

# Building Resilient Infrastructure and Communities (BRIC) and Flood Mitigation Assistance (FMA) Fiscal Year 2020 Data and Trends

Ryan Janda, David Ratté, and Sunny Ng | August 16, 2021



# FEMA



## Agenda

- **Welcome and Introduction**  
Kayed Lakhia, AIA, NCARB, LEED AP, CFM, FEMA
- **BRIC and FMA Overview**  
Ryan Janda, FEMA
- **BRIC Scoring Overview**  
David Ratté, FEMA
- **FMA Submissions and Selections**  
Sunny Ng, FEMA



# BRIC and FMA Overview



## Building Resilient Infrastructure and Communities (BRIC) Program

- Competitive grant program that provides funding to states, local, tribal and territorial governments
- Funds can be used to support communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency
- Funded by 6% set-aside of the assistance FEMA provides following a Presidential Disaster Declaration through its Public and Individual Assistance programs
- **Program strengths: National capability- and capacity-building for mitigation; Program funds infrastructure projects**



## Flood Mitigation Assistance (FMA) Grant Program

- Competitive grant program that provides funding to state, local, tribal and territorial governments
- Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program
- Funded by an annual congressional appropriation
- **Program strength: 90-100% funding for repetitively flood damaged buildings insured under the National Flood Insurance Program**



# BRIC and FMA Fiscal Year 2021 NOFO and 2020 Project Selections

FY 2020 Cycle: FEMA announced BRIC and FMA sections in July 2021



FY 2021 Cycle: FEMA published FY 2021 NOFO for BRIC and FMA in August 2021



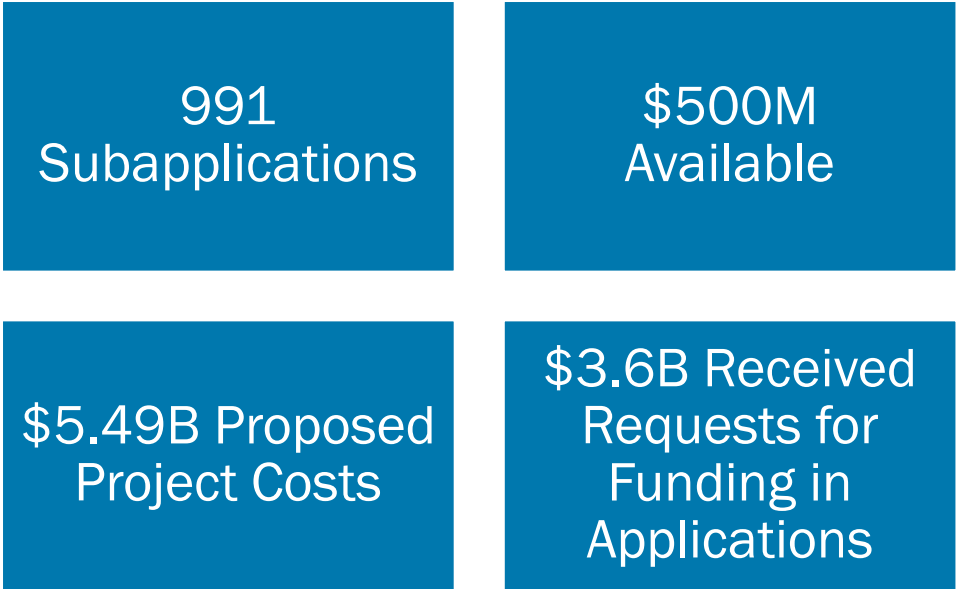
FEMA



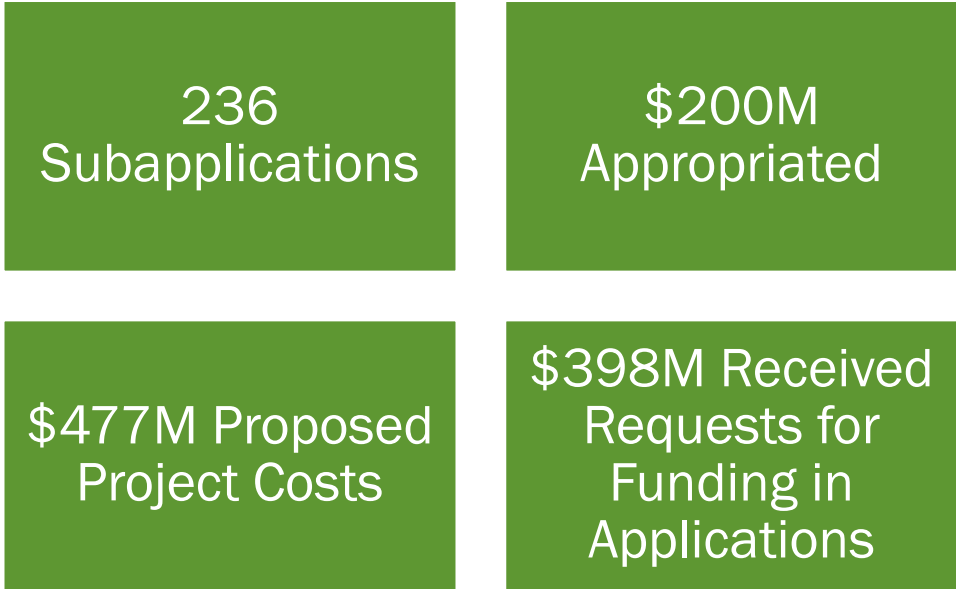
# Fiscal Year 2020 BRIC and FMA Subapplications Summary

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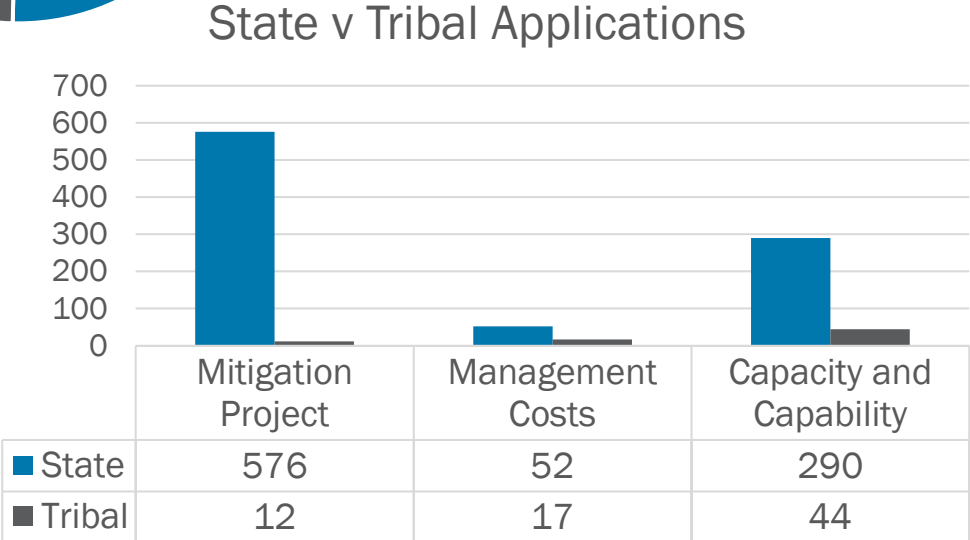
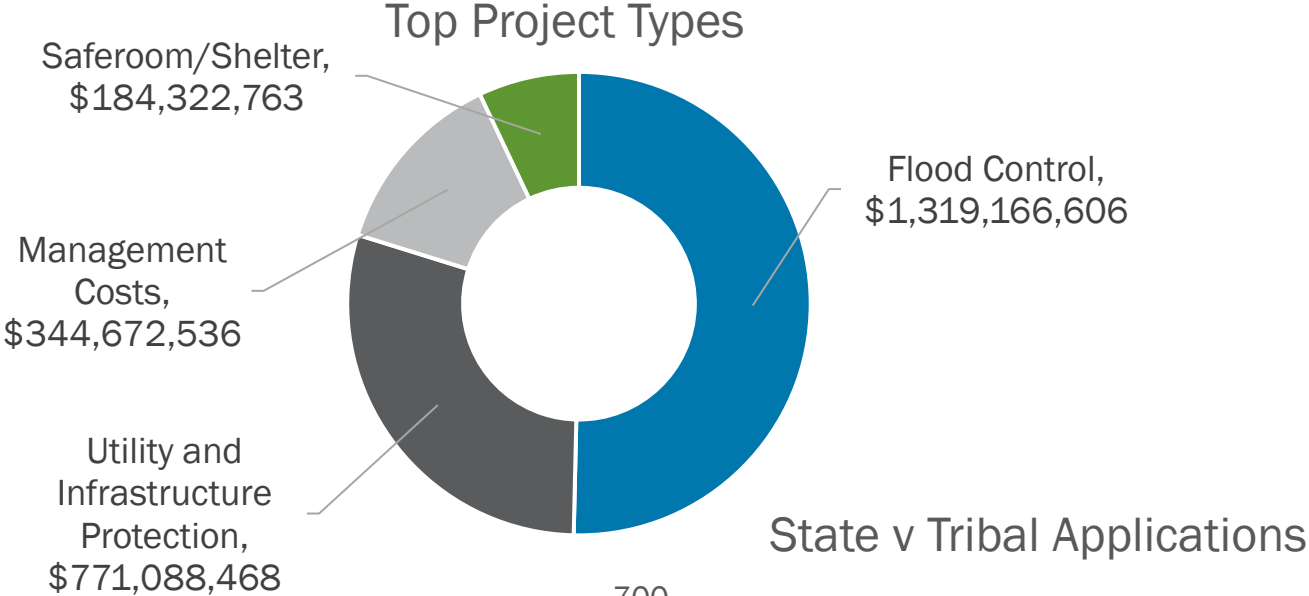
## FY 2020 BRIC Subapplications Summary



## FY 2020 FMA Subapplications Summary



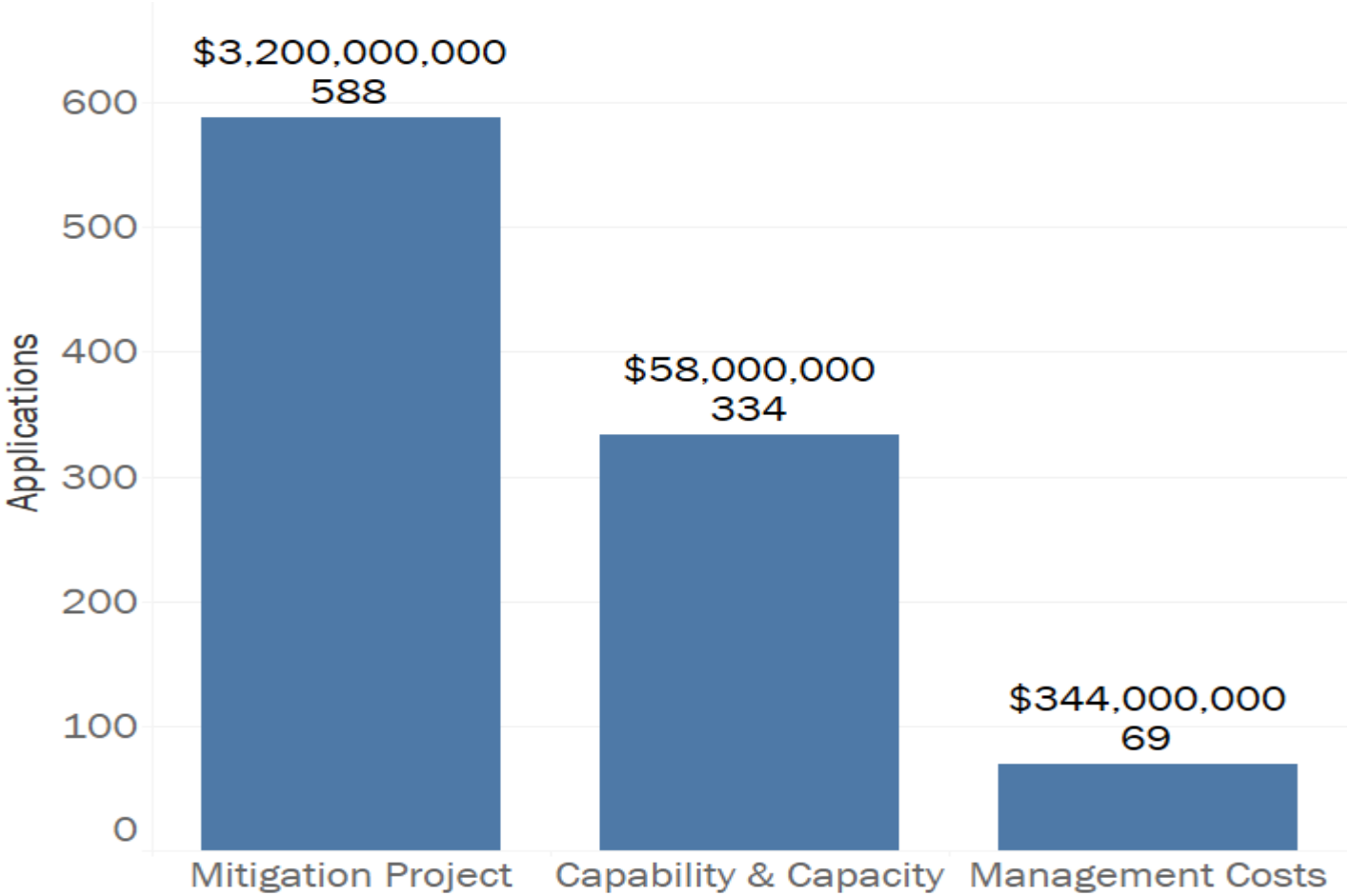
# BRIC Program Submissions Dashboard



For the FY 2020 BRIC Program:

- \$500 Million available
- 991 Subapplications
- \$5,496,125,581 Total Subapplication Costs
- \$3,598,180,486 Federal Share Requested
- 76% Average Federal Cost Share
- 98 Small and Impoverished Community Applications

# Fiscal Year 2020 BRIC Subapplication Types Data Dashboard



FEMA received 7 large project applications whose project amounts reached the maximum in federal share (\$50M)

FEMA also offers non-financial Direct Technical Assistance to communities through BRIC. A total of **12 applications** were submitted for Direct Technical Assistance, from **9 states** and **3 tribes**.

