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Mitigation Directorate
Federal Insurance and Mitigation Administration
Federal Emergency Management Agency
400 C Street SW
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July 15, 2019

Dear Sir or Madam:

On behalf of The Pew Charitable Trusts, we thank the Federal Emergency Management Agency (FEMA) for the opportunity to submit comments on the Building Resilient Infrastructure and Communities (BRIC) program developed under Section 1234 of the Disaster Recovery and Reform Act.

Historically, funding levels for pre-disaster mitigation have fluctuated dramatically and often failed to meet demand based on Congressional appropriations. BRIC offers the potential to provide a consistent and significant increase in funding for pre-disaster mitigation and to incentivize essential projects that reduce the risk posed by disasters, but only if the right guardrails are put in place. Therefore, we commend FEMA for undertaking a thorough process to ensure the program funds are spent in a way that reduces risk and costs in order to drive more community resilience.

Pew has a strong interest in promoting sound public policies aimed at reducing flood risk, ensuring adequate pre-disaster mitigation dollars are made available and effectively spent, encouraging smart decisions about how and where to build and rebuild, and promoting the use of natural infrastructure to accomplish these goals. We believe it is essential that the BRIC program prioritize mitigation strategies proven to improve and protect communities and their infrastructure from natural disasters. Because flooding is the most frequent and costliest disaster threat in the nation, many of our comments focus on strategies for addressing this particular hazard.

Pew encourages FEMA to integrate the following principles into BRIC to maximize the effectiveness of this important new program.

I. Priorities for BRIC

BRIC is a new mitigation program, not a new source of infrastructure funding

Pew believes that BRIC dollars should not simply replace or add to established infrastructure funding sources. BRIC funds should not be used simply to support the replacement of aging infrastructure or other needed investment in new roads, highways, public utilities, or other infrastructure. Rather, FEMA should ensure that funds awarded are directed specifically to pre-disaster mitigation efforts. While BRIC funding can be used to support and enhance the resilience of basic community infrastructure, including schools, hospitals, roadways, and utilities, all BRIC funding should support the overall objective of community resilience, as well as critical natural infrastructure, such as functioning floodplains, protective dunes, and sensitive wetlands.

Natural infrastructure should be a top priority

To help prepare the nation for flood disasters, the BRIC program must recognize natural functioning floodplains as fundamental flood protection infrastructure. In keeping with this priority, the Agency should also require grant applicants to evaluate the use of natural and nature-based infrastructure wherever feasible.

Projects that contribute to restoring or maintaining the natural storage capacity of floodplains can make communities more resilient and reduce damage caused by flooding. According to a [2017 study, for example](#), wetlands prevented an estimated \$425 million in property damage during Hurricane Sandy, and examples abound from across the country that show the beneficial effects of natural infrastructure. [In Massachusetts](#), during the 1970s the United States Army Corps of Engineers studied flooding along the Charles River and issued a report that recommended protecting undeveloped areas of the Charles' watershed as a cost-effective way to mitigate flooding in downstream areas. As a result, through acquisition of land through purchase or easement over a period of years, 8,095 acres of wetland and watershed were protected at a cost of \$8.3 million. Due to the strategic protection of these parcels of land within the 307 square mile watershed, over \$12 million in flood damages have been averted since the project was implemented.

In eastern Iowa, the [Iowa River Corridor Project \(IRCP\)](#) was created following the Great Flood of 1993. The goal of the IRCP was to provide mitigation options to landowners plagued by flooding and to reduce recovery costs from flooding through ecosystem-based solutions. Under a partnership involving the Iowa Department of Natural Resources (DNR), the Department of Agriculture's Natural Resource Conservation Service (NRCS), the U.S. Fish and Wildlife Service (FWS), and several nonprofit organizations, the FWS evaluated the wildlife and recreational potential of projects and agreed to purchase tracts of land to compensate farmers who choose to permanently stop farming fields in floodplains. These areas became part of the National Wildlife Refuge System, and much of the 50,000 acres of the Project have reverted into natural wetlands. In a state where 98% of wetlands have been converted to agriculture over the past 150 years, this is a significant development.

