Coastal Flood Resilience Project

WHITE PAPER

Response to Federal Emergency Management Agency Request for Program Management Input 7.21.2021

The *Coastal Flood Resilience Project* is a coalition of organizations working for stronger programs to prepare for coastal storm flooding and rising sea level in the United States. This *White Paper* provides background information and suggestions in response to the Federal Emergency Management Agency's (FEMA's) request for input on "FEMA programs, regulations, collections of information, and policies for the agency to consider modifying, streamlining, expanding, or repealing in light of recent Executive Orders."

President Biden's recent Executive Orders call for a national effort to reduce greenhouse gas emissions as needed to meet the goal of the Paris Climate Accords and to adapt to the impacts of a changing climate. FEMA has an important role to play among federal agencies working to mitigate the impacts of a changing climate on communities and other assets across the country.

FEMA faces the daunting challenge of adjusting its operations and outlook to recognize that climate change is changing the nature of the risks that disasters pose to Americans. Core programs, such as the National Flood Insurance Program (NFIP), need to be revised to reflect new realities driven by a changing climate. Disaster preparation and response, always critical to reducing loss of life and property and restoring communities, homes, and businesses after a disaster, must be reimagined to meet the expanded and changing risks that a changing climate brings.

A changing climate makes disasters of many kinds more common and more severe. Although risks like wildfire, droughts, and heat waves will pose a growing challenge as the planet warms, **the single biggest risk of a changing climate to American lives, property, and communities is the increasing intensity of coastal storms, the wider extent of coastal storm flooding, and the permanent inundation of large areas of the coast by rising sea levels.**

This *White Paper* provides an overview of the coastal storm and sea level rise risks that are at the heart of the challenge that FEMA will face at the climate warms in the coming decades and provides recommendations for actions FEMA should take now to better prepare to meet these challenges.

Problem Statement

Coastal storms are a major risk to life and property and a warming climate is causing an increase in the number of the strongest storms. These storms bring more extensive coastal flooding, higher storm surges, and increased rainfall. Research indicates that intense storms are slowing down and thus raining on a given place for longer. Even as storms move more slowly, they intensifying more rapidly, making their landfall harder to predict and more likely to result in major damage and loss of life.

Sea level rise around the globe is likely to be 3 to 4 feet by 2100 but may be as high as 6 to 8 feet if efforts to control emissions of greenhouse gases falter. Sea level rise along parts of the American coast will be as much as 30 percent greater than the global average due to factors such as ocean currents and land subsidence. In the short term, this will result in more "sunny day flooding" during high tides and larger surges and greater flooding during storms. In the long term, sea level rise will lead to permanent inundation of significant portions of the American coast.

More severe storms and rising seas will bring economic, environmental, and social disruption to coastal communities on an unprecedented scale. Prompt and thoughtful preparation for these impacts can save lives and dramatically reduce costs. Millions of people and hundreds of coastal communities face far more extensive flooding than they currently experience. The combination of more severe storms and rising seas is projected to result in potential losses of coastal property running into trillions of dollars. These loss estimates, however, are based on the existing population along the coast which is increasing rapidly. Population living right along the coast (i.e., at elevations of 33 feet and lower) is expected to double by 2060.

In addition, low income and minority communities are in harm's way. These communities are disproportionately affected by climate change including sea level rise, flooding, and extreme coastal weather events, and often lack the resources to respond to these risks.

Storm and sea level rise risks to critical coastal infrastructure, such as transportation, water, and energy, are well documented. Thousands of miles of roads, railroads, ports, and airports are at risk. Sewage treatment plants and drinking water treatment facilities will be inundated. Energy facilities, especially along the Gulf coast, are endangered. Major defense installations, such as Naval Station Norfolk, need to prepare for more severe storms and rising seas.

Coastal beaches and wetlands have already been harmed by coastal storms and rising seas and these losses will increase in the future. Some researchers estimate loss of 30 percent of Gulf of Mexico wetlands by 2050 and over 60 percent of California beaches by 2100. Some of these ecosystems may be able to migrate to upland areas if geography is favorable and if the needs of communities and infrastructure do not take priority. The fortunes of coastal tourism and fishing sectors are tied to the health of these ecosystems.