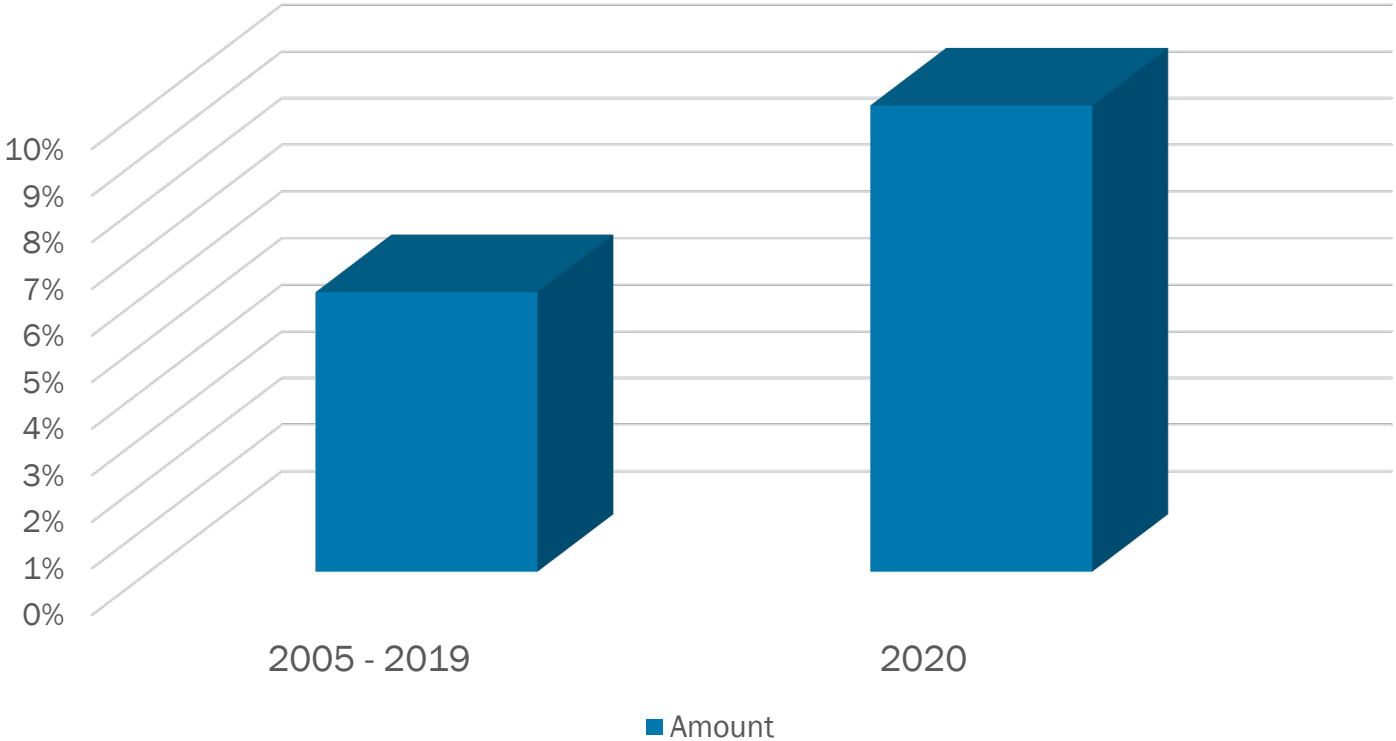




# Fiscal Year 2020 BRIC Small and Impoverished Communities Summary

*98 Small and Impoverished Submissions – Communities with a Population of 3,000 or less*

Small Communities Submissions



For FY20, the number of small impoverished submissions represents nearly **10% of all subapplications** submitted, up from 6%!

*FEMA is committed to delivering our programs with equity, and this increase in applications from small, impoverished communities is an encouraging sign*



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# Fiscal Year 2020 BRIC: Top Project Types

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## Top Five Project Types by Federal Share Requested:

1. Flood control (\$1.3 billion)
2. Utility and infrastructure protection (\$771 million)
3. Saferoom/shelter (\$184 million)
4. Retrofit (\$176 million)
5. Mitigation reconstruction (\$164 million)

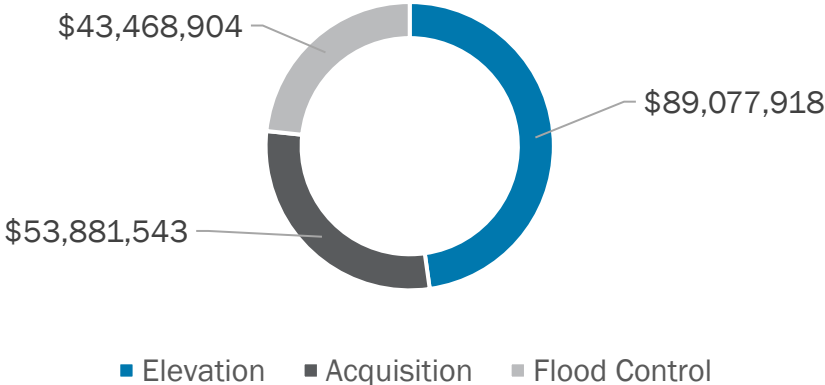
## Top Five Project Types by Number of Subapplications:

1. Flood control (163)
2. Plan update (127)
3. Utility and infrastructure protection (120)
4. Engineering, environmental, feasibility and/or Benefit-Cost Analysis (99)
5. Generator (72)

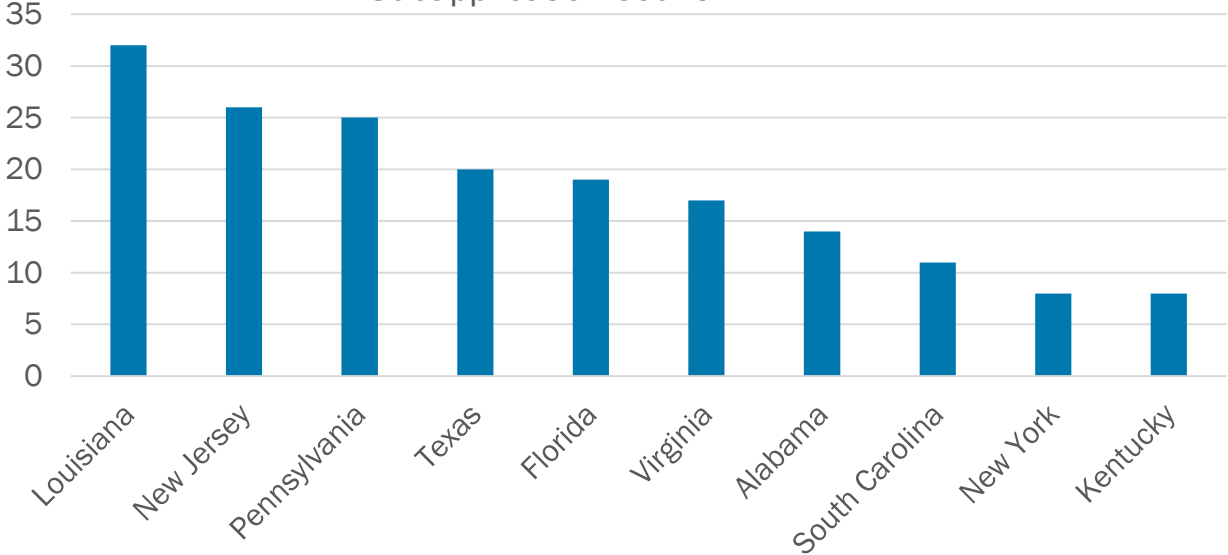


# FMA Submissions Dashboard

Top Project Types



Subapplication Count

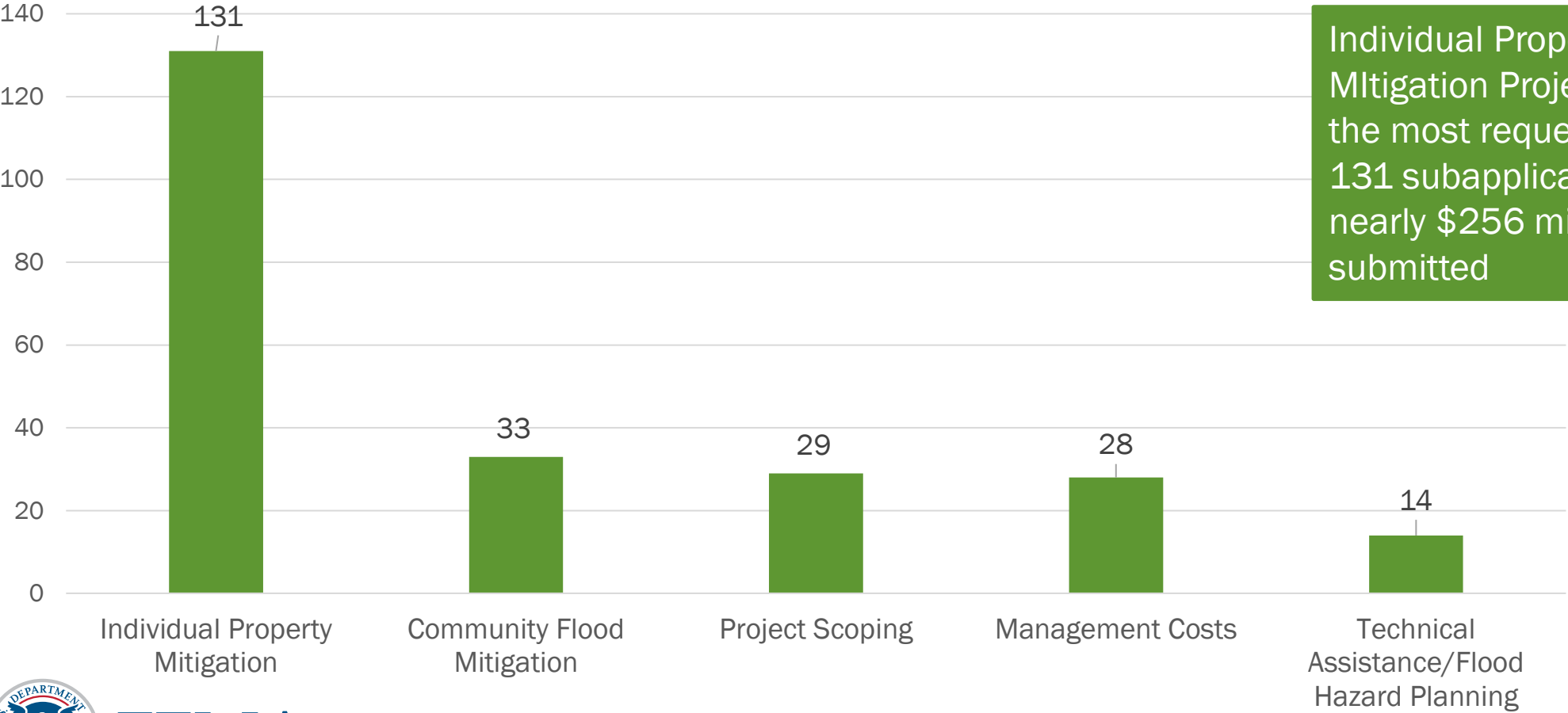


For the FY 2020 FMA Program:

- \$200 Million Appropriated
- 236 Subapplications
- \$477,765,118 Total Subapplication Costs
- \$387,016,499 Federal Share Requested
- 83% Average Federal Cost Share
- 187 Communities
- 611 Severe Repetitive Loss/Repetitive Loss Properties
- Majority of project types: Elevation, Acquisition and flood control

# Fiscal Year 2020 FMA Subapplication Types Data Dashboard

Applications



Individual Property Mitigation Projects were the most requested, with 131 subapplications and nearly \$256 million submitted



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■ Applications

Federal Emergency Management Agency

# Fiscal Year 2020 FMA: Top Project Types

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## Top Five Project Types by Federal Share Requested:

1. Elevations (\$143.9 million)
2. Flood control (\$124.4 million)
3. Acquisition (\$68.1 million)
4. Stabilization and restoration (\$15.5 million)
5. Relocation (\$9.4 million)

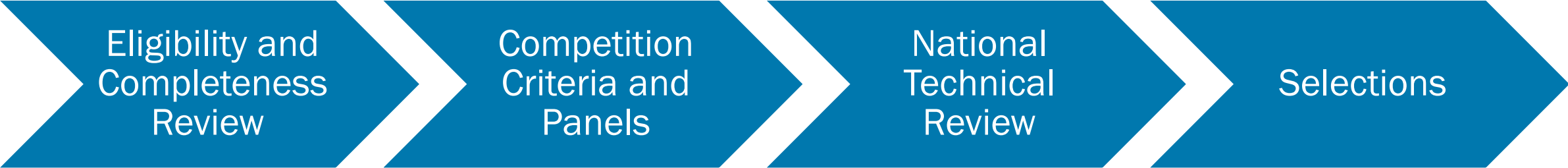
## Top Five Project Types by Number of Subapplications:

1. Elevations (76)
2. Acquisition (38)
3. Flood control (33)
4. Engineering, environmental, feasibility and/or Benefit-Cost Analysis (16)
5. Mitigation reconstruction (11)



# BRIC and FMA Applications Review Process

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# BRIC and FMA Program Selections Dashboard

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For the FY 2020 BRIC and FMA Programs combined:

- \$700M available
- 523 Subapplications
- 58 Small and Impoverished Community Population Subapplications
- \$1,425,146,142 Total Subapplication Costs

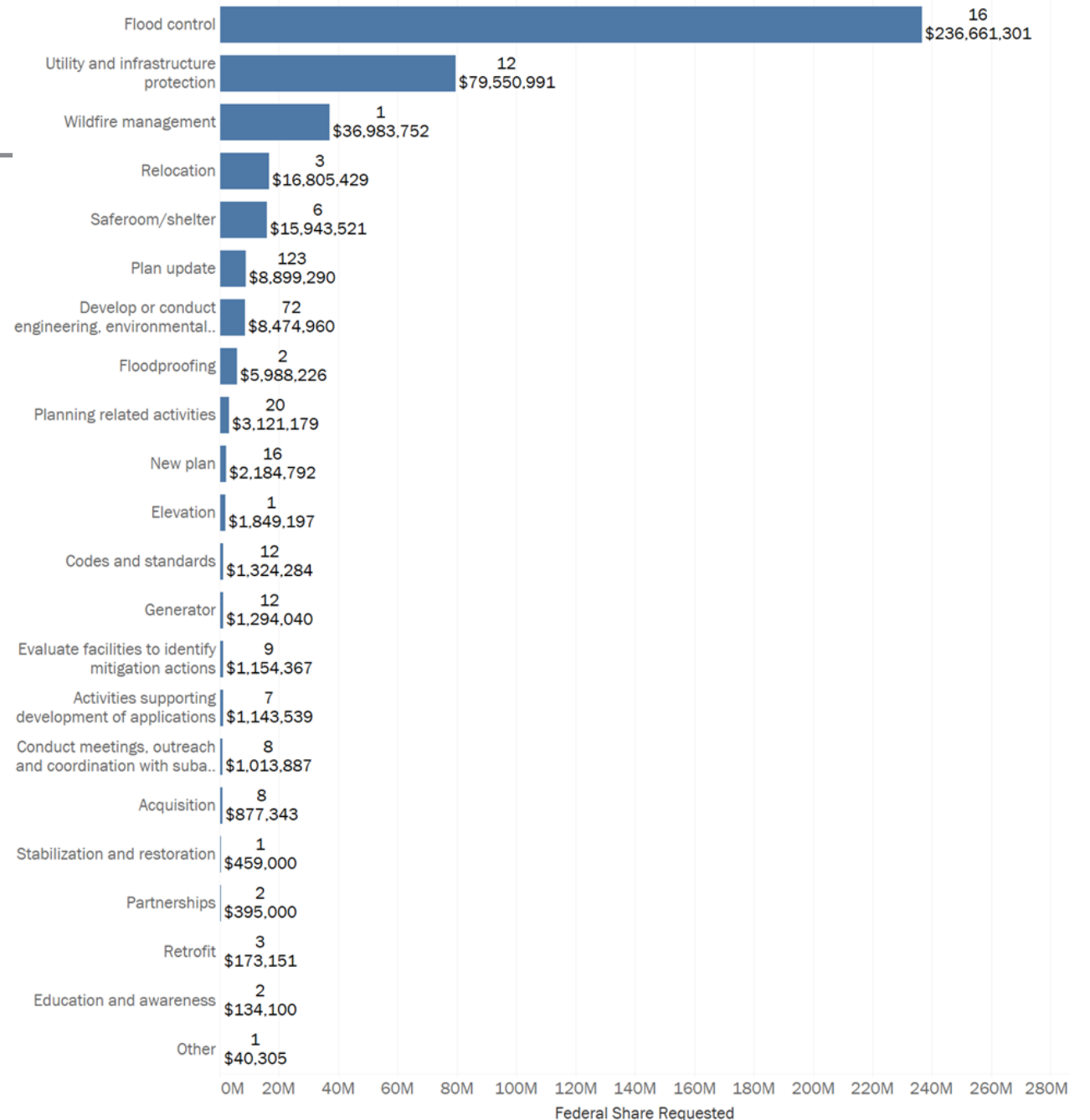


# BRIC – All Selections

FY 2020 BRIC Program:

- 406 Subapplications
- 58 Small and Impoverished Community Population Subapplications
- \$1,185,233,632 Total Subapplication Costs
- \$500,000,000 Federal Share
- All Applicants that applied received at least one selection

All Selections by Primary Activity (Management Costs Removed for Visualization)

