related to funding, and
- Describing innovative nature-based mitigation projects that have been implemented.

V. Conclusion

In FY 2020, the BRIC grant program funded 29 mitigation projects including NBS, accounting for almost \$312 million (62 percent) of the total FY 2020 funds. Data related to FY 2020 BRIC projects that were selected will be used as a baseline for further analysis in subsequent years. “Incorporation of nature-based solutions” remains a BRIC program priority in FY 2021 and FY 2022.

VI. Appendix: List of Abbreviations

Abbreviation	Definition
BRIC	Building Resilient Infrastructure and Communities
DHS	Department of Homeland Security
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
NBS	Nature-Based Solutions