Recommendations

President Biden's Executive Orders related to climate change have important implications for FEMA's policies and programs related to flood insurance and disaster prevention and response. These Order include:

- Executive Order 13985 of January 20, 2021: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government;
- Executive Order 13990 of January 20, 2021: Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis;
- Executive Order 14008 of January 27, 2021: Tackling the Climate Crisis at Home and Abroad; and
- Executive Order 14030 of May 20, 2021 on Climate-Related Financial Risk.

In light of these Orders, FEMA should reevaluate its existing programs and priorities and make significant changes to its approach to flood insurance and disaster prevention and response giving attention to actions in six key areas:

1. work with Congress to reauthorize and strengthen the National Flood Insurance Program;
2. continue expanding investments in disaster prevention;
3. prepare for both past and future risks, including climate change risks:
4. expand support for relocation of assets to safer, higher ground;
5. encourage expanded state and local role in disaster prevention and response; and
6. commit to social justice in flood insurance and disaster prevention and response programs.

1. **Work with Congress to Reauthorize and Strengthen the National Flood Insurance Program (NFIP):** The NFIP is a critical tool for helping communities and homeowners cope with the flood risks and is especially important for helping address coastal storm surge flooding and rising sea levels.

   FEMA should work with Congress to revise and strengthen the program. Some important improvements to the program include:

   - increasing public awareness of flood and sea level rise risk;
   - discouraging new construction in sea level rise risk areas;
   - shifting people and property to safer, higher ground; and
   - assuring that flood insurance is affordable.

   Additional information on recommendations for needed improvements to the NFIP is provided in the attached *White Paper.*

2. **Continue Expanding Investments in Disaster Prevention:** Numerous studies document that a dollar invested today in disaster mitigation avoids as much a $6 in disaster response costs. In the future, the severity, number, and costs of disasters is likely to increase as the climate changes. Increases in property losses along the coast will be a major contributor to cost increases. Limiting rapidly growing disaster response costs will require a significantly increased investment in disaster prevention planning and in implementation of projects called for in these plans.

   FEMA is moving toward increased investment in disaster prevention. The development of the Building Resilient Infrastructure and Communities (BRIC) program provides important funding for disaster prevention planning. President Biden expressed confidence in the value of this investment with a recent proposal to double the program funding to about $1 billion. Additional funds are available for buyouts of high-risk property. And, supplemental appropriations after major disasters provide additional funds or prevention planning and implementation.

   Although there is progress in the right direction, disaster prevention planning and project implementation are still too uncoordinated across programs within FEMA and across other federal programs (e.g., Community Development Block Grant-Disaster Recovery, Army Corps of Engineers) as well as state programs. **FEMA should take the initiative to work with other federal agencies and state and local government to develop a well-coordinated approach that maximizes the benefit of these efforts and reduces duplicative or inconsistent policies.**

   As coordination of an intergovernmental effort for disaster prevention evolves, FEMA and other agencies will need to significantly increase funding to support effective planning and to finance the projects that will accomplish the needed risk reduction. The amount of this new investment in prevention projects should be determined based on the results of the expanded planning effort. It is important to note, however, that federal financial support for project implementation has limits and that national priorities, as well as fairness to disadvantaged communities, need to be considered in allocating scarce funds.

3. **Prepare for Both Past and Future Risks:** Although expanded investment in disaster prevention is critical, FEMA must also rethink the nature of the disasters it is trying to prevent. Past FEMA guidance for FEMAs largest investment in disaster prevention, through the Hazard Mitigation Grant Program, has encouraged communities to look back at the most recent disaster and concentrate on avoiding another similar event.

   The President's Executive Orders should prompt FEMA to also consider future disasters that are the result of changing conditions related to a changing climate. For example, FEMA should not just plan for coastal storm surges from hurricanes like those of the past but also prepare for more severe storms that are predicted as a result of climate change.

