



FEMA Grants Overview:
Upcoming Opportunities
with BRIC, HMGP, & FMA
Simplifying the Complexities

Keren Bolter Climate Compact VA Workshop 8/18/2021

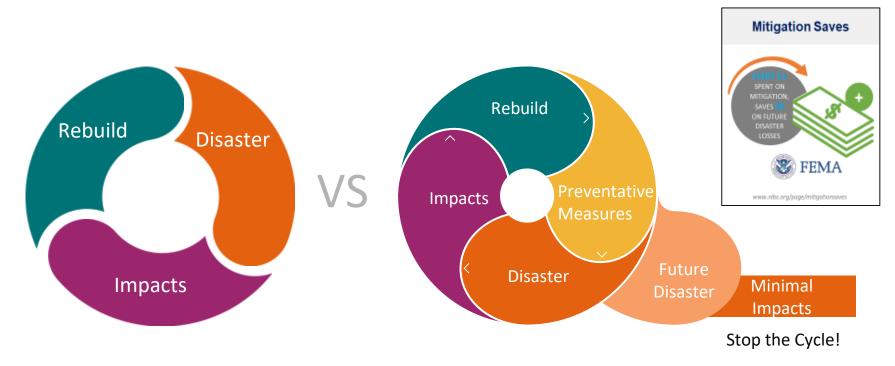


How can your VA process/results be leveraged to support funding its implementation?

- Before starting your VA, envision of how it will come to life
- Tailor the process to ensure that it will produce "FEMAready" projects
  - How can you make sure that the VA will ID eligible (cost effective) projects?
  - What information/processes will support any FEMA application?
  - What kinds of data should you already be collecting?



#### **ROI: The Business Case for Resilience**



Solution Oriented Approach

**Prevention Oriented Approach** 



# Our Approach to Funding

**FEMA- Ready:** Arcadis uses methodologies approved by Federal agencies so that the results of analyses may be used for future grant funding pursuits.



#### **PROVEN TRACK RECORD**

\$5B

in funding for resiliency projects over the last seven years

>20

years

Experience and accumulated capacity and knowledge in Federal, state, and local grants.





# **FEMA Funding in 2021/2022**

- \$3.46B in Hazard Mitigation Grant Program (HMGP) for COVID
  - \$188M for FL
- Flood Mitigation Assistance (FMA) (focus of repetitive loss)
  - \$160M announced for 2021
  - 117 of 236 applications awarded \$200M in 2020
    - 26 states did not submit.
- \$1B in Building Resilient Infrastructure and Communities (BRIC) (formerly PDM)
  - NOFO released Mon \$919k is for competitive projects (\$50k cap)



# **2021 Flood Mitigation Assistance (FMA)**





#### **BRIC FY2020 Lessons Learned**

- For the \$500M in Federal funding available, FEMA received 991 sub-applications requesting nearly \$4 billion in funding – competition is high!
- Most projects required adjustments to meet technical scoring criteria: nature-based solutions, increasing level of protection
- Phasing enables greater flexibility for projects that still need to go through full design and construction
- Starting early is critical to developing a competitive application





# **BRIC Scoring Criteria**



Technical Evaluation Criteria
Technical points will be awarded
as "all or nothing".



Rated on how well they address the prompts
Rated on a scale

Technical
Criteria

100 pts

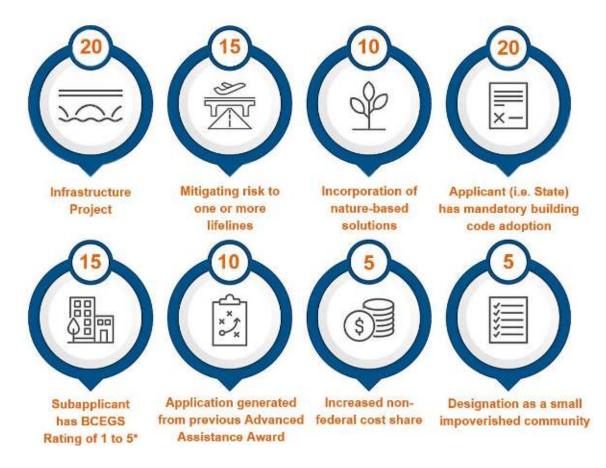
+
Qualitative
Criteria

100 pts

=
Total score
200 pts

Not at all	Minimally	Partially	Mostly	Entirely	Exceeds
0	7	14	21	28	35





# Technical Criteria



## **Qualitative Criteria**

Conditions

Resiliency

Effectiveness



**Impacted** 

**Activities** 

Measures

**Partners** 



# **Community Lifelines**

Lifelines are services communities use. Lifeline-focused mitigations projects could improve a wide variety of public, private and non-profit organizations.

















