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Federal Emergency Management Agency
Regulatory Affairs Division
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Submitted electronically: http://www.regulations.gov

May 8, 2020

Re: Comments on Proposed Building Resilient Infrastructure and Communities (BRIC) Policy. [Docket ID FEMA-2019-0018]

To Whom It May Concern:

On behalf of the National Audubon Society and its more than 1.7 million members, we are writing to comment on the Federal Emergency Management Agency's (FEMA) policy related to the Building Resilient Infrastructure and Communities (BRIC) program, which will replace the pre-disaster mitigation program and provide dedicated funding to help communities build resilience to flooding and other natural disasters. The 2018 Disaster Recovery and Reform Act (DRRA) authorized FEMA to set aside six percent of disaster recovery funding to support pre-disaster mitigation in communities. FEMA estimates that approximately $300 million to $500 million in funding will be allocated through the BRIC program annually to support mitigation projects at the state and local level. We encourage FEMA to incorporate stakeholder feedback and strengthen the BRIC policy to specifically prioritize projects that address long-term threats from climate change, like sea-level rise, and that deploy natural infrastructure solutions for reducing risks.

Specifically, Audubon encourages FEMA to add the following principles to its BRIC policy for the reasons described in detail below:

1. Address long-term threats from climate change and sea-level rise
2. Encourage nature-based approaches that deliver multiple benefits to society
3. Prioritize floodplain buyouts
4. Incentivize proactive state and local approaches to reducing losses from natural hazards
5. Require and fund monitoring

Address long-term threats from climate change and sea-level rise

FEMA should use the BRIC policy to encourage state and local grantees to use best-available science to assess and develop mitigation measures that address long-term threats from climate change and sea-level rise. Communities across the U.S. face increasing climate threats from sea-level rise, more intense coastal storms, extreme rainfall events, more intense and prolonged droughts, heatwaves, and wildfires. From 2016 to 2018 alone, six separate coastal storms (Matthew, Harvey, Irma, Maria, Florence, and Michael) caused an estimated $329.9 billion in damages and over 3,000 fatalities; and the number of billion dollar disaster events affecting communities across the U.S. has doubled since the 1980's.[1] And these events are already causing significant and costly impacts in communities and critical infrastructure. For example, in 2012, Hurricane Sandy, flooded electric substations causing more than 8 million people to lose power, damaged wastewater treatment facilities causing the release of millions gallons of untreated wastewater into local waterways, and flooded tunnels and transit stations throughout New York City causing billions of dollars in damages to the region's transportation system and prolonged closures of major transportation arteries. According to the 2018 National Climate Assessment, estimated annual damages to roads alone, including critical evacuation routes, could reach $20 billion by 2090 under a high emissions scenario.

To address mounting risks from climate change, FEMA should include in its BRIC policy a principle that state and local governments use best-available science to assess how climate change will exacerbate risks from natural hazards in state and local hazard mitigation plans and to identify mitigation strategies for addressing future risks. Additionally, FEMA should provide funding and technical assistance to help state and local governments assess vulnerabilities to future sea-level rise and increasing flooding and other climate change risks. State and local governments should be encouraged and provided the resources they need to assess how climate change will exacerbate risks to development, critical infrastructure assets, socially and economically vulnerable populations, and natural resources, and develop strategies to reduce risks by taking steps to protect and preserve important natural landscapes – like wetlands, marshes, and beaches – that can provide natural flood buffers, among other adaptation benefits. Given that the DRRA specifically called on FEMA to take into account the "degree of commitment of the State or local government to reduce damages from ***future natural disasters*****"** and "the extent to which the assistance will fund activities that ***increase the level of resiliency***," as criteria for evaluating funding proposals, it is especially important for FEMA to specifically acknowledge increasing climate risks in its BRIC policy. By doing so, FEMA can signal to state and local grantees that they will need to ensure that large-scale investments in mitigation projects are "future-proofed" to account for increasing risks due to climate change.

Encourage nature-based approaches that deliver multiple benefits to society

Despite FEMA noting that a substantial number of stakeholders called for increased emphasis on natural infrastructure approaches for reducing risks in its Summary of Stakeholder Feedback report, FEMA's BRIC policy fails to discuss nature-based solutions. Audubon encourages FEMA to specifically include a principle prioritizing natural infrastructure solutions for reducing risks from flooding and other natural hazards in its BRIC policy. Natural infrastructure can provide a more cost-effective solution for managing stormwater, protecting coastal communities from more frequent and severe storms, and recharging groundwater