In addition, FEMA has traditionally encouraged states and communities to plan to prevent disasters that are both historical and present a potentially imminent threat, such as a hurricane. **Based on the President's Executive Orders, FEMA should also be encouraging work to prevent slow moving risks on the horizon that have the potential to cause widespread damage over a period of decades.** For example, sea level rise is not an emergency or a disaster today, but the slow and steady rise in sea level will result in the inundation of coastal land that is home to millions of Americans and over a trillion dollars in property in the foreseeable future.

Planning with both short term and long-term disaster risks in mind can have major consequences for decisions concerning prevention actions or investments. For example, a disaster plan in a coastal community that identifies the risk of expanded storm surges might be the basis for mitigation measures such as elevating buildings to avoid the temporary flooding. A plan that also identifies sea level rise risks, however, might involve avoiding permanent inundation by relocation of assets to higher, safer ground.

4. **Expand Support for Relocation of Assets to Safer, Higher Ground:** Responding to the President's Executive Orders will require that FEMA recognize that managing the accelerated risks driven by climate change will increasingly require disentangling people and assets from the riskiest places. The need to steer new development away from risky places, and gradually relocate existing assets to safer places, is especially critical in responding to coastal flooding due to more severe storms and permanent inundation from rising sea levels.

   Today, the conventional model is that decisions about how to respond to climate change risks are in the hands of state and local government. For example, in some places, elevating structures or building a seawall may be the preferred, initial response to coastal flooding. In other places, the relocation of buildings and related assets to higher ground on an appropriate schedule may be found to be a better choice.

   Given the scale of the climate driven risks the country faces, FEMA and other federal agencies should not play the role of disinterested party as state and local governments sort out response options. Rather, **FEMA should be a strong advocate for multiple benefits of phased relocation of assets to higher ground.** Compared to the alternatives, strategies providing for relocation are most likely to avoid property damage, have lower long-term costs, and most reliably reduce loss of life. Within FEMA's current legal authority, where allowed, FEMA should work with state and local governments to educate them on the benefits of relocation and provide increased technical assistance and support to encourage these types of pre- or post-disaster mitigation options.

   In addition to advocating for relocation strategies, **FEMA should adopt policies that discourage new development in risky places and expand its capacity and resources to support tools to facilitate relocation, such as buyouts, in both the NFIP and disaster**

response programs. For example, FEMA should discourage new development in areas at risk of sea level rise inundation by declining to issue flood insurance for new development in these areas.

In the case of assets already in places at risk of coastal flooding, FEMA should work with other Federal agencies and state and local government to expand and improve buyout programs. In general, FEMA should develop a consistent, national buyout policy based on learning from best practice examples. Such a policy should promote more holistic buyout practices, like active and long-term restoration and management of bought-out land and providing increased relocation support and services for bought-out residents. It should also build on useful existing policies such as a focus on willing sellers of property and limits on redevelopment of bought-out sites to public projects. Some key principles that FEMA should adopt as it shifts toward a relocation model include:

- focus on buyouts that are in the best financial interest of the government;
- make buyout investments based on locally developed plans that reflect community interests and treat underserved communities and individuals fairly;
- recognize that relocation may involve the loss of a well-loved home or business and that relocation is stressful for communities and individuals;
- provide financial and other resources to mitigate the psychological, social, and economic costs of buyouts for people, especially given cultural or historical ties to land and communities;
- consider investments in sites on higher ground that displaced people have the option to relocate to and seek expanded authority from Congress for this work if needed; and
- support state and local governments in removal of buildings and utilities from buyout properties and the disposition of property and debris.

5. **Encourage Expanded State and Local Role in Disaster Prevention and Response:** FEMA and other federal agencies are playing an increasingly predominant role in disaster planning and prevention project implementation. The scale of future disasters, including those related to coastal storms and sea level rise, is likely to require that FEMA have access to increased federal financial resources.

   Although the financial capability of the federal government is indispensable, FEMA should more strongly encourage state and local government to invest in disaster planning and response capabilities. For example, FEMA should work with Congress to invest in state disaster response capabilities and resources, and reward states that increase investment in prevention by increasing the federal share of relief funding in the event of a major disaster.

   Expanded state and local engagement in disaster planning and project implementation has several benefits.