# **Eligibility and Competitiveness**

#### **Projects Must:**

- Be cost-effective
- Reduce/eliminate risk and damage from future natural hazards
- Meet latest two consensus codes
- Meet all environmental and historic preservation (EHP) requirements
- Align with Hazard Mitigation Plan











Improve Resilience

### **2020 BRIC**

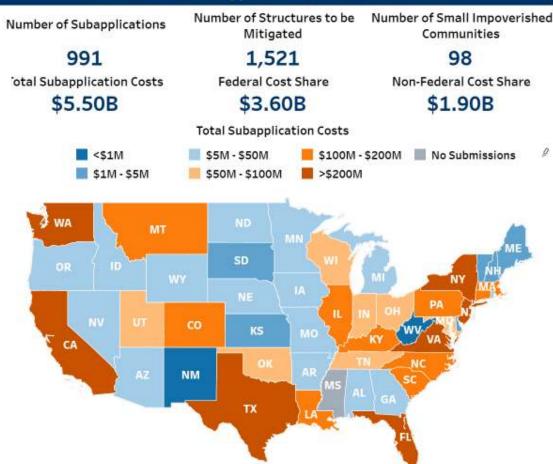
#### 22 Awards went to 10 States

- 12 Flood Control Projects
- 4 Utility and Infrastructure Protection
- 2 Relocation Projects

#### 1 of each of the following:

- Elevation (Roadway)
- Floodproofing
- Saferoom/Shelter
- Wildfire
- 568 applications were competitive
  - The rest were "allocations"
- 241 out of 293 Capability & Capacity Building applications were awarded
- 22 mitigation projects
  - 490 not selected out of 512

# Building Resilient Infrastructure Communities Fiscal Year 2020 Application Period Submissions



# 2020 BRIC in FL

# Mitigation 23

Projects Submitted:

# Awards: 6

Amount \$12

Requested 2.6 M

'

# Ineligible: 6

Building Codes Capacity Building	Selected	\$56,381
Pasco County - Indigo Ln - Acquisition Demolition	Selected	\$94,574
Pasco County - Fasano Regional Shelter Hardening	Selected	\$55,900
Public Works Generator Mitigation Project-Animal Care Protective Services	Selected	\$361,251
Pasco County - Senior Center Generator	Selected	\$262,500
Pasco County - Green Key Drainage	Not Selected	\$1,460,935
Pasco County-Thomas Blvd Acquisition	Not Selected	\$212,651
City of Panama City Emergency Response Center Codes Plus	Not Selected	\$1,030,188
City of Tamarac Water Treatment Plant Hardening	Not Selected	\$967,874
Charlotte County Leachate Plant Generator Project - LPGP	Not Selected	\$1,022,819
City of Homestead Power Grid Resiliency	Not Selected	\$5,207,401
K-8 School Central Basin	Not Selected	\$5,268,000
Human Services Generator Project	Not Selected	\$598,500
City of Port St. Lucie Flood Control Structures	Not Selected	\$3,915,941
Miami-Dade PHCD Ingram Terrace Comprehensive Residential Mitigation	Not Selected	\$794,632
Monroe County Twin Lakes Subdivision Road Mitigation Project	Ineligible	\$7,312,399
Data Center Generators	Ineligible	\$367,500
City of Miami Beach Maurice Gibb Memorial Park Seawall Mitigation Project	Ineligible	\$2,045,432
SFWMD Building Flood Resiliency at Critical Basins in South Florida: C-9 Basin	Ineligible	\$64,824,136
Miami-Dade Countywide Continuity of Operations Energy Resilience Project	Ineligible	\$28,980,001
SFWMD Building Flood Resiliency at Critical Basins in South Florida: C-7 Basin	Ineligible	\$62,295,863
Monroe County Sands Subdivision Road Mitigation Project	Withdrawn	\$8,659,364