Projects like these, that remove structures or reduce activity in floodplains or that restore or offer lasting protections for wetlands, salt marshes, riverbanks, coastal dunes, and other natural features, can help mitigate against flood and storm damages while adding natural habitat for wildlife and community amenities such as parks and open space. As such, they are one of the most valuable forms of infrastructure – and can work in tandem with so-called gray infrastructure - and should be prioritized.

FEMA should continue support for projects that move people out of harm’s way

To address hazards from flooding, the Pre-Disaster Mitigation program has been an important source of funding for the acquisition of disaster prone or damaged properties, and the BRIC program should ensure that funding for these activities remains a top priority. This is particularly important for those areas where structural solutions may be limited or simply not cost effective or for areas have been rebuilt multiple times following disasters. In these instances, the most effective form of mitigation to ensure long-term and lasting protections may be the purchase of properties from willing sellers.

The creation of open space through the acquisition of at-risk properties and the restoration of natural floodplains is an effective mitigation strategy that should be supported through BRIC. As outlined in the previous recommendation, natural greenspace serves as vital infrastructure to flood-prone communities by increasing water absorption and detention capacity, as well as improving water quality. Again, property acquisition and reestablishment of natural and beneficial flood-mitigation features should be a BRIC priority. To increase the effectiveness of these measures, FEMA should encourage comprehensive approaches to acquiring clustered at-risk properties and community level planning for relocation.

FEMA should emphasize a “no adverse impact” approach to project review

As FEMA considers what the BRIC program should prioritize, it is important to recognize that a guiding principle in disaster mitigation should be “first, do no harm.” Projects awarded BRIC funds should be those that address flood impacts or the impacts of other disasters without simply transferring the risk to neighboring communities or to those downstream.

Benefits of “no adverse impact” policies can be significant. For example, to reduce vulnerability to flooding in Brevard, North Carolina, the city council adopted exemplary regulations on construction in a floodplain, with the aim of helping to ensure that projects will not increase the risk of downstream flooding. Since their adoption in 2009, the regulations have also lowered flood insurance premiums for many residents because of incentives available through FEMA’s Community Rating System.

Furthermore, FEMA should prioritize multijurisdictional projects. BRIC projects will achieve greater effectiveness when planned on a regional or watershed level by creating comprehensive perspective of flood risk. Therefore, FEMA should encourage and facilitate partnership among state and local agencies, as well as non-governmental organizations and investors.

BRIC-eligible projects must account for both current and future risks

All BRIC-eligible projects must account for future risk. For projects involving investment in buildings or other infrastructure, this consideration of future risk must cover, at a minimum, the expected design life of the proposed project. For flood mitigation projects, this assessment could begin with data in FEMA flood insurance maps and studies, but the analysis should be supplemented with other information regarding future risks associated with anticipated land use changes, sea level rise, changed precipitation patterns, or other relevant factors. FEMA could reward communities that provide their own thorough assessment of their unique future risks.

For under-resourced communities applying to the BRIC program, FEMA should provide technical assistance to ensure that their applications adequately consider future risks. In providing assistance, FEMA should utilize the resources of other federal agencies, including, for example, the Department of Transportation's Vulnerability Assessment Scoring Tool and the National Oceanic and Atmospheric Agency's Sea Level Rise Viewer.

II. Evaluating BRIC Applications

FEMA should recognize that communities vary in their mitigation needs and their abilities

Disaster-stricken and at-risk communities vary significantly, particularly in their ability to adequately provide the resources to compete against the larger communities or those that are particularly well versed in the grant application process. Under-resourced communities should not be penalized for their lack of resources or inexperience in the grant application process. As such, we recommend that FEMA offer two or more tiers of awards, tied to type or complexity of project or simply to community size or community profile.

Creating different tiers within the BRIC program would help to facilitate the competitive process. To jumpstart resilience efforts, small communities with less access to resources should be considered against similarly situated applicants, rather than being compared with larger communities with greater resources. Furthermore, increased competition among larger communities will fuel higher quality plans and applications, leading to more effective allotment of BRIC funds.

FEMA should also require applicants to submit information about other federal assistance they have received over the previous 10-year period for the same peril in the impacted area. This will ensure federal resources are not repeatedly being directed toward a small subset of communities.