- State and local governments that know that they will pay a share of disaster response costs are more likely to see the value of, and make their own investment in, disaster prevention planning and projects.
- As climate change risks drive more frequent and more serious disasters, FEMA's human resources are more likely to be stretched thin and a bad luck scenario of multiple disasters of different types occurring in the same period could undermine effective response. Building a widely distributed network of disaster professionals at federal, state, and local levels would provide a pool of personnel able to shore-up FEMA resources in the event of multiple, complex disasters.
- Many of the programs and policies that will help reduce risks from more severe storms and sea level rise are best adopted and implemented at the state and local level (e.g.; zoning to discourage new building in flood risk areas). State and local officials are more likely to be willing to adopt these policies if the are engaged in, and partially paying for, prevention and response actions.

6. **Commit to Social Justice in Flood Insurance and Disaster Prevention and Response Programs:** President Biden's Executive Orders clearly call for a significant new commitment to social justice in the context of federal government efforts to address climate change. Section 219 of EO 14008 provides:

> "Agencies shall make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."

FEMA faces significant challenges in strengthening its commitment to social justice in both flood insurance and disaster prevention and response programs. Low income and disadvantaged communities have fewer resources to help recover from a disaster than do wealthier communities. And, there is evidence that FEMA response efforts and buyout programs tend to disproportionately benefit wealthier communities and individuals. **To meet the spirit of the Executive Order, FEMA must rethink its implementation of disaster response programs with environmental justice in mind, recognizing that overcoming long-standing discrimination requires equitable, rather than just equal, treatment.**

As indicated in the attached White Paper on the NFIP, **FEMA should work with Congress and other stakeholders to improve affordability of the flood insurance program**, including:

- expand technical assistance to make the discounts available under the Community Rating System (CRS) fully available to disadvantaged communities;
- offer premium discounts for agreements to sell damaged property;

- discount premiums to assure affordability; and
- support disadvantaged communities in flood and sea level rise response options and focus expanded investments on these communities.

Attachment:

White Paper: Needed Reforms to the National Flood Insurance Program Addressing Coastal Flood Resilience and Sea Level Rise

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The *Coastal Flood Resilience Project* is a coalition of organizations working for stronger programs to prepare for coastal storm flooding and rising sea level in the United States. The views expressed in this *White Paper* are those of the contributors and do not represent the views or endorsements of their organizations.

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Coastal Flood Resilience Project

WHITE PAPER

Needed Reforms to the National Flood Insurance Program Addressing Coastal Flood Resilience and Sea Level Rise 6.28.2021

The *Coastal Flood Resilience Project* is a coalition of organizations working for stronger programs to prepare for coastal storm flooding and rising sea level in the United States. This *White Paper* provides background information and recommendations for the reauthorization of the National Flood Insurance Program (NFIP) focused on coastal flood resilience and sea level rise.

The NFIP provides financial benefits to property owners located in floodplains and promotes state and local flood preparedness. Unfortunately, the NFIP is not prepared for the changes to flood risk resulting from a warming planet, including more severe coastal storm surge flooding and permanent inundation of coastal communities by rising sea level. These coastal storm and sea level rise risks have already put the NFIP deeply in debt and are likely to drive future claims that will far exceed insurance premiums and make the entire program unsustainable in the coming decades.

Adapting the NFIP to the coastal flood risks emerging as the climate changes will require a fundamental change in the program's orientation. Today, the program is designed to insure against, and support rebuilding after, conventional flood events. Tomorrow, the program must respond to increasing storm flood risk and permanent inundation due to rising seas by moving people and buildings out of harm's way. This new focus should include the following key changes.

- **Increasing Public Awareness of Flood Risk**: Congress should revise the NFIP to increase public awareness of evolving risks by updating floodplain maps, providing useful information about sea level rise threats, and requiring mandatory disclosure of flood risks to prospective property buyers, both residential and commercial, before any sale.
- **Discouraging New Construction in Sea Level Rise Risk Areas:** Congress should revise the NFIP to discourage new construction in areas at risk of permanent inundation by rising seas, including not issuing NFIP policies for new construction in these areas.