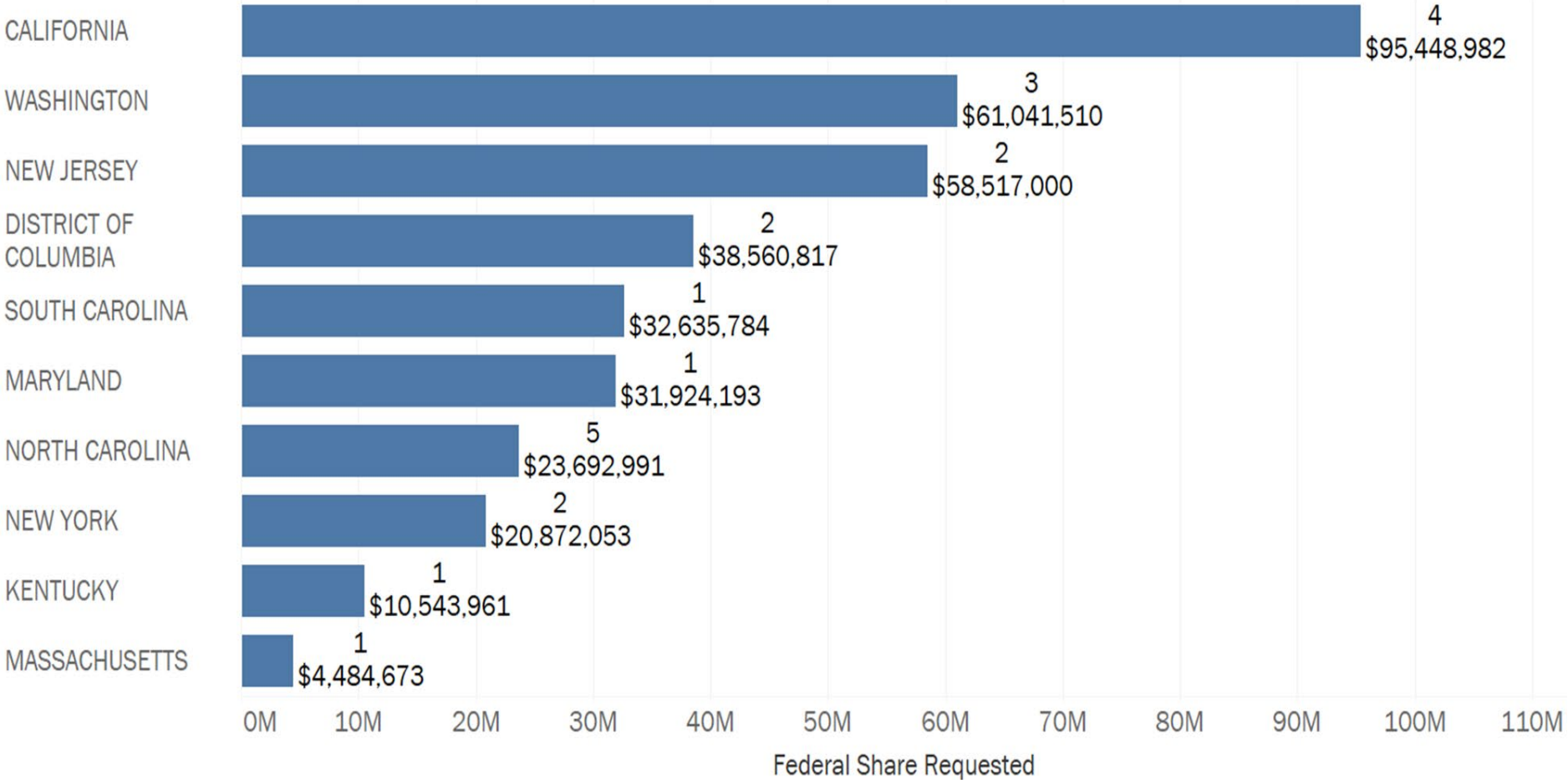


# BRIC – National Competition Selections

FY 2020 BRIC Program:

- 22 Selections
- 10 States
- \$377M in Federal Share

Competitive Selection by States

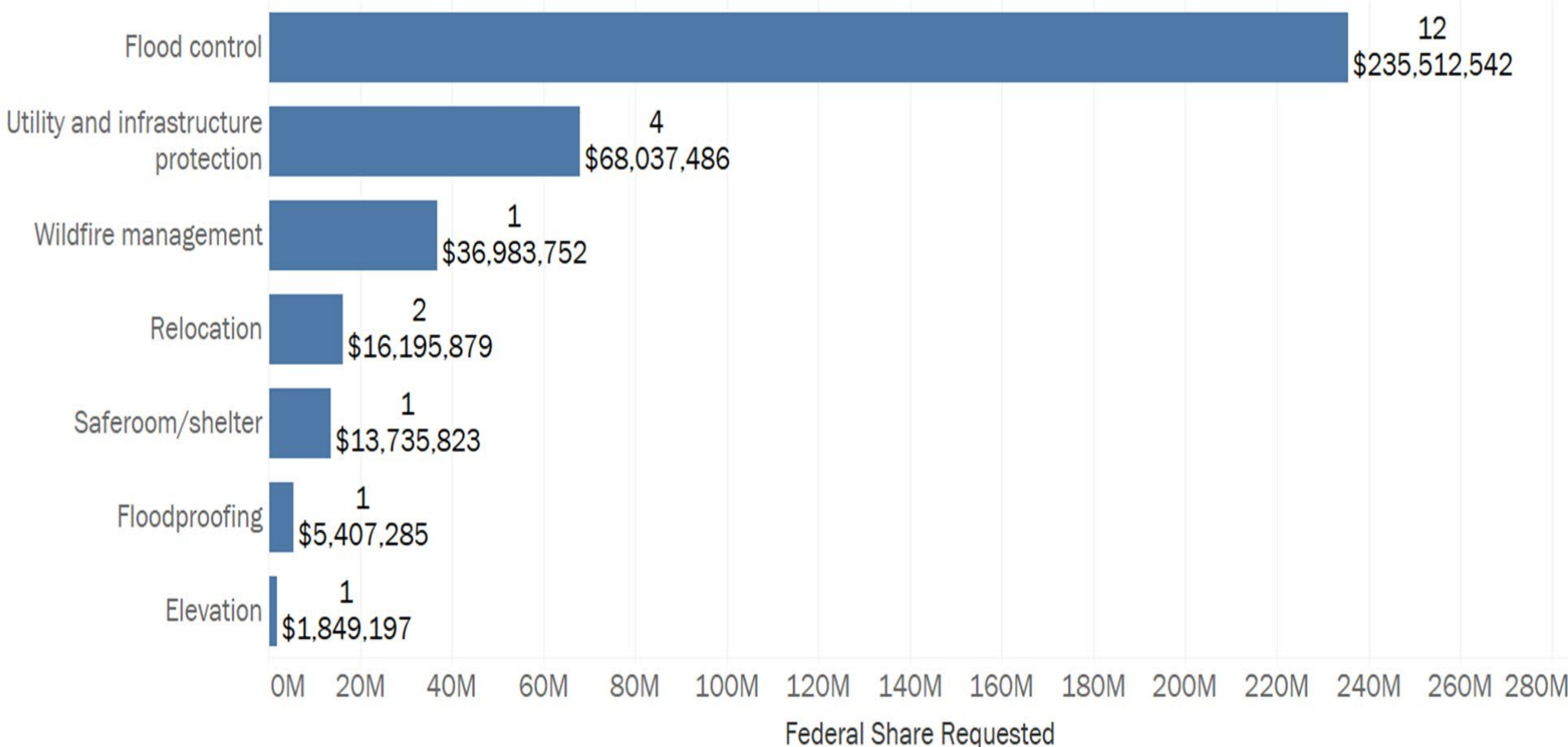


# BRIC – National Competition Selections

FY 2020 BRIC Program:

- 22 Selections
- 10 States
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Competitive Selection by Primary Activity

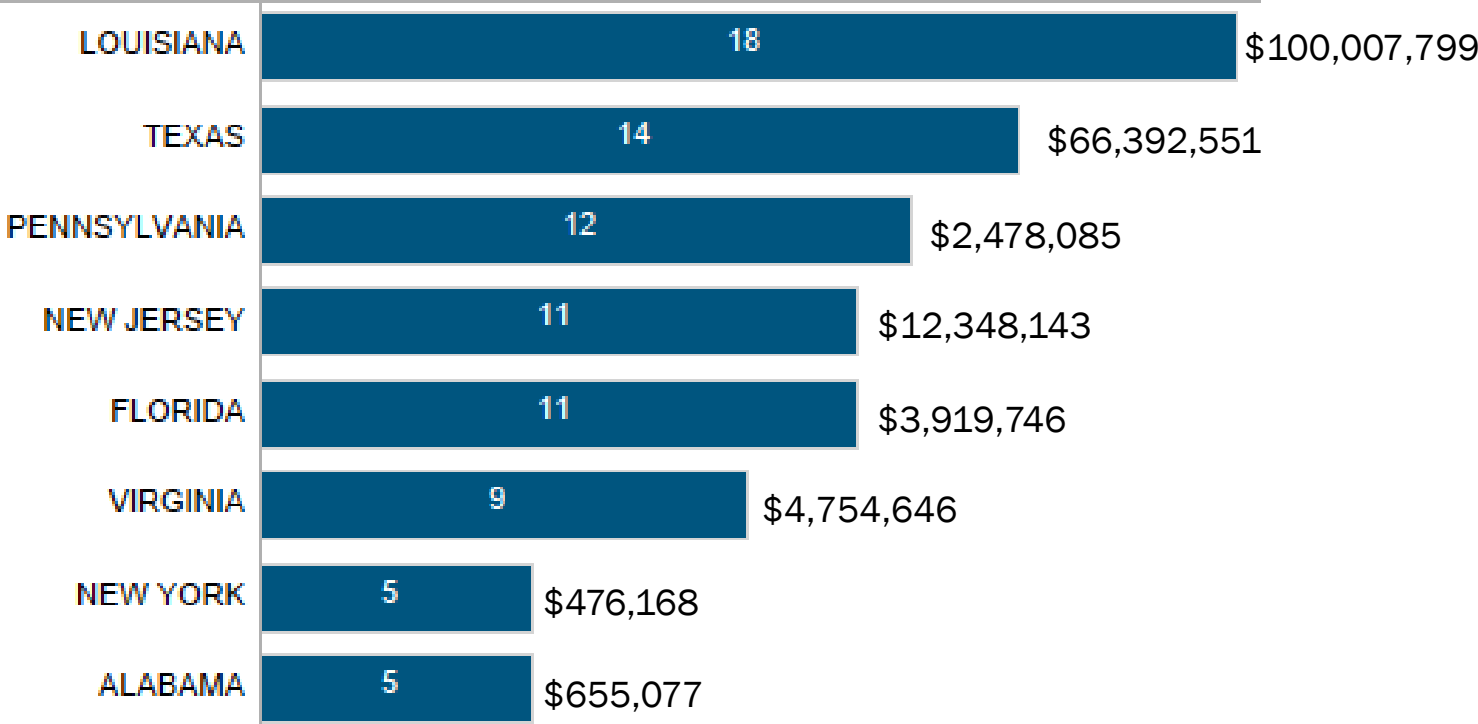


# FMA Selections Dashboard

FY 2020 FMA Program:

- 117 Subapplications
- \$239,912,510 Total Subapplication Costs
- \$199,947,302 Federal Share Requested
- 85% Average Federal Cost Share
- 100 Communities
- 510 Severe Repetitive Loss/Repetitive Loss Properties

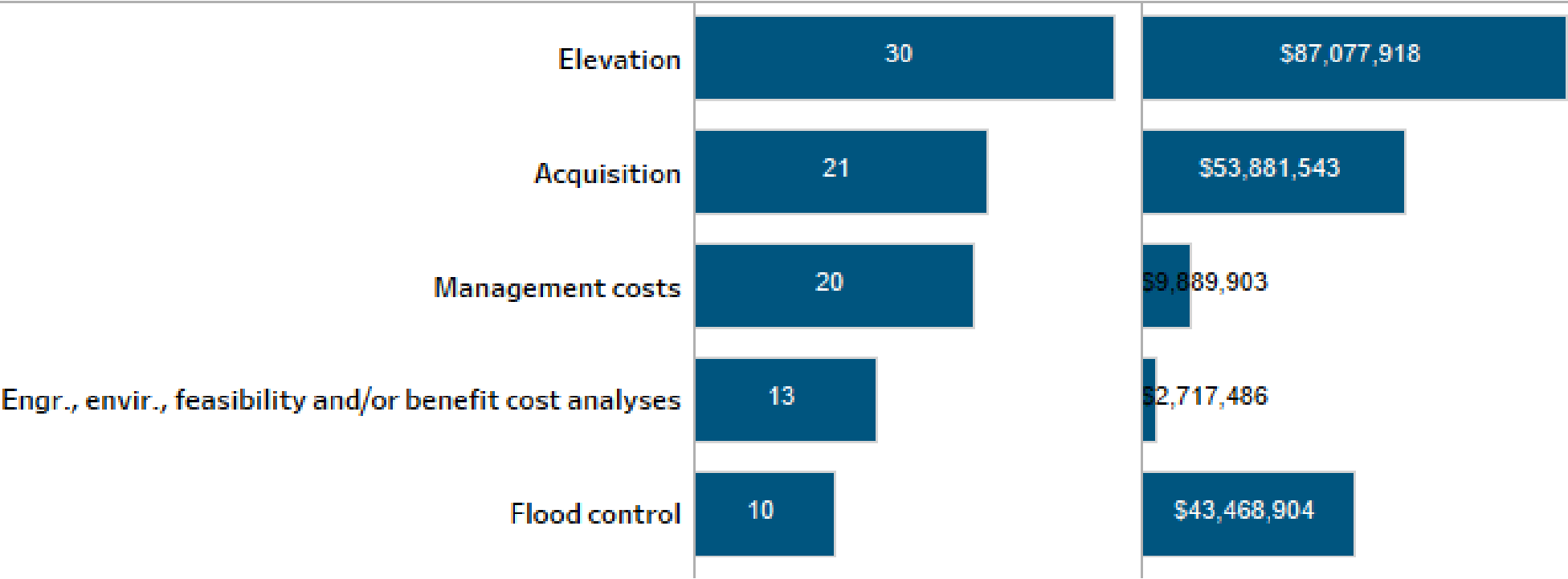
## Subapplications by State



# FMA Selections Dashboard

Major project types include elevation, acquisition, management costs, scoping, and flood control.