[1] National Oceanic and Atmospheric Administration, "2018's Billion Dollar Disasters in Context." February 7, 2019. https://www.climate.gov/news-features/blogs/beyond-data/2018s-billion-dollar-disasters-context

aquifers in arid environments. For example, NOAA estimates that natural infrastructure solutions provide more than $23 billion in storm protection services every year.[2] In addition to providing natural flood and erosion control, natural infrastructure provides numerous ecosystem service benefits, including improving air and water quality, enhancing habitats for birds, fish and other wildlife, increasing recreational opportunities and land values, recharging groundwater, and sequestering carbon pollution, which result in net benefits to society that are not delivered by other types of mitigation approaches. Additionally, natural infrastructure solutions help to avoid the impacts from more environmentally harmful gray infrastructure alternatives. Gray flood control infrastructure – like seawalls, groins, levees and jetties – exacerbate erosion of coastal ecosystems and can create a false sense of security for communities that feel "protected" by these infrastructure systems that can fail or be overtopped. Whereas natural infrastructure solutions grow and build over time and can adapt to changing environmental conditions on the ground, gray infrastructure built to protect against today's 100-year flood event will become less protective over time as flood risks increase with sea-level rise and changing precipitation patterns.

Because of the multiple benefits delivered by natural infrastructure, many states and communities are already using these types of approaches to address climate threats to communities and critical infrastructure lifelines, while also delivering benefits to birds and the habitats they rely on. For example, in Oregon, the community of Pringle Creek is implementing a "Green Streets Initiative," utilizing permeable pavements and other green infrastructure techniques to reduce pollution and flooding from stormwater runoff,[3] and the Oregon Department of Transportation removed a levee and restored a natural floodplain along the Necanicum River to reduce seasonal flooding along portions of Highway 101.[4] Similarly, in California, Caltrans recently completed a realignment of the Piedras Blancas segment of Highway 1 in San Luis Obispo where the former site of the highway has been turned into parkland and restored to protect the 2.8-mile stretch of highway from sea level rise and erosion.[5] And in Florida, Everglades restoration results in a 4-to-1 return on investment, protecting the drinking water of more than 8 million people and enhancing the Everglade's wetland system, which provided a critical buffer that protected residents in south Florida from Hurricane Irma in 2017.[6] These examples show how natural infrastructure solutions can be deployed to both protect critical infrastructure assets, while also restoring and enhancing habitats for birds and other wildlife. Given that the DRRA specifically called on FEMA to "fund activities that ***maximize net benefits to society***," FEMA's BRIC policy should specifically highlight nature-based solutions to encourage communities to deploy these types of multi-benefit strategies for enhancing climate resilience that also deliver other environmental, recreational, social, and economic benefits.

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[2] National Oceanic and Atmospheric Administration, "Fast Facts: Natural Infrastructure." Undated. https://coast.noaa.gov/states/fast-facts/natural-infrastructure.html

[3] Georgetown Climate Center's Adaptation Clearinghouse, Pringle Creek (Salem, Oregon) Green Streets, https://www.adaptationclearinghouse.org/resources/pringle-creek-salem-oregon-green-streets-initiative.html

[4] Georgetown Climate Center's Adaptation Clearinghouse, Necanicum River – Highway 101 Flood Mitigation, https://www.adaptationclearinghouse.org/resources/necanicum-river-highway-101-flood-mitigation.html

[5] Highway 1 Piedras Blancas realignment completed, Paso Robles Daily News. Sep. 28, 2017, https://pasoroblesdailynews.com/highway-1-piedras-blancas-realignment-completed/75624/

[6] McCormick, Clement, Fischer, Lindsay, Watson. 2010. Measuring the Economic Benefits of America's Everglades Restoration. Mather Economics. Roswell, GA.

Prioritize floodplain buyouts that reduce flood losses and flood insurance claims to the NFIP

By promoting floodplain buyouts and ecosystem restoration projects in the BRIC policy, FEMA can ensure that communities are exploring opportunities for buyouts as a strategy for helping residents relocate out of the most vulnerable flood-prone areas that are straining emergency response capacities and tax-payer resources. Based on research after Hurricane Floyd, FEMA found that "acquisition and relocation of flood-prone buildings is more effective in reducing flood losses than any other approach."[7] The National Flood Insurance Program (NFIP) is currently more than $20 billion debt. Encouraging mitigation strategies that facilitate buyouts and restoration of the most flood-prone properties will be one of the most cost-effective strategies for reducing flood losses in communities, increasing the long-term solvency of the NFIP. The BRIC policy should specifically call out floodplain buyouts and restoration as priority actions for reducing flood losses and encourage best practices for implementing buyout programs at the state and local levels.