# **2020 BRIC Competitive Awards**

	•		
State	Title	Project/Hazard Category	Award
	Central Street Bridge Improvements and Sawmill Brook Restoration, Culvert Retrofit &		
MA	Restoration	Drainage Improvements	\$4,484,673
CA	City of Rohnert Park Copeland Creek Detention Basin	Drainage Improvements	\$6,000,000
DC	Blue/Green Storm Water Flood Mitigation in Southwest Washington, DC	Green Infrastructure/N-B Solutions	\$18,612,178
CA	Central San Walnut Creek / Grayson Creek Levee Project	Levee or Other Large Flood Protection Structure	\$2,465,231
WA	North Shore Levee West	Levee or Other Large Flood Protection Structure	\$34,650,746
NY	Upper Minkel Dam Decommissioning & Riparian Corridor Restoration	Levee or Other Large Flood Protection Structure	\$1,050,000
NJ	New Jersey DEP Hudson River Floodwall Infrastructure and Resilience Park	Levee or Other Large Flood Protection Structure	\$22,517,000
DC	Saint Elizabeths Hospital & DC Emergency Communications Microgrid Project	Microgrid	\$19,948,639
	Lumberton Loop: A City-Wide Plan for Flood Mitigation, Restoration, and Recreation in		
NC	Lumberton, NC	Other Planning/Assessment	\$1,927,179
KY	Frankfort Mero Flood Pump Station (CSO) Renewal and Relocation	Pump Station	\$10,543,961
NC	Hickory Snow Creek Pump Station Relocation and Hardening	Pump Station	\$3,540,939
NJ	New Jersey Meadowlands East Riser Ditch Pumping Station and Channel Improvements	Pump Station	\$36,000,000
WA	Westport Vertical Evacuation Structure	Safe Room	\$13,735,823
NY	NYC Parks -Tottenville Shoreline Protection Project	Streambank/Shoreline Restoration/Stabilization	\$19,822,053
NC	Town of Duck Living Shoreline and NC 12 Resiliency Project	Streambank/Shoreline Restoration/Stabilization	\$1,849,197
NC	Town of Princeville	Unknown/Other	\$10,968,390
CA	City of Menlo Park, Menlo Park SAFER Bay Project	Unknown/Other	\$50,000,000
MD	Middle Branch Resiliency Initiative - Stage I FINAL	Unknown/Other	\$31,924,193
NC	Hickory Northeast Wastewater Treatment Facility Hardening and Stream Restoration Project	Utility Protection	\$5,407,285
WA	Kittitas County Washington Waste Transfer Station Flood Mitigation	Utility Protection	\$12,654,940
SC	City of Columbia Resilient Water Supply Project	Utility Protection	\$32,635,784
CA	Wildfire Resilient Sonoma County - Nature-based Mitigation to Adapt in an Era of Megafires	Wildfire	\$36,983,752

16 August 2021 15





- Don't Stress! If something is missing, they don't just throw out the application, there will be an RFI and they will request info or ask Qs
- Social Determinants of Emergency Preparedness –
  - Show how you will prioritize and operationalize Equity

CDC Social Vulnerability Index (CDC SVI)

A tool to identify socially vulnerable communities GRASE



 AVOID any language on required maintenance, wear & tear repair/replacement work

> Focus on what will happen if a particular project isn't done & increasing level of protection





# **Eligible Projects**

#### **Flood Protection**

- Acquisition, floodproofing, retrofits, elevating structure
- flood control, floodwater storage and diversion, stream restoration, stormwater management
- wetland restoration/creation

#### **Other Hazards**

 Power outages, wind, fire, redundancy & more!

# Planning - Capability & Capacity Building

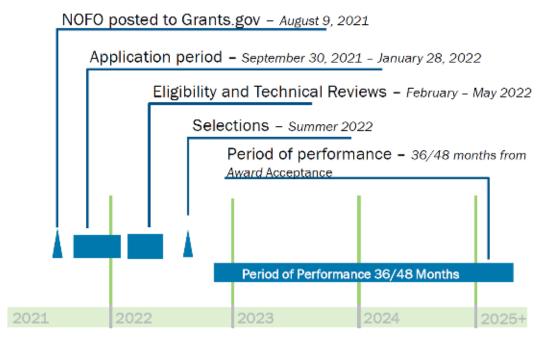
- Water Master Plan, Vulnerability Assessment, Asset Management
- Project Scoping and Application Development

#### **Infrastructure Mitigation**

- WTP upgrades
- Generators
- SCADA
- Booster and lift stations



#### **FMA/BRIC Mitigation Grants Timeline**



# **Logistics**

- How do you apply?
  - FEMA Go
- Is there cost share?
  - Yes 25% or more





# **Technical Due Diligence**

# Common technical justification required for funding applications

- Flow modeling
- Scope of work
- Detailed cost estimate
- Alternatives analysis
- Design drawings
- Permits
- Future condition projections

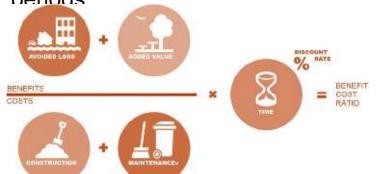
- Benefit-cost analysis
- Economic impact analysis
- Monitoring plans
- Environmental and Historic Preservation review