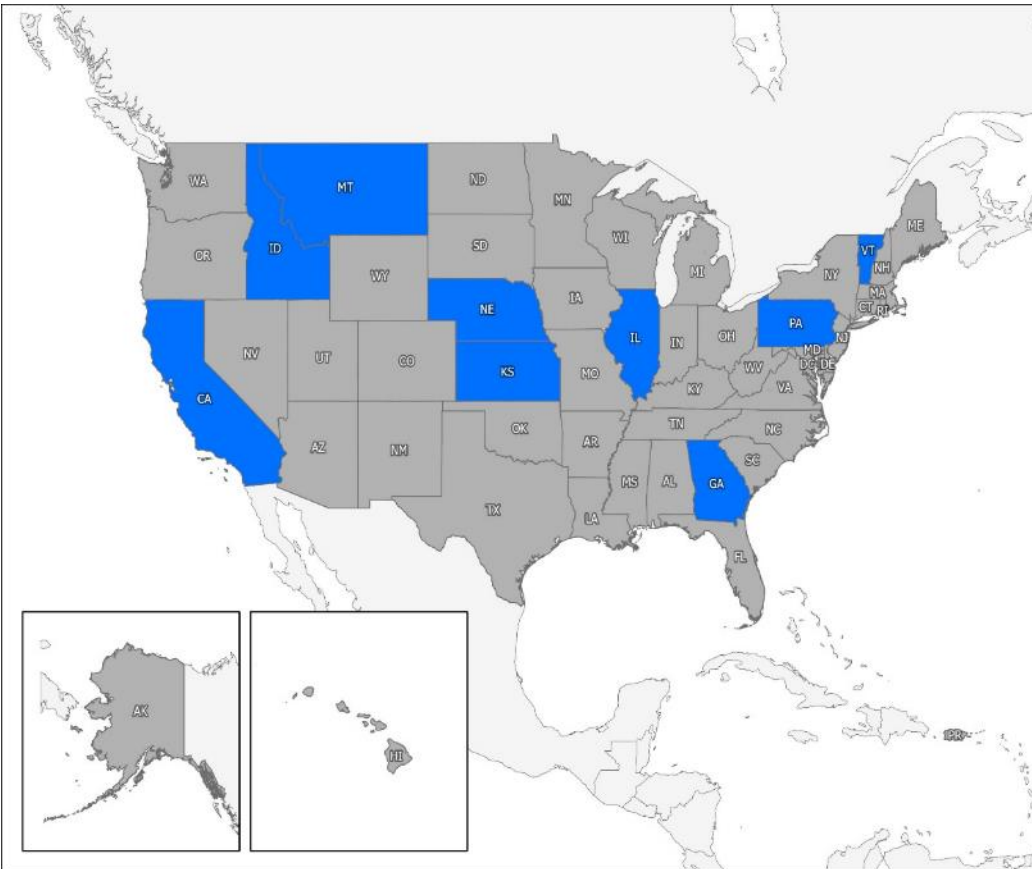
**Subapplications by Project Type**



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# FY 2020 BRIC Direct Technical Assistance Selections



Region	State / Tribe	Community	Project Type
1	Vermont	Town of Pittsfield	Project Identification/BCA
3	Pennsylvania	Railroad Borough	BCA
4	Georgia	City of Thomasville	Training/Project Identification
5	Illinois	Village DePue	BCA/Application Development
7	Iowa Tribe of Kansas and Nebraska	Iowa Tribe of Kansas and Nebraska	Project Scoping
8	Northern Cheyenne Tribe (Montana)	Northern Cheyenne Tribe	Grant Management Assistance
9	Morongo Band of Mission Indians (California)	Morongo Band of Mission Indians	Project Identification/Application Development/BCA
10	Idaho	City of Kamiah	Project Identification and Scoping/Application Development



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# FY 2020 Technical Criteria Overview



Infrastructure project



Mitigating risk to one or more lifelines



Incorporation of nature-based solutions



Applicant has mandatory building code adoption requirement  
(2015 or 2018 versions of International Building Code and International Residential Code)



Subapplicant has Building Code Effectiveness Grading Schedule Rating of 1 to 5



Application generated from a previous FEMA Hazard Mitigation Assistance Advance Assistance award



Increased non-federal cost share



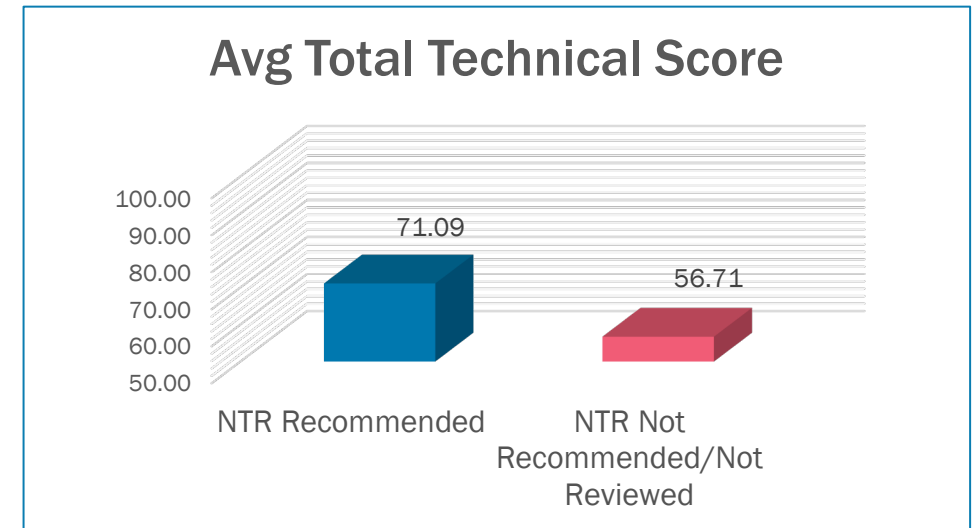
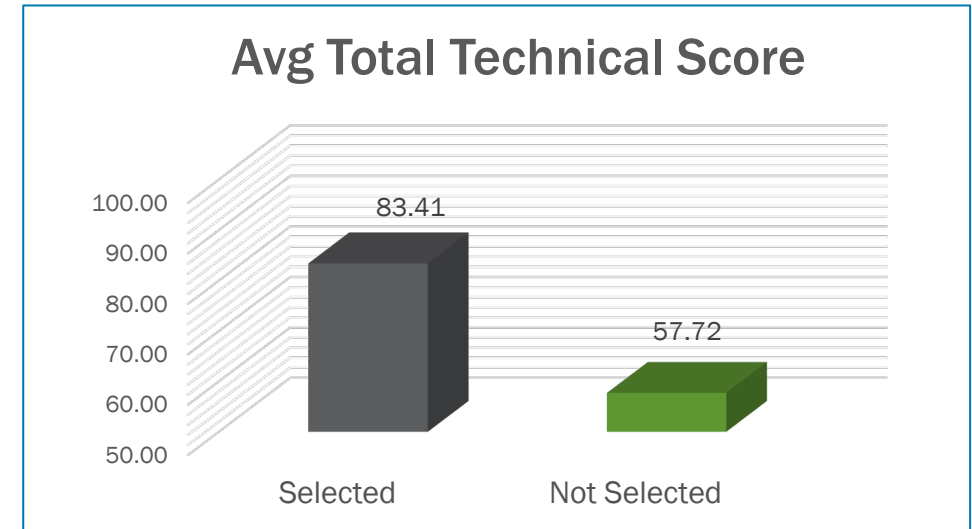
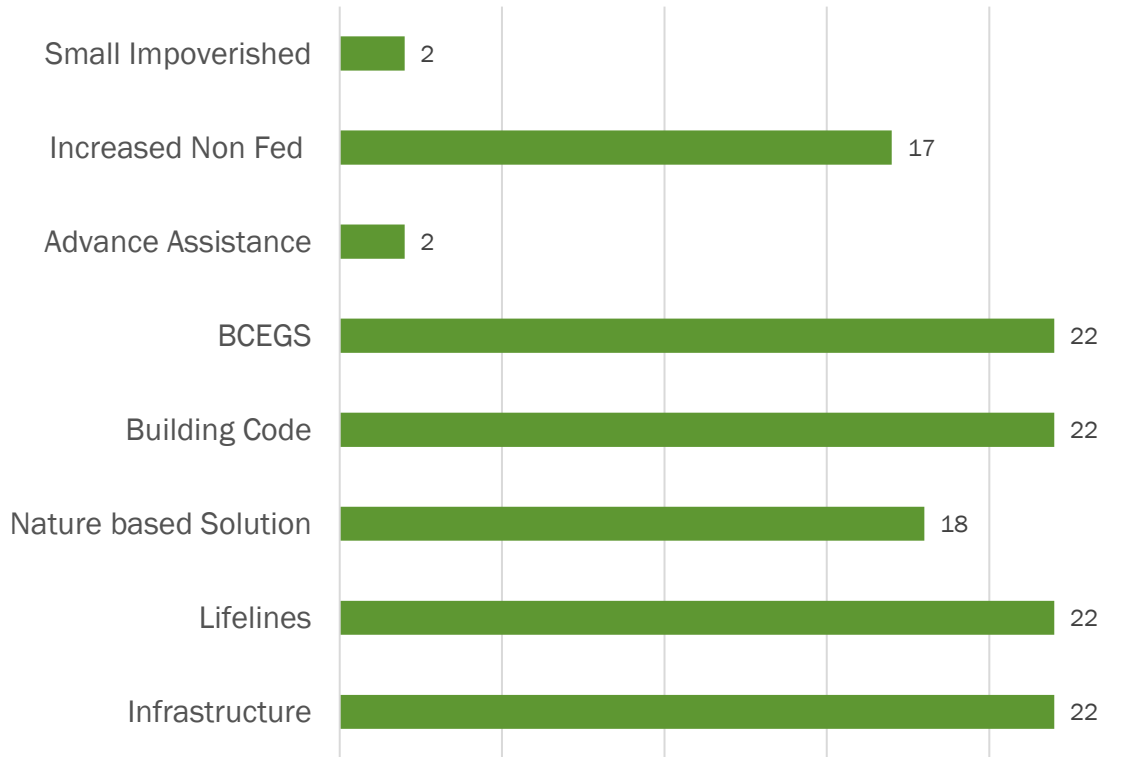
Designation as a small impoverished community



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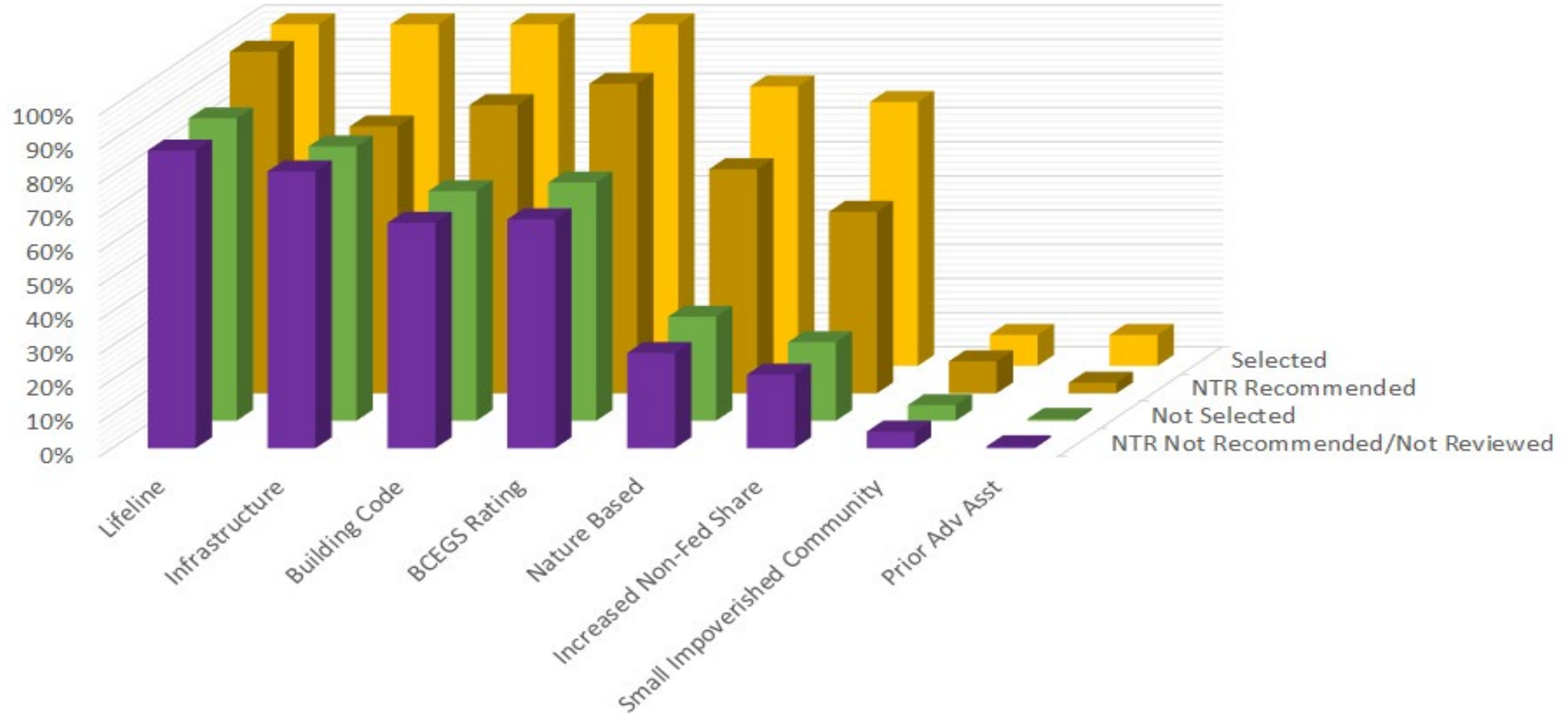
# Scoring: Technical Evaluation Criteria

## TECHNICAL EVALUATION CRITERIA: SELECTED 22

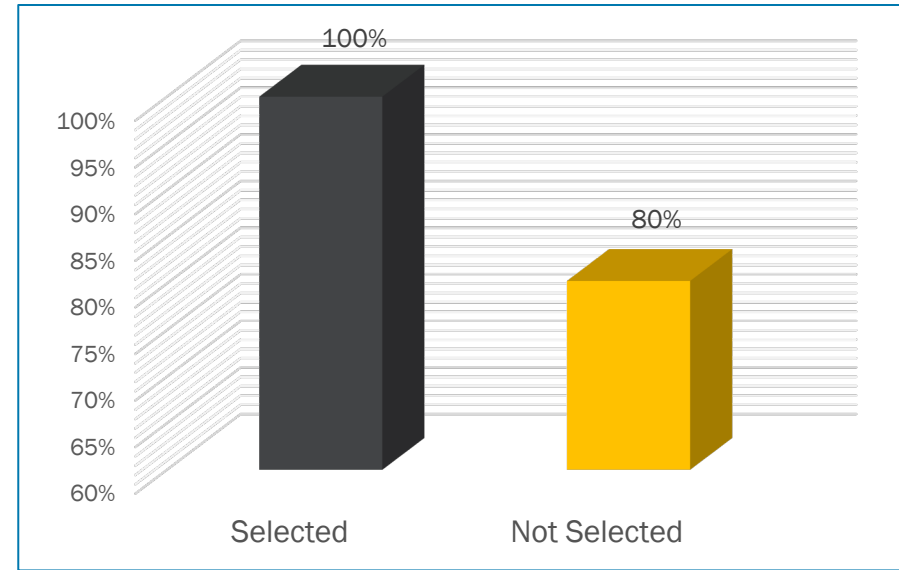
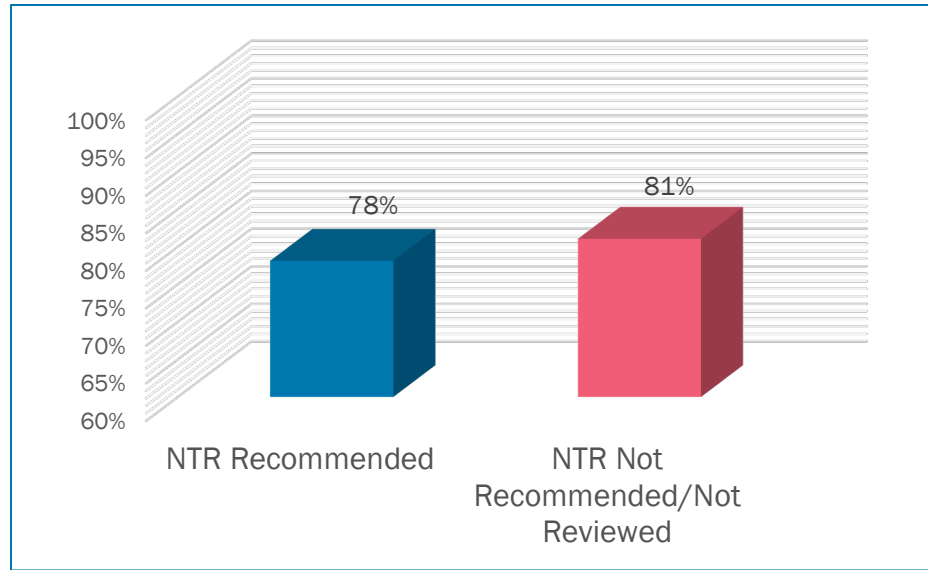


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# Scoring: Technical Evaluation Criteria