Many states and communities are already showing how comprehensive buyout programs can be crafted to enhance flood resilience, deliver environmentally beneficial restoration, and provide relocation and other incentives to minimize the social and economic consequences of buyouts on affected residents. For example, in North Carolina, the City of Charlotte and Mecklenburg County have been administering a regional floodplain buyout program through the Stormwater Services agency (CMSS) since 1999. This program has enabled over 700 families and businesses to relocate out of flood-hazard areas. CMSS combines local stormwater fees with mitigation funds to buyout flood-prone properties and convert bought-out lands to natural floodplains and other recreational uses. Since 1999, CMSS has spent $67 million to acquire properties and estimates that these buyouts have avoided approximately $25 million in property damage and prevented $300 million in future losses.[8] Additionally, in South Carolina, the state legislature is considering legislation that would create a Resilience Revolving Fund (S. 259) to support floodplain buyouts and restoration projects. The Resilience Revolving Fund would combine state and federal funding to provide low-interest loans as well as grants to local governments and other private partners to support buyouts and other flood mitigation efforts. The legislation includes specific criteria for prioritizing large-scale buyouts, including buyouts of "blocks or groups of homes rather than individual homes" and areas larger than 10 acres. Additionally, the fund would create incentives for restoration and other flood resilience activities by requiring that a certain percentage of the funding be used to execute "beneficial flood mitigation practices," including providing relocation assistance to affected residents and supporting floodplain restoration efforts that provide broader flood-risk-reduction benefits to surrounding development. FEMA should encourage and prioritize these types of best practices for implementing comprehensive buyout programs at the state and local level that reduce the fiscal strain on the NFIP and deliver multiple benefits in communities by specifically acknowledging and prioritizing these types of approaches in its BRIC policy.

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[7] Federal Emergency Management Agency. *Evaluation of CRS Credited Activities During Hurricane Floyd.* September 25, 2000. P. 42. https://www.wbdg.org/FFC/DHS/fema_eval_crs_cred_activities_hurricane_floyd.pdf.

[8] *Floodplain Buyout (Acquisition) Program*, City of Charlotte, https://charlottenc.gov/StormWater/Flooding/Pages/FloodplainBuyoutProgram.aspx.

Incentivize proactive state and local approaches to reducing losses from natural hazards.

FEMA should also specifically include principles in its policy encouraging and rewarding communities that proactively adopt better floodplain management practices. In previous PDM Notices of Funding Opportunity (NOFOs), FEMA has offered incentives to communities that proactively take steps to reduce their exposure to damages from natural hazards through adoption of higher building codes, better floodplain regulations, and participation in the Community Rating System (CRS), among other practices. FEMA should include similar principes in its BRIC policy by noting that the program will prioritize states and local governments that adopt higher floodplain management standards, including measures to limit development in special flood hazard areas, to preserve and restore natural flood buffers, and to allocate state and local resources to support buyouts and ecosystem restoration efforts that reduce future damages from repetitive flood losses. By leveraging the CRS and providing technical assistance and training to help communities join the CRS, FEMA can reward communities that take proactive regulatory steps that are known to provide the most cost-effective solutions for reducing future flood losses, such as limiting new development and redevelopment in flood-prone areas and preserving and enhancing natural floodplains.

Include long-term monitoring on the list of eligible activities for BRIC funding

Long-term comprehensive monitoring of the performance of mitigation projects is needed to advance and demonstrate the effectiveness of innovative natural infrastructure approaches and to integrate these types of approaches into the mitigation playbook and engineering mainstream. Funding for long-term, comprehensive monitoring is limited. Allowing long-term monitoring to be included on the list of eligible activities for BRIC funding and requiring uniform data standards set by FEMA in coordination with partners and stakeholders, would improve understanding of engineering specifications, comparative levels of protection, and maintenance requirements of natural infrastructure projects. FEMA should require and fund monitoring and performance reporting for mitigation projects funded through BRIC to ensure that this program is delivering cost-effective projects that deliver multiple benefits to communities in furtherance of the legislative goals articulated by the DRRA.

We ask for your consideration of these priorities as you work to craft final principles for guiding implementation of the BRIC program. By supporting better floodplain management practices and natural-infrastructure solutions, FEMA can help states and communities reduce their vulnerability to costly and destructive acts of nature while preserving and enhancing ecosystems that are important to birds and other wildlife. These policy changes will ensure that BRIC funding is supporting projects that will deliver multiple benefits to communities, including saving taxpayer dollars by avoiding disaster-related expenditures, enhancing public safety, and improving the environment. Please see the National Audubon Society as a trusted resource on this and other issues where healthy communities, economies, and wildlife overlap.

Sincerely,

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National Audubon Society