BRIC should support and reward mitigation planning and proactive capacity-building

To ensure that limited resources are awarded effectively and support progress toward disaster preparedness goals, local and state governments must develop thoughtful risk assessments and hazard mitigation plans. The BRIC program offers an opportunity for FEMA to improve preparedness and mitigation planning.

Pew recommends that FEMA allow a modest percentage of BRIC funds to be used for improving and updating hazard mitigation plans – and for ensuring that the goals and strategies of these plans

are fully incorporated in other types of community planning. Through BRIC, communities should prioritize the incorporation of hazard mitigation into zoning and subdivision ordinances, comprehensive land use plans, and capital improvement plans and budgets.

To encourage states and communities to be proactive, FEMA could also prioritize awards to communities that have demonstrated capacity to make effective use of award. Capacity could be assessed based on multiple criteria, such as dedicated resiliency funds established at the local or state level, commitment to updated building codes and standards, consideration of future risk, level of specificity in planning documents, and participation in regional hazard mitigation efforts. Communities working in concert with other jurisdictions within a shared watershed and with non-governmental stakeholders should be recognized for their comprehensive risk understanding and planning.

BRIC should encourage partnerships to increase mitigation investment and results

When considering proposed projects, FEMA should prioritize applications that will maximize project impacts by using partnerships and multi-jurisdictional relationships. Many state and local governments have developed important reciprocal aid agreements that allow for efficient and effective sharing of resources and expertise in the event of a major disaster. The same concepts can be employed or even expanded in the mitigation arena by promoting shared responsibilities and investments across jurisdictions and engaging the private sector as well. Such partnerships may be particularly valuable in the case of flooding, where a lack of coordination can result in a project exacerbating flooding problems in an upstream or downstream community.

To foster improved collaboration, FEMA should accept and encourage joint-jurisdiction applications for mitigation projects. In addition, FEMA – as it does in the selection of flood mapping projects – should consider the leverage potential of applications, favoring projects that bring additional resources to bear on a significant hazard or mitigation need. Although FEMA should encourage partnerships among private and public entities, it should not mandate such collaboration.

Adoption and enforcement of building codes and standards should be an award prerequisite

Although it has been clearly demonstrated that use of the latest, most up-to-date hazard-resistant building codes and standards is highly effective in reducing disaster damage, many communities still lag in adoption and or enforcement. As FEMA knows, code activities were made eligible for BRIC funding by changes to the Stafford Act last year, and Pew fully supports helping communities that are seeking to update codes and standards and improve capacity for enforcement. Beyond grants for this sort of code improvement work, however, FEMA must underscore the importance of building codes and make the use of hazard resistant codes and standards a prerequisite in FEMA's consideration of BRIC applications. FEMA should give priority to states that score highly on the Building Code Effectiveness Grading Schedule, a rating system first developed by the Insurance Services Office (ISO) following Hurricane Andrew. BRIC funds should be limited for communities that do not make timely updates to their building code requirements or that fail to apply and enforce those codes within their community.

III. BRIC Process and Design

BRIC dollars should be managed to build state and local institutional capacity

We also encourage FEMA to manage BRIC funding to ensure availability of sufficient mitigation resources over time. While the Disaster Recovery Reform Act specifies that the President may set aside an amount equivalent to six percent of certain disaster spending accounts, the law itself does not dictate the spend-down of that full amount within the same year. To provide consistent support for the states and localities developing their own institutional capacity and expertise in the mitigation field, Pew recommends that FEMA avoid complete spend down with a single award cycle. Multiple award cycles, based on priorities rather than total amounts available in the fund, could allow for advance notice of funding opportunities and keep open a line of support for important ongoing mitigation needs.

Benefit-cost analysis should value the long-term effectiveness of mitigation projects

While the new BRIC program has potential to significantly increase mitigation assistance, the demand for funds will likely remain high. This means that difficult choices will have to be made, and benefit-cost analysis (BCA) can help FEMA spend limited dollars wisely. Pew, however, urges FEMA to adopt flexible BCA policies that accomplish several objectives, including:

- Incorporating full consideration of project co-benefits, such as improved water quality, recreational opportunities, reduced social and economic vulnerability, and lowered emergency response costs;
- Valuing benefits that accrue over the long-term, ideally over multiple decades;
- Accepting the use of reasonable assumptions and supporting data from applicants;
- Recognizing the utility of replicable projects that can be scaled up or transferred to other communities; and
- Providing assistance to small or under-resourced communities.