# Scoring: Infrastructure Comparison



Ferry Dock Refurbishment



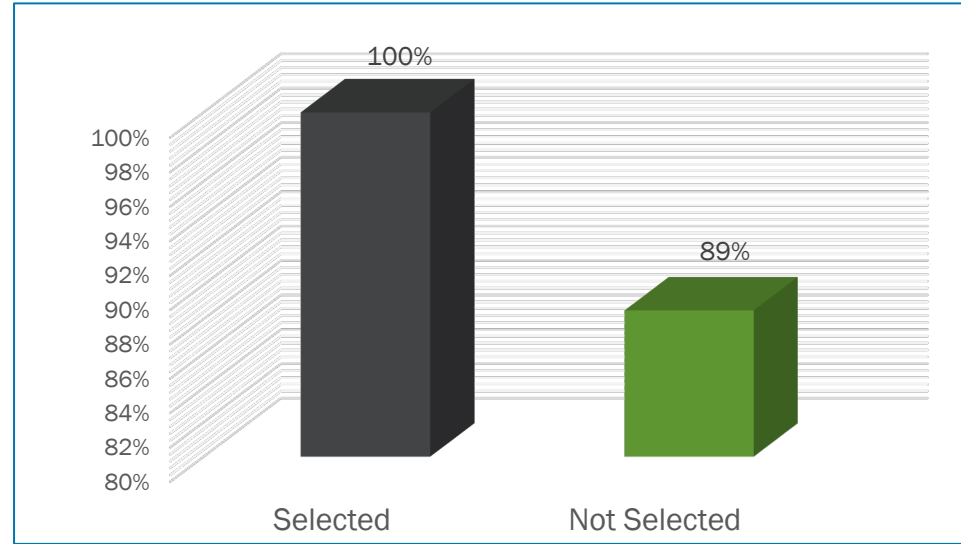
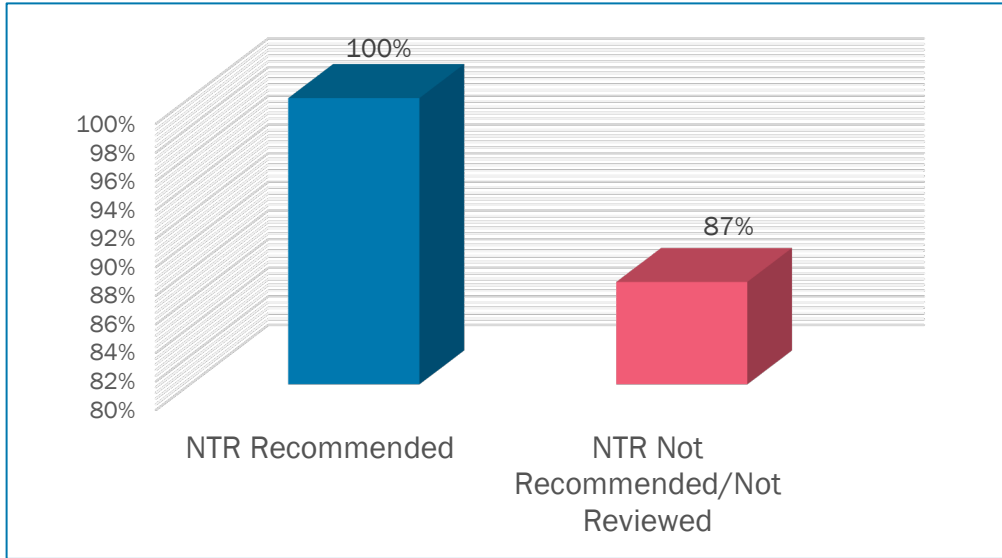
Culvert Restoration



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# Scoring: Lifeline Comparison



Vertical Evacuation Structure



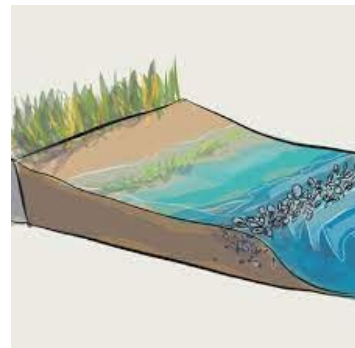
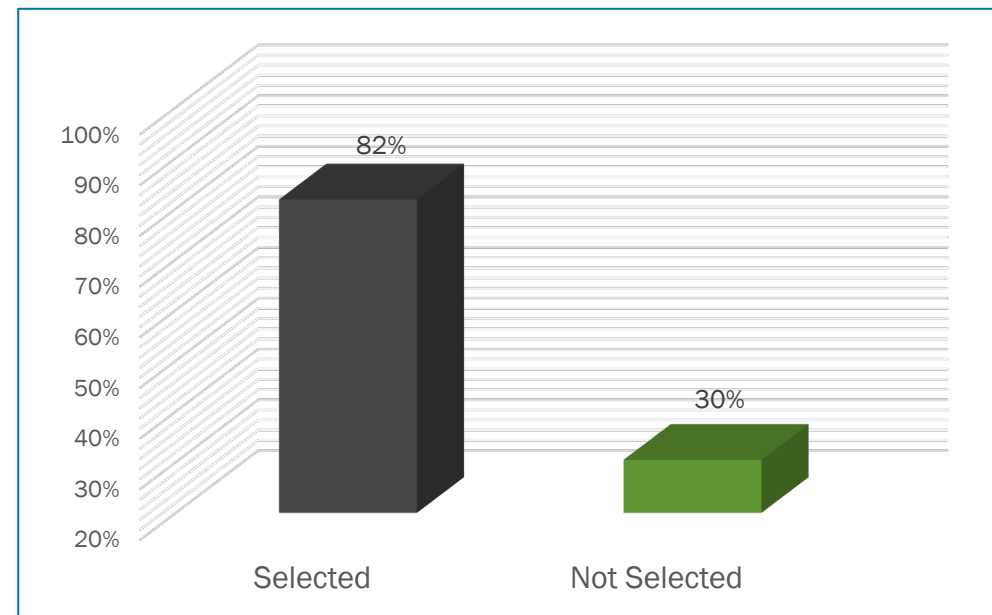
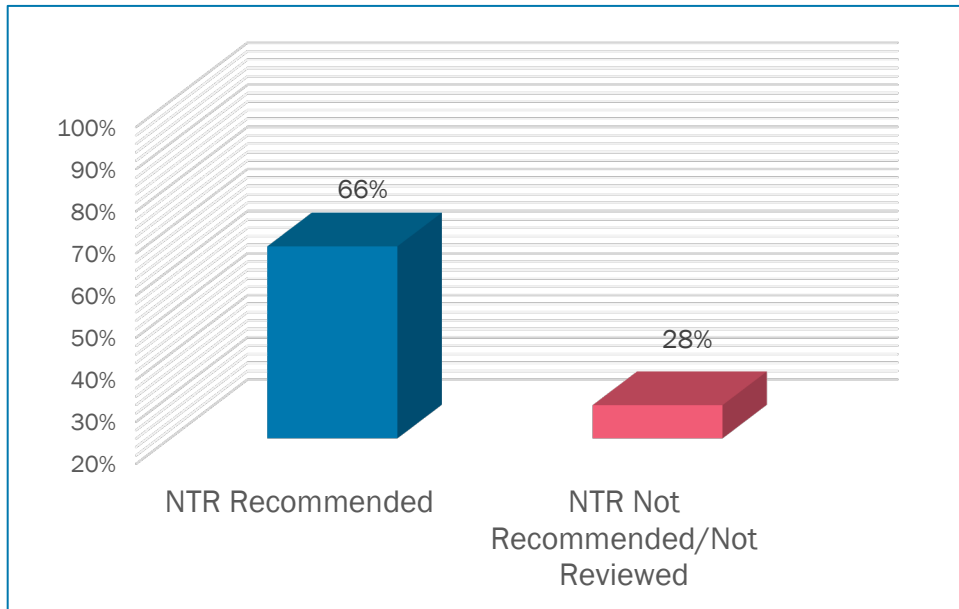
Water Treatment Plant



FEMA



# Scoring: Nature-based Solutions Comparison



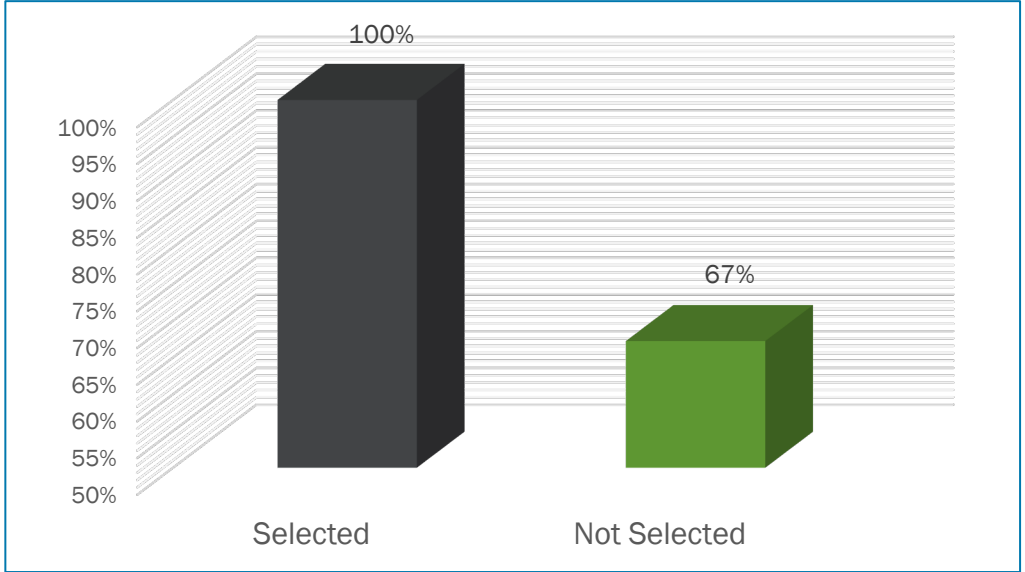
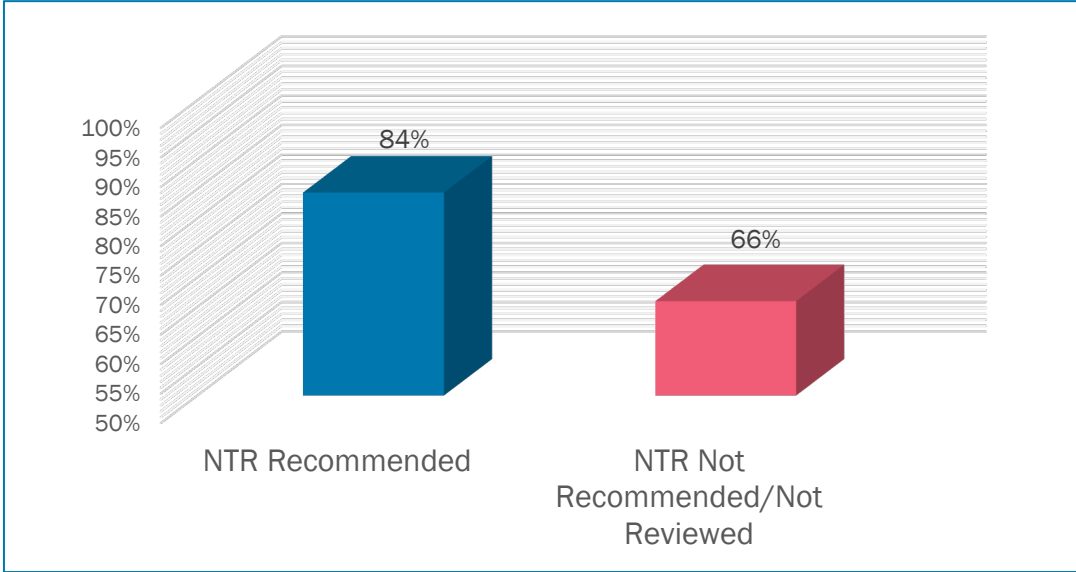
FEMA

Federal Emergency Management Agency



Applicant has mandatory building code adoption requirement (2015 or 2018 versions of International Building Code and International Residential Code)

# Scoring: Building Codes Comparison



Government Building Seismic Retrofit



Earthquake Damage from Unreinforced Masonry

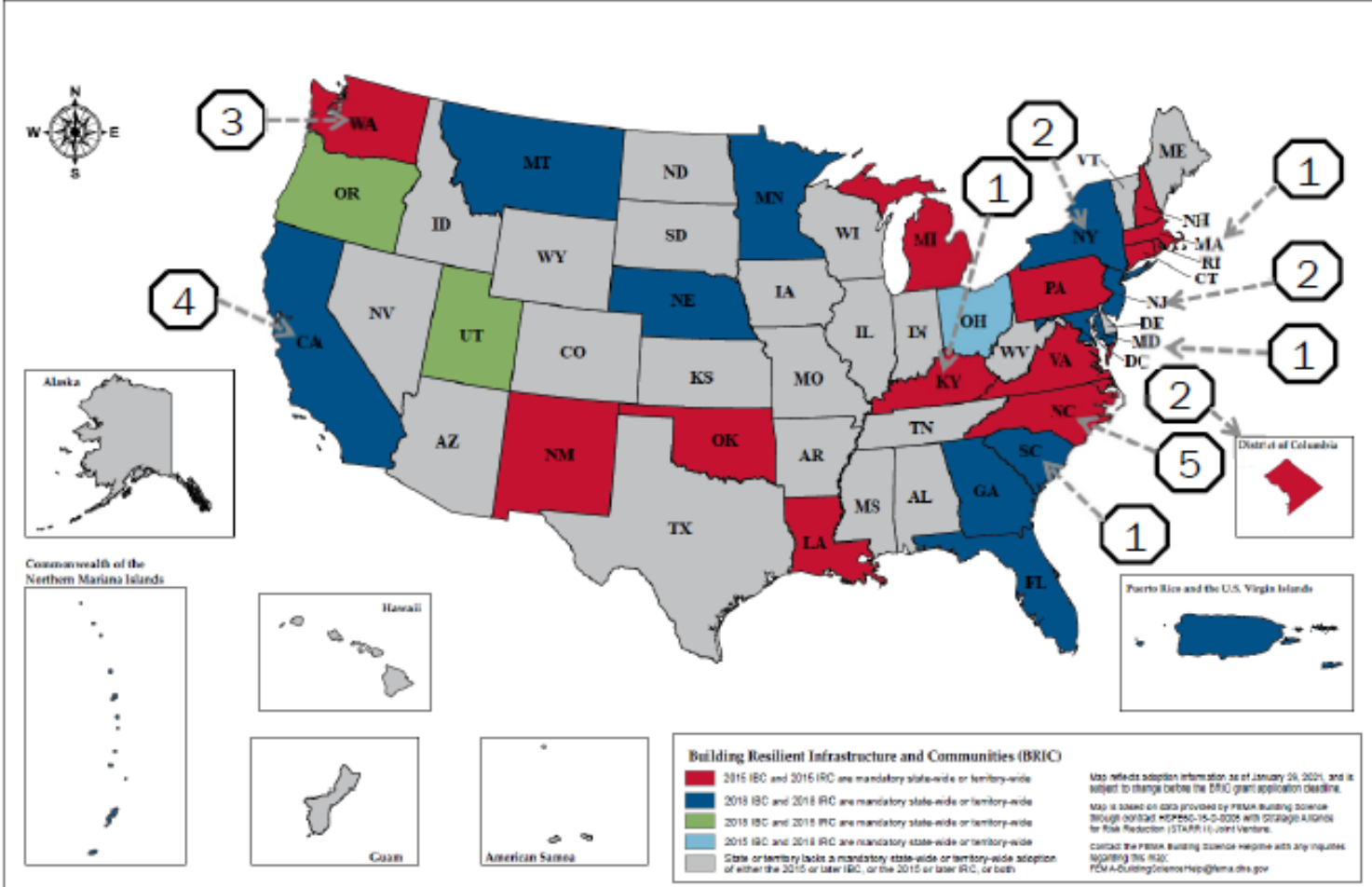


# BRIC and Building Codes

# Number of projects selected

These states, territories, and commonwealths received points for building codes.