# **Benefit Cost Analysis**

#### FEMA's BCA Toolkit 6.0

- Modelled or Historic Losses
- Ex. Flooding FIS, SW Modelling, or high-water marks, repair invoices
- All about damages avoided before and after mitigation for various return periods



At a cost of \$70 million, the WR-RR levee will provide nearly \$119 million in benefits over its lifespan, protecting:







NEARLY 600 BUILDINGS

OVER 600 PEOPLE

NEARLY 400 WORKERS

#### Over its projected 50-year lifespan, the project will prevent an estimated:



\$358 MILLION IN PROPERTY DAMAGE



\$242 MILLION HUMAN HEALTH IMPACTS & LOST PRODUCTIVITY



\$22 MILLION IN RELOCATION COSTS



~\$15 MILLION IN DAMAGE TO PARK & UNIVERSITY FACILITIES

#### The levee's added-value benefits include:







PROPERTY VALUE INCREASES

ECONOMIC DEVELOPMENT

DIVERSE PARTNERSHIPS
COMMUNITY REVITALIZATION
EDUCATION AND AWARENESS





# Floodwall Project in VA



#### **Floodwall Specifics**

- 2k' long & ~16ft high
- Concrete floodwall 1ft above
   BFE
- \$8.7M Fed Share Selected
- Michael in 2018 caused lagoon submersion, equipment damage, and plant shutdown from 11ft of water that took 30 hours to recede
- Recent floods higher watermark



# Miami-Dade Water and Sewer Department HMGP Case Study

#### **What Does WASD Do?**

 Operates and maintains two critical assets – Pump Station 1 and 2 that serve over 800k residents combined.

# What Are the Risks to the Facilities?

 Wind, surge, stormwater, power loss, and subsurface intrusion into the wastewater collection system.

#### **Project Funding Allocations:**

- Applied and awarded funding and awarded under the Hurricane Irma (DR-4377) HMGP Allocation
- Phase 1 (~\$ 1.7M) Hydrology and Hydraulic Study, Design Engineering, and Permitting
- Phase 2 (~\$18.4M) Construction

FEMA Awards Miami-Dade County Over \$1.7 Million for a Wastewater Transmission System, Utility Protective Mitigation Project

Release date: june 14, 2019

Release Number: R4 DR-4337-FL NR 287

Orlando, Fla. – FEMA is awarding Miami-Dade County a \$1,780,624.50 Hazard Mitigation grant to fund the initial phase 1 of design and engineering a project to harden Pump Station 1 and Pump Station 2 located at 390 NW North River Drive, Miami, FL 33128 and 1075 Biscayne Boulevard, Miami, FL 33132, respectively.

These stations provide wastewater conveyance services to a direct service population of approximately 811,722 people.

Source: Miami-Dade Water and Sewer Department

# Study #3 Portsmouth Olde Town Stormwater Pump Station

[FMA FY19 // \$7.4M Fed Share \*Selected\*]

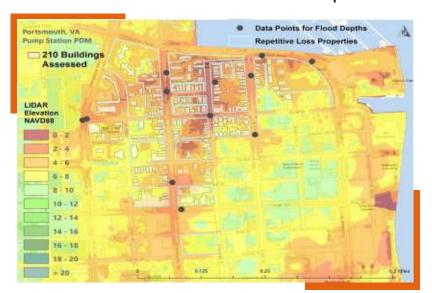




Portsmouth Olde Town Stormwater Pump Station

 Stormwater Pump Station Construction and Stormwater Improvements

Protection of RL and SRL Properties





#### Left:

Independent measures to protect structures from flooding

## **Important Resources**

Funding Nature-Based Solutions with FEMA Grants

 www.nature.org/content/dam/tnc/nature/en/documents/T NC NBS Guidebook-04-30-2021 LR.pdf

#### FEMA BRIC/FMA Webinar Series

- Only 1000 spots so register ASAP
  - <a href="https://femacqpub1.connectsolutions.com/content/connect/c1/7/en/events/catalog.html?folder-id=202865375&from-origin=fema.connectsolutions.com">https://femacqpub1.connectsolutions.com/content/connectsolutions.com/c





# 2021 BRIC and FMA

**Programs Webinar Series** 

Date and Time	Webinar Topic
August 16 2-3:30 pm ET	BRIC and FMA FY 2020 Data and Trends
August 18 2-3:30 pm ET	Where Equity Fits into the BRIC and FMA Program Design and Community Resilience
August 24 2-3:30 pm ET	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



If you miss them, the recordings get posted on the FEMA YouTube page





Dr. Keren Bolter, PhD, Funding Expert

PH: 954.881.1409

EM: Keren.Bolter@arcadis.com