We understand that FEMA has provided pre-calculated benefit information for specific mitigation actions, such as acquisition and elevation within a Special Flood Hazard Area and certain post-wildfire mitigation activities, and we would encourage the Agency to consider expanding on the availability of these sorts of credible data “fill-ins” for other mitigation options, such as wetlands protection, riverbank setbacks, or utility elevation. In addition, to the extent that an applicant presents reasonable information regarding co-benefits beyond those that FEMA currently recognizes, we urge a full and fair consideration of that data in the BCA.

Pew also believes that it may be reasonable to extend FEMA’s current options for expedited cost-effectiveness determinations, particularly to repeatedly flooded properties or structures within areas that have been identified as buyout priorities by local jurisdictions. To the extent that FEMA can lessen or even eliminate the need for project applicants to submit detailed house-by-house appraisals and elevation certificates when an area or neighborhood buyout is proposed, mitigation timelines may be shortened and administrative costs lowered. In areas that have flooded

repeatedly, including those beyond the current SFHA, FEMA could reasonably assume a positive benefit-cost ratio, regardless of a substantial damage assessment and without requiring a detailed BCA.

Pew also believes that FEMA should revisit the issue of discount rates applied to BRIC mitigation projects, even if a change in rate would require special concurrence from the Office of Management and Budget. Our concern here is that continued use of a seven percent discount rate in mitigation BCA's may skew effectiveness determinations against those mitigation actions that have accrued benefits or losses avoided well into the future.

Finally, some mitigation projects with modest BCA scores may still be valuable to an individual community and the nation if they can be shared and replicated in similarly-situated jurisdictions. FEMA should not allow its BCA approaches to eliminate the possibility of such projects, particularly in small or under-resourced communities.

FEMA should provide advance notice of award priorities and use multiple award cycles

Funding for the BRIC program has the potential to be significant, depending on future disaster spending. In less disaster-prone years, funding may fall significantly. As noted earlier, this uncertainty may work against efforts to establish and sustain institutional knowledge of disaster mitigation at all levels of government. To avoid significant shortfalls and surges of BRIC dollars, we recommend that FEMA annually initiate at least two award cycles for the program. In addition, to avoid significant year-over-year changes in the availability of funding, FEMA should provide advance notice of BRIC funding opportunities and priorities. This should be coupled with notices detailing the availability of technical assistance for small or under-resourced communities so that these entities can better prepare quality applications.

By giving advance notice of its funding priorities, FEMA may also be able to tap into additional sources of expertise. Organizations or individuals with experience in the focus of a particular funding cycle – purchasing at-risk properties, strengthening of particular community lifelines, or implementing natural infrastructure projects – could assist in shaping technical assistance for potential applicants and could assist FEMA in identifying what successful strategies should be considered.

FEMA should ensure appropriate evaluation of BRIC projects

FEMA should implement tracking and reporting requirements for BRIC awards. Requiring recipients to submit project analyses after projects are implemented will better inform the effectiveness of future mitigation projects. In particular, FEMA should require post-event loss avoidance reporting for recipients that experience natural disasters after the completion of a BRIC project. Florida's Department of Emergency Management has used post-event loss avoidance studies to better understand the relative effectiveness of mitigation projects and build public support for mitigation investment. FEMA should follow this model and work with grant recipients to assure assessment of mitigation activities after implementation.

In summary, we believe that the BRIC program authorized by Congress represents a significant opportunity for FEMA to guide states and locals toward effective pre-disaster mitigation and to prepare the nation and its infrastructure for future disasters. We urge the Administration to consider the principles we have detailed, and we look forward to a speedy launch of this critical program.

Sincerely,

A handwritten signature in black ink, appearing to read "Velma M. Smith". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Velma M. Smith
Senior Officer, Government Relations

A handwritten signature in black ink, appearing to read "Matthew Fuchs". The signature is cursive and somewhat compact, with a distinct loop at the end.

Matthew Fuchs
Officer, Flood-Prepared Communities Program