These states, territories, and commonwealths did not receive points for building codes.

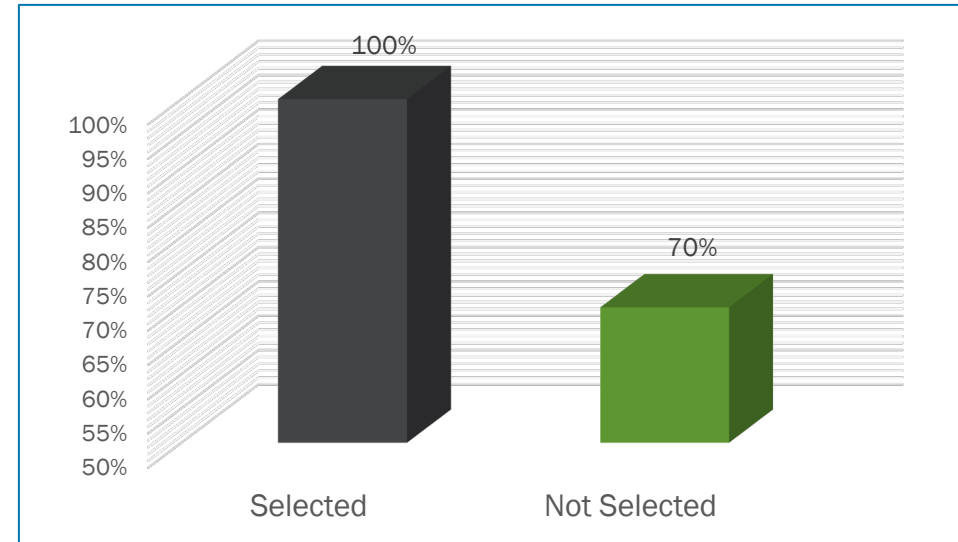
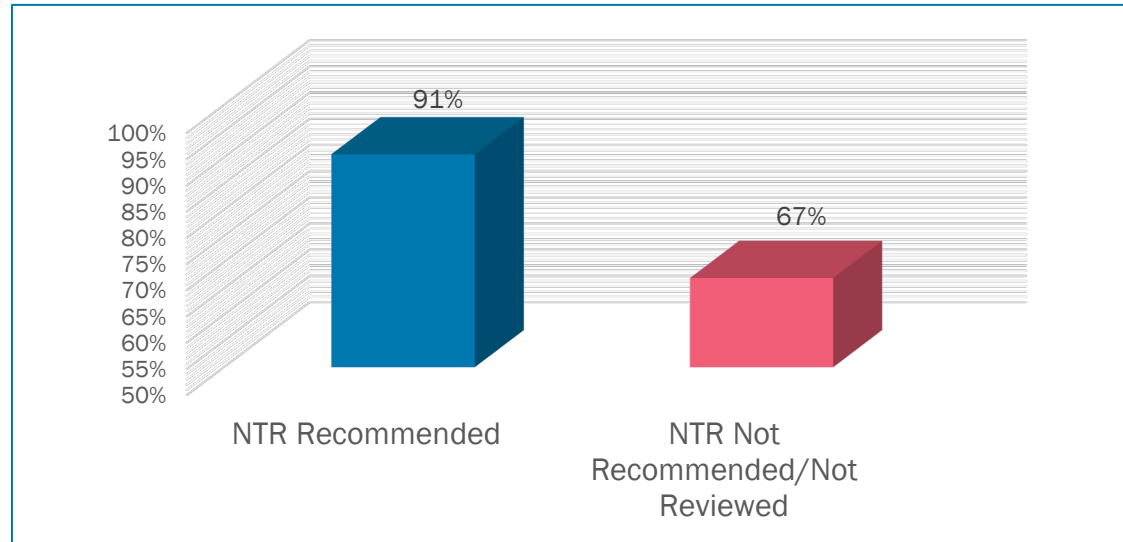


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Subapplicant has Building Code Effectiveness Grading Schedule Rating of 1 to 5

# Scoring: BCEGS Comparison



## Let Building Codes Save You from Earthquakes

Findings from across the nation indicate the adoption and enforcement of modern seismic-resistant building codes since 2000 indicates an average annual savings of \$60 million. California and Washington account for 87% of the nation's total savings.



# FEMA

<https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes-save-study>

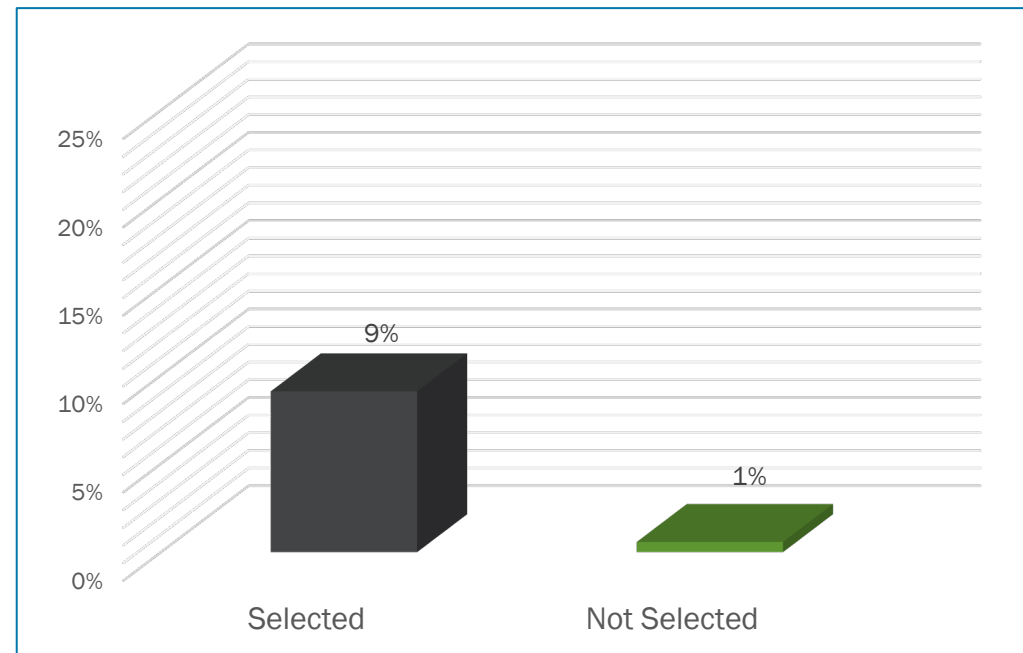
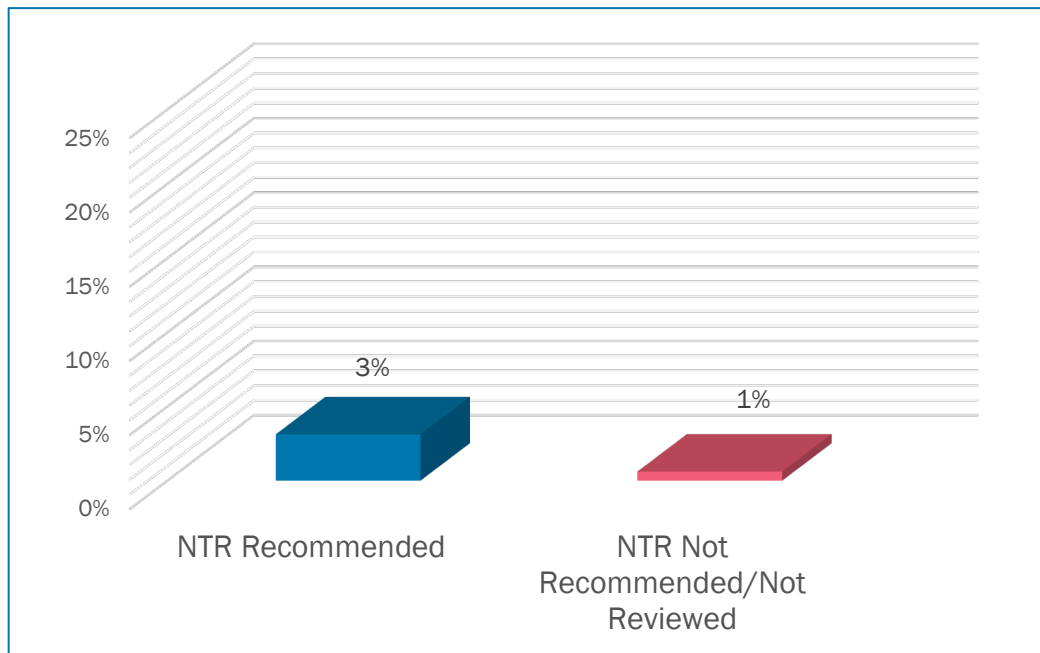
Federal Emergency Management Agency





Application generated from a previous FEMA Hazard Mitigation Assistance Advance Assistance award

# Scoring: Prior Advanced Assistance Comparison



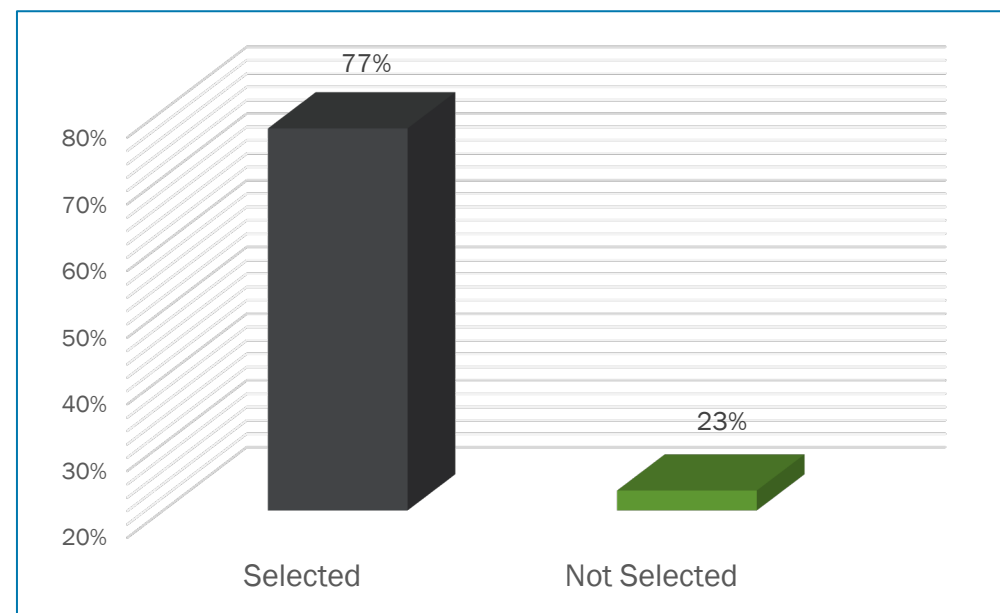
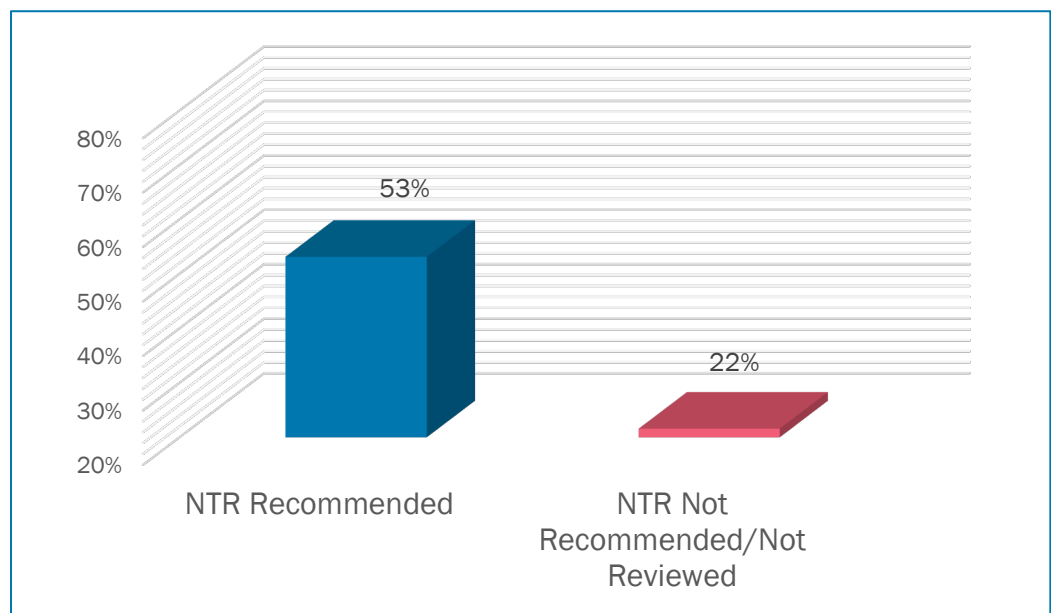
**FEMA**

5 points



Increased non-federal cost share

# Scoring: Increased Non-federal Share Comparison



San Francisco Bay Levee Overtopping



# FEMA

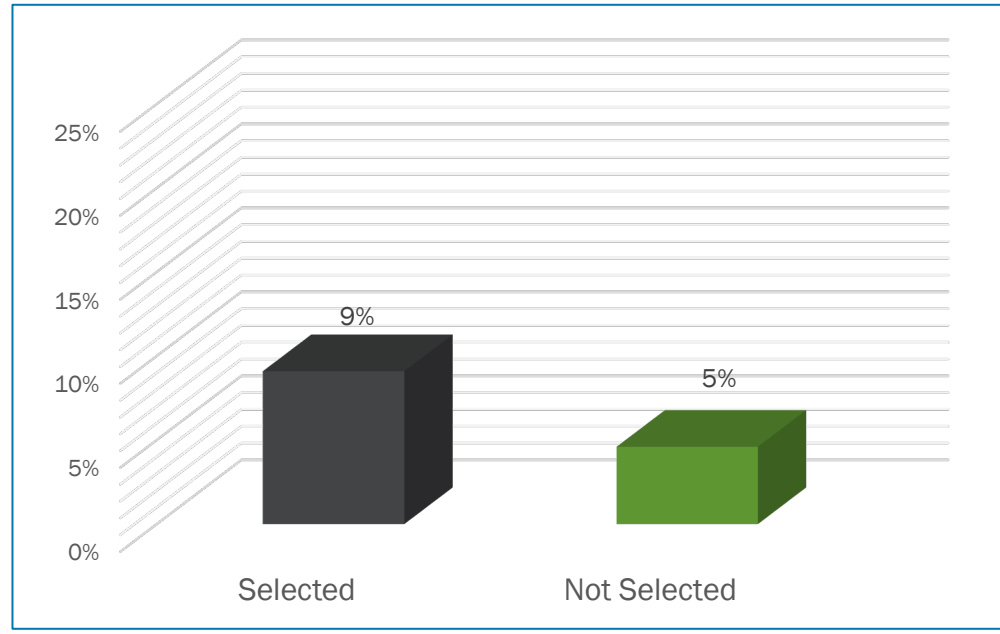
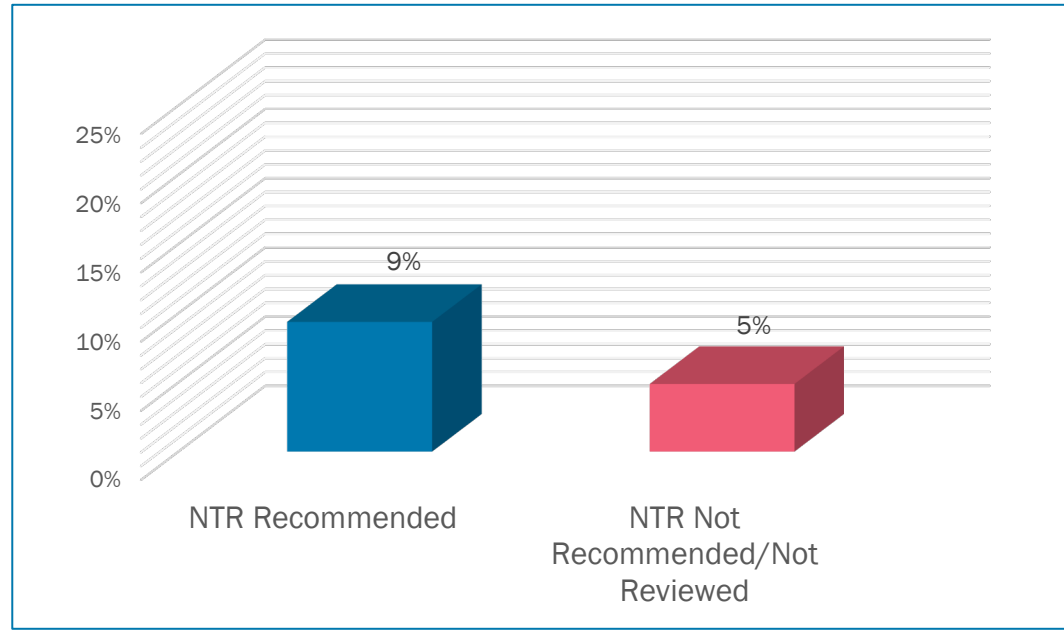
Federal Emergency Management Agency

5  
points



Designation as a  
small impoverished  
community

# Scoring: Small Impoverished Community Comparison



Hurricane Matthew Flooding



FEMA

Federal Emergency Management Agency



# FY 2020 Qualitative Criteria Overview



**Risk Reduction /  
Resiliency Effectiveness**



**Future  
Conditions**



**Implementation  
Measures**



**Population  
Impacted**



**Outreach  
Activities**



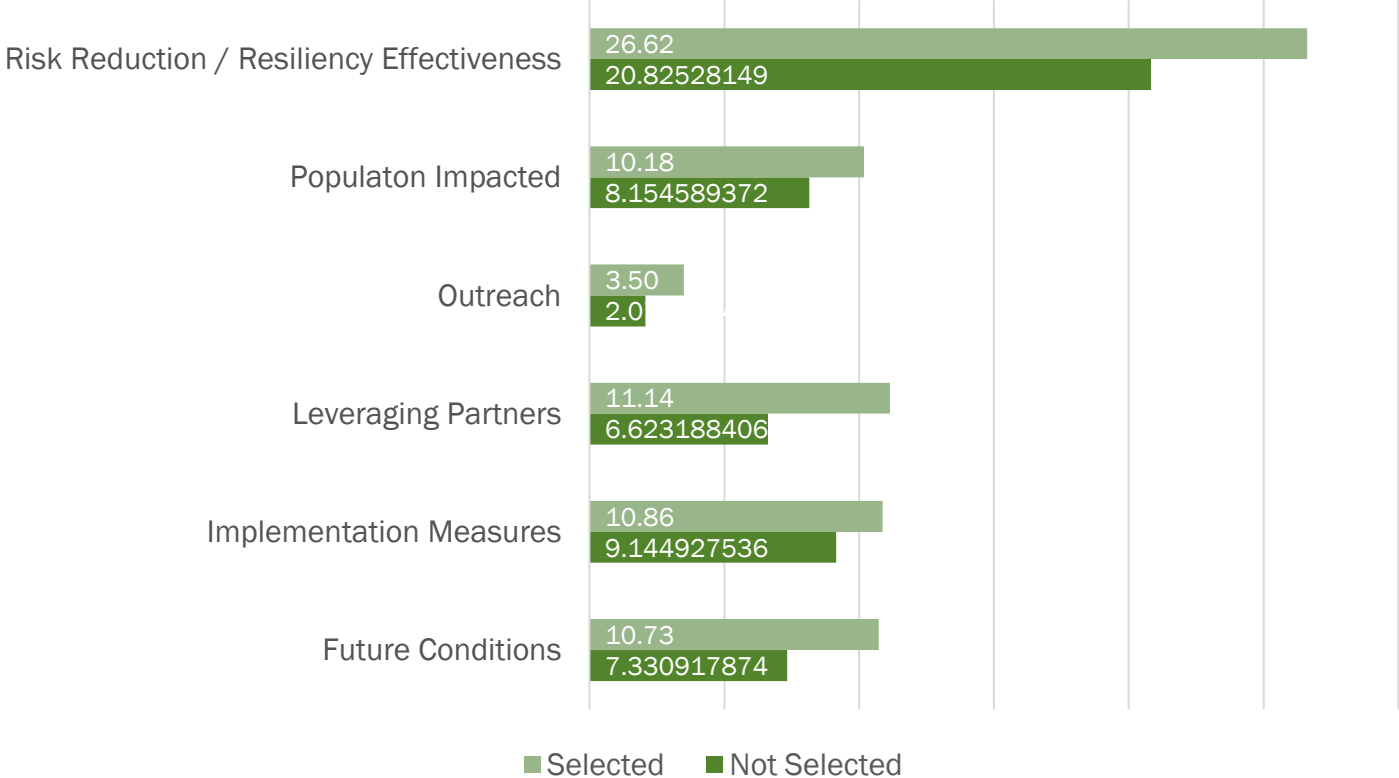
**Leveraging  
Partners**



**FEMA**

# Scoring: Qualitative Panel Scores

SELECTED VS. NOT SELECTED SCORES



Areas of improvement for those not-selected are:

1. Risk-Reduction/Resiliency Effectiveness
2. Leveraging Partners
3. Future Conditions



# Key Takeaways

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- **National Technical Reviews (NTR)**
  - All projects that advanced to NTR received the lifeline points
  - Nearly 80 percent of the projects in NTR received infrastructure points
  - Building codes and building code enforcement were additional important trends for projects in NTR
  
- **Selections for Further Review**
  - Of the 64 NTR projects that were recommended for further review, 22 were selected for further review
  - Of those 22, 100 percent received lifeline, infrastructure, building code adoption, and building code enforcement points
  - 82 percent of the selections had nature-based points and 77 percent had increased non-Federal share
  - For small impoverished, only 2 of the 22 projects received these points
  - For qualitative scoring, risk reduction, population impacted, implementation measures, and leveraging partners were important variables for selected projects



# Flood Mitigation Assistance Eligibility Requirements

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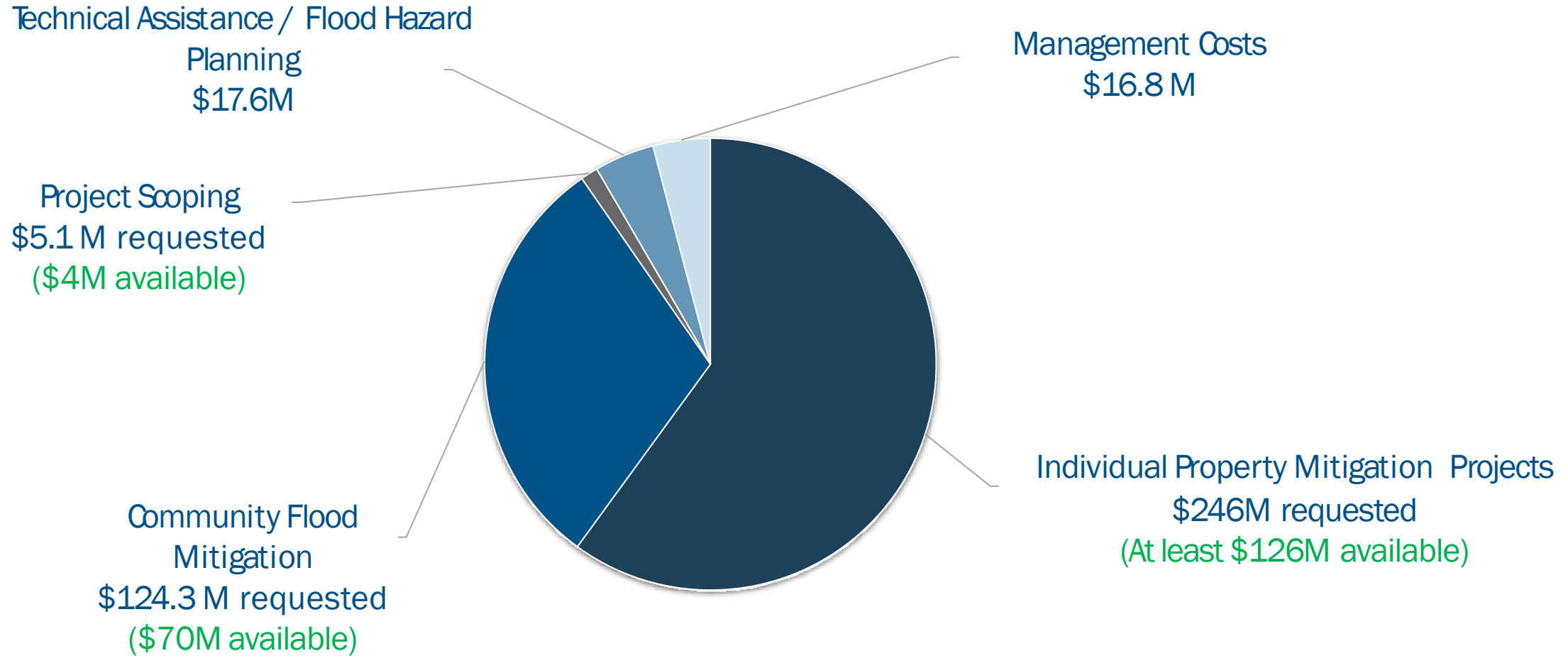
- All Applicants and subapplicants must have a FEMA-approved Local or Tribal **Hazard Mitigation Plan** by the application deadline AND at the time of obligated funding
- Subapplicants must also **participate** in the **National Flood Insurance Program (NFIP)** (Not on probation or suspended)
- All structures included in the project subapplications must be **insured** under the NFIP (Before, During, and After)



# Fiscal Year 2020 Funding



# Top 5 FMA Project Types by Federal Share Requested



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# FMA Year Over Year

Submissions	FY20		FY19		FY18	
	Count	Federal Share	Count	Federal Share	Count	Federal Share
Project Scoping	29	\$5,062,237	28	\$3,445,993	18	\$1,395,871
Community Flood Projects	35	\$140,848,239	20	\$60,606,164	33	\$112,250,427
Technical Assistance	5	\$312,500	4	\$187,500	7	\$312,498
Planning	9	\$416,336	8	\$152,288	8	\$181,917
Flood Mitigation Projects	130	\$228,946,668	145	\$229,603,893	131	\$181,298,765
Other (Generators)	-	-	2	\$352,382	-	-
Management Costs	28	\$22,952,743	27	\$11,936,589	25	\$9,211,929
<b>TOTAL</b>	<b>236</b>	<b>\$398,538,723</b>	<b>234</b>	<b>\$306,284,809</b>	<b>222</b>	<b>\$304,651,408</b>

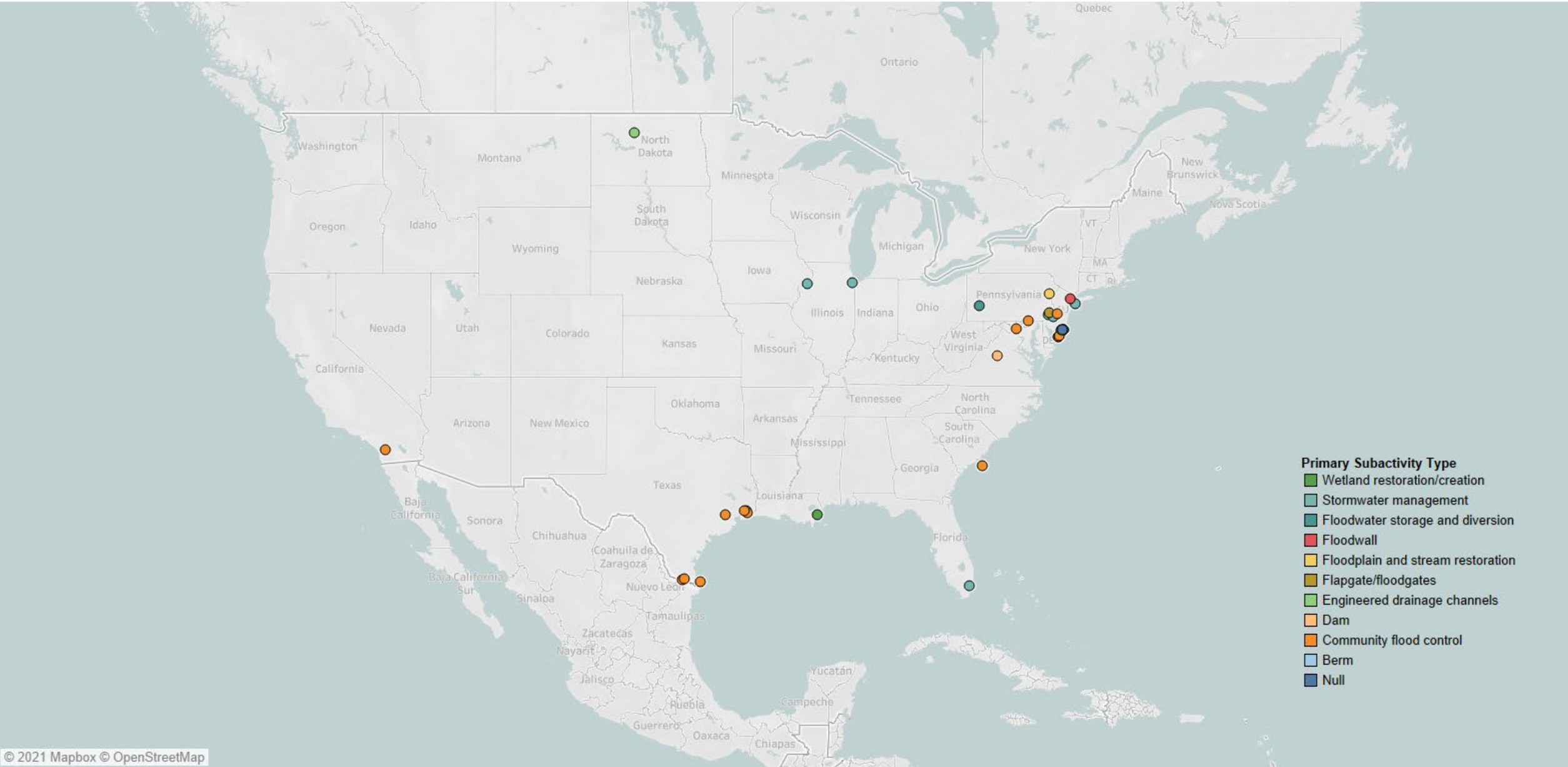
Selections	FY20		FY19		FY18	
	Count	Federal Share	Count	Federal Share	Count	Federal Share
Project Scoping	22	\$3,931,756	18	\$2,509,311	15	\$1,245,014
Community Flood Projects	10	\$43,468,904	4	\$20,612,859	8	\$33,783,583
Technical Assistance	3	\$150,000	4	\$187,500	7	\$312,498
Planning	6	\$192,499	8	\$152,288	7	\$157,542
SRL/RL Projects	56	\$142,314,241	90	\$178,114,397	58	\$88,654,843
Remaining NFIP Projects	-	-	-	-	15	\$25,577,066
Management Costs	20	\$9,889,903	21	\$8,111,023	20	\$9,211,929
<b>TOTAL</b>	<b>117</b>	<b>\$199,947,302</b>	<b>145</b>	<b>\$209,687,378</b>	<b>130</b>	<b>\$158,942,476</b>



# FY20 Flood Mitigation Assistance

\$200 Million Appropriated - Submissions

## Community Flood Mitigation Project Subapplications

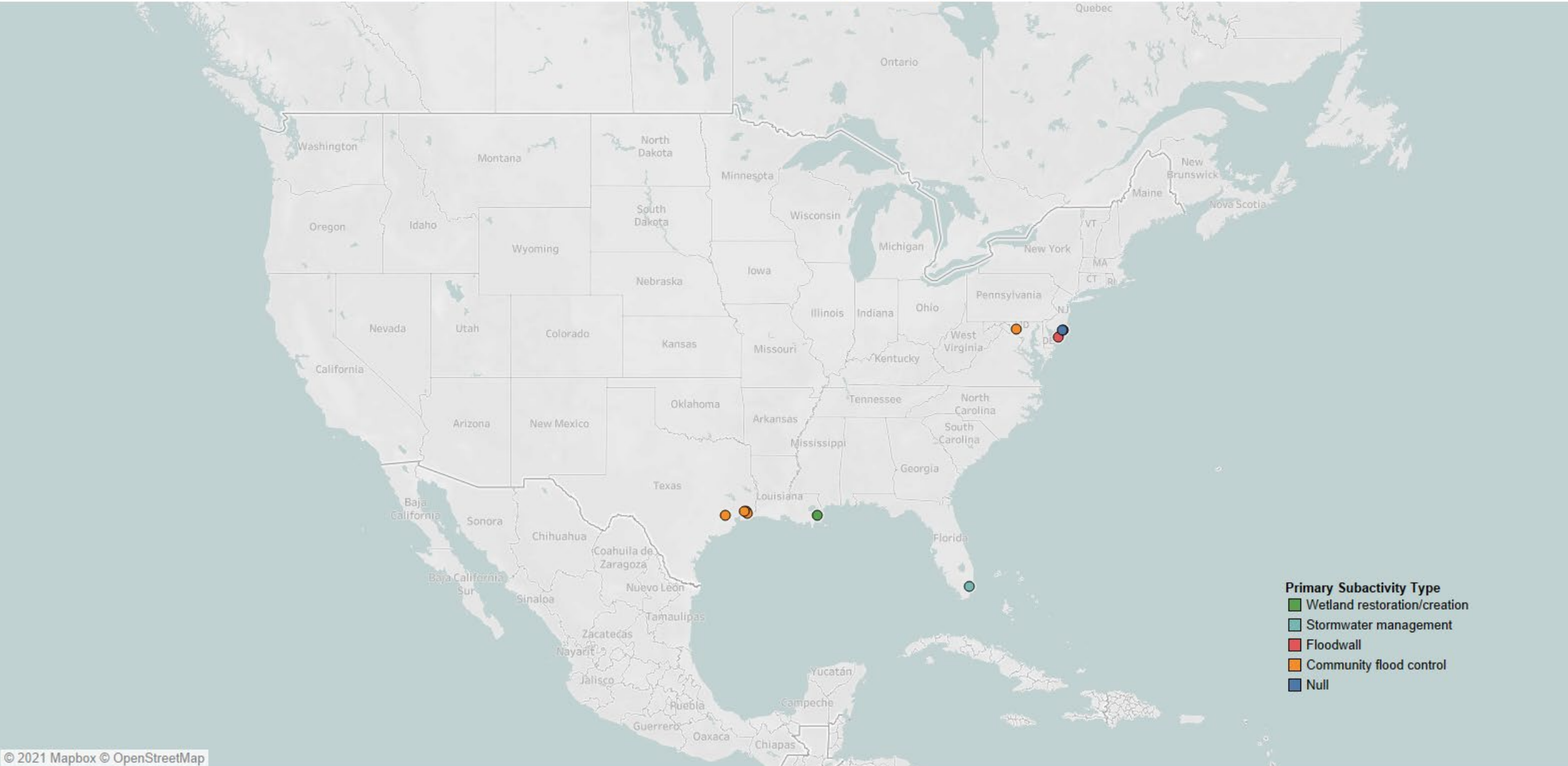


- Primary Subactivity Type**
- Wetland restoration/creation
  - Stormwater management
  - Floodwater storage and diversion
  - Floodwall
  - Floodplain and stream restoration
  - Flapgate/floodgates
  - Engineered drainage channels
  - Dam
  - Community flood control
  - Berm
  - Null

# FY20 Flood Mitigation Assistance

\$200 Million Appropriated - Selections

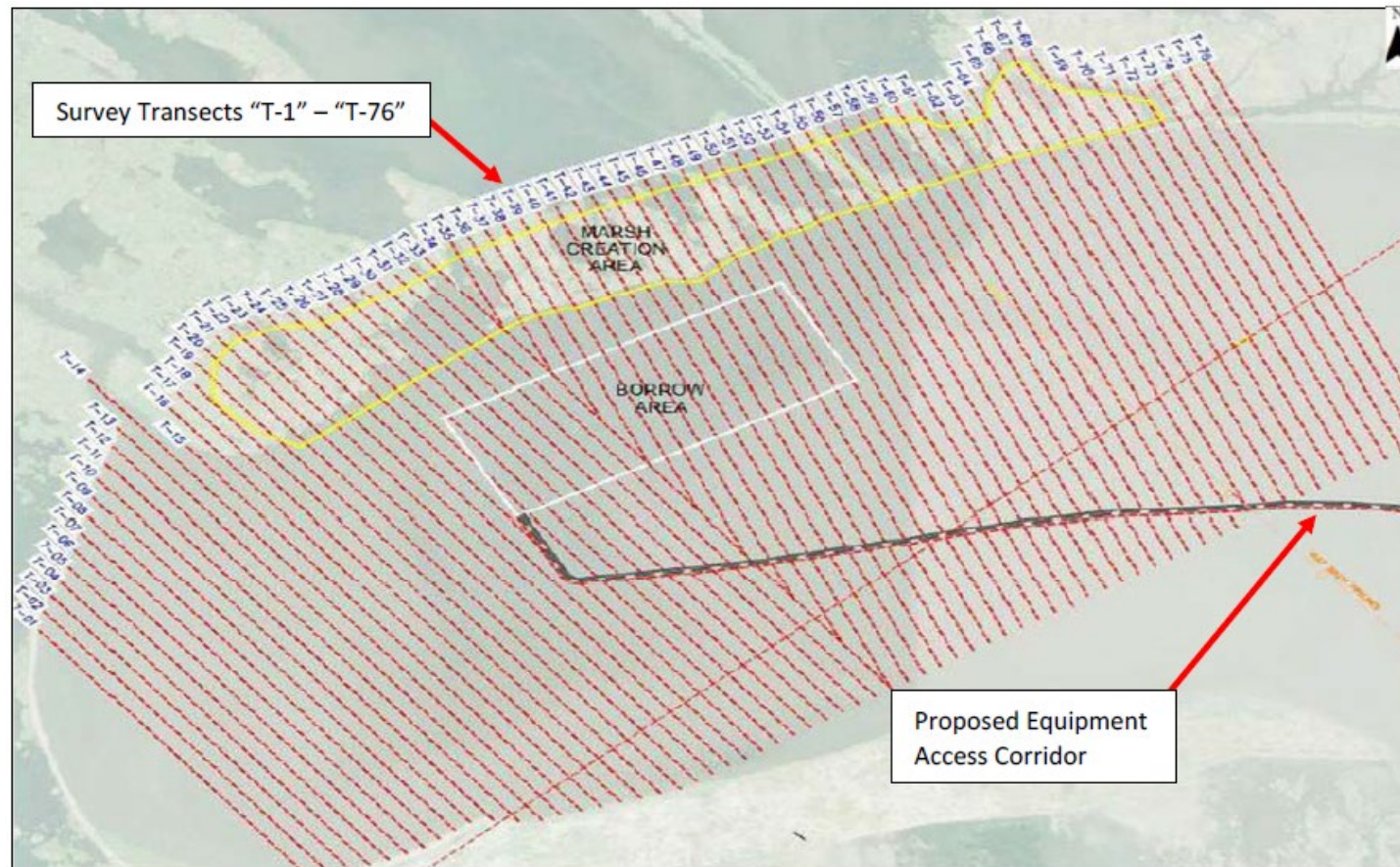
Community Flood Mitigation Project Subapplications





# Lake Lery Marsh Creation and Rim Restoration Phase III Project Saint Bernard Parish, Louisiana

Marsh Creation | Est. Cost \$19,793,231 | Fed Share \$14,931,161



## Benefitting Area

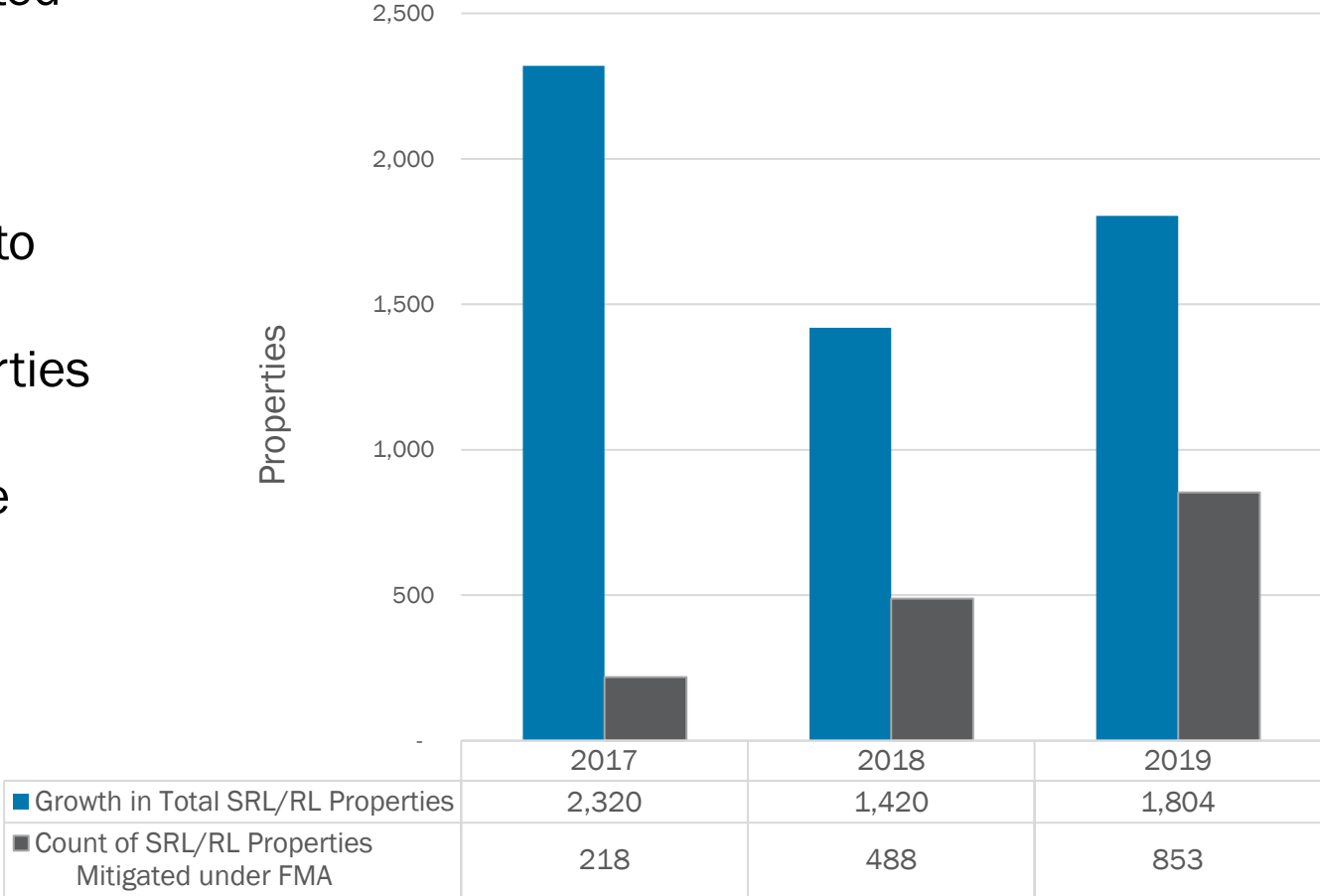
NFIP Policies	11,340
Repetitive Loss Properties	134
Severe Repetitive Loss Properties	357

Figure 6. Survey Extents

# FMA Program Funding Trends

- Since 2016, FMA has been appropriated \$175M per year of which \$160M is available
- Approximately \$500M need annually to effectively mitigate the year-over-year growth of SRL/RL NFIP-insured properties
- Approximately \$7B needed to mitigate approximately 28,000 SRL/RL NFIP-insured properties

FMA Mitigated vs Year-Over-Year Growth of SRL/RL Properties



# Summary and Lessons Learned for FMA and BRIC

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- The FMA program continues to mitigate severe repetitive loss and repetitive loss properties insured by the National Flood Insurance Program and continues to see growing demand for individual property mitigation and community flood mitigation projects
- The data show that key factors for BRIC competitive projects that were selected include building code adoption and enforcement, nature-based solutions, infrastructure, and lifelines
  - For qualitative scoring, risk reduction, population impacted, implementation measures, and leveraging partners were important variables for selected projects



**FEMA**

# Looking Forward: FY 2021 Notice of Funding Opportunity (NOFO)

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## BRIC

- Funding levels increased including:
  - Total funding increased from \$500 million to \$1 billion
  - State/Territory Maximum Allocation increased from \$600,000 to \$1 million
  - Funding available for planning and planning-related activities increased from \$300,000 to \$500,000 per applicant
  - Tribal Set-Aside increased from \$20 million to \$25 million
- Streamlining Direct Technical Assistance request process
- Equity updates
- Point allocations for technical and qualitative scoring changed

## FMA

- Funding levels increased including:
  - Total funding increased for the Project Scoping priority from \$4 million to \$10 million
  - Project Scoping cap split into two separate caps (for Community Flood Mitigation Projects and individual flood mitigation projects) and now at the subapplication level (previously \$600,000 per applicant)
    - Up to \$900,000 for community flood mitigation projects
    - Up to \$300,000 for individual flood mitigation projects
- Equity updates
- Project priority scoring

# 2021 BRIC and FMA Programs Webinar Series

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Date and Time	Webinar Topic
August 18 2-3:30 pm ET	Where Equity Fits into the BRIC and FMA Program Design and Community Resilience
To be determined	Severe Repetitive Loss/Repetitive Loss Mitigation Priorities
August 26 2-3:30 pm ET	BRIC and FMA FY 2021 NOFO Webinar #2
September 8 2-3:30 pm ET	BRIC FY 2021 NOFO Technical and Qualitative Criteria
September 13 2-3:30 pm ET	BRIC and FMA FY 2021 NOFO Tribal Webinar
October 13 2-3:30 pm ET	Federal Agency Roundtable



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# 2021 BRIC and FMA Programs Webinars and Office Hours

- Application Pitfalls Webinars:
  - September 1 and 20
- FEMA's Hazard Mitigation Assistance Division will hold office hours for the BRIC and FMA Programs on the following dates:
  - October 19, 21, 26, and 28



Full schedule of BRIC and FMA Programs Webinars available at:  
<https://www.fema.gov/grants/mitigation/2021-building-resilient-infrastructure-and-communities-and-flood-mitigation-assistance-programs>



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# Resources

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- [BRIC Website](#)
- [FMA Website](#)
- [FY 2020 BRIC Subapplication Status](#)
- [FY 2020 FMA Subapplication Status](#)

## Other Resources:

- Benefit Cost Analysis (BCA): [www.fema.gov/benefit-cost-analysis](http://www.fema.gov/benefit-cost-analysis)
- Hazard Mitigation Planning: <https://www.fema.gov/hazard-mitigation-planning>
- ISO Mitigation – Building Codes  
<https://www.isomitigation.com/bcegs/>
- FEMA GO – [www.fema.gov/grants/guidance-tools/fema-go](http://www.fema.gov/grants/guidance-tools/fema-go)
- Sign up for BRIC and HMA Updates:  
[https://public.govdelivery.com/accounts/USDHSFEMA/subscriber/new?topic\\_id=USDHSFEMA\\_477](https://public.govdelivery.com/accounts/USDHSFEMA/subscriber/new?topic_id=USDHSFEMA_477)



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