- **Shifting People and Property to Safer, Higher Ground:** Congress should revise the NFIP to shift program focus from rebuilding damaged properties to relocating homes and communities to higher, safer ground as sea level rises, including investing in planning for timely relocation and significantly increasing funds for buyouts of high-risk properties from willing sellers.
- **Assuring that Flood Insurance is Affordable:** Congress should revise the NFIP to expand premium discounts for adoption of flood reduction measures, giving priority to low-income policyholders, and then further discount premiums to make them affordable. At least 40 percent of expanded investments in buyouts from willing sellers and in home flood mitigation should be available to low-income policyholders.

Problem Statement

Flooding along inland and coastal waters of the United States takes a toll in lives, results in costly damage to property, and often requires expensive disaster relief spending by federal, state and local governments.

The National Weather Service reports several hundred deaths each year due to flooding. The National Centers for Environmental Information https://www.ncdc.noaa.gov/billions/summary-stats found that over sixty percent of the losses from billion dollar or greater weather events over the past forty years were from coastal storms and inland flooding. The average annual losses from coastal and inland flooding over this period was over $28 billion per year. Among these greater than one billion events, coastal hurricanes resulted in by far the greatest number of deaths, the highest damage costs, and the highest costs per event.

The Congressional Budget Office projects that future annual flood losses from coastal storms under current policies will be over $30 billion. Federal disaster relief appropriations for flood and storm events vary greatly from year to year but the Congressional Budget Office projects annual federal relief spending just for the costs of major hurricanes to be $17 billion. In 2017, Hurricanes Harvey, Irma, and Maria resulted in federal relief spending of about $127 billion.

The toll that flooding takes in terms of lost lives, damaged property, and government spending is likely to increase as climate change makes coastal and inland flooding worse. The National Climate Assessment indicates that warmer temperatures will increase precipitation intensity in some regions of the contiguous U.S., raising the risk of damaging floods.

A warming climate is also causing an increase in the number of the strongest coastal storms. These storms bring more extensive coastal flooding, higher storm surges, and increased rainfall. Research indicates that intense storms are slowing down and thus raining on a given place for longer. Even as storms move more slowly, they intensifying more rapidly, making their landfall harder to predict and more likely to result in major damage and loss of life.

Sea level rise around the globe is likely to be 3 to 4 feet by 2100 but may be as high as 6 to 8 feet if efforts to control emissions of greenhouse gases falter. Sea level rise along parts of the

American coast will be as much as 30 percent greater than the global average due to factors such as ocean currents and land subsidence. In the short term, this will result in more "sunny day flooding" during high tides and larger surges and greater flooding during storms. In the long term, sea level rise will lead to permanent inundation of significant portions of the American coast.

The NFIP provides important service to homeowners in floodplains, promotes state and local efforts to prepare for flooding, and provides mortgage issuers with confidence of loan repayment. Unfortunately, the program also encourages people to stay or move to risky places and make coastal storm flooding and sea level rise damages worse. Although the balance between premium income and damage claims can be maintained for homes in inland floodplains, more severe coastal storms and rising seas are rapidly driving up claims far in excess of premiums paid by property owners in high-risk coastal areas. Congress forgave $16 billion in NFIP debt in 2017 and the program is carrying about $20 billion in debt. Future hurricanes, made worse by rising seas, will continue to drive up debt and make the program financially unsustainable.

Recommendations

The changes to the NFIP described below are needed to strengthen and improve preparedness for coastal storms and rising sea level.

1. **Improve Awareness of Flood and Sea Level Rise Risks:** A key step toward accomplishing a long-term shift in the focus of the NFIP toward relocating property and assets to higher ground is to build public awareness of the risks of more severe coastal storms and rising seas. Measures to build public understanding of the risk include:

    - Updating flood insurance maps to reflect current conditions;
    - Adding information about future risks, including sea level rise, to floodplain maps; and
    - Adopting a national standard for disclosure of flood risk prior to time of sale or the long-term lease of property.

    A. **Update Flood Insurance Maps:** Many of the maps identifying areas and properties at risk of flooding for which flood insurance under the NFIP may be required are badly out of date. The wide variation in the age of flood maps means that some properties that would be in a floodplain and might be required to have flood insurance if the map had been updated, are left out of the program. In addition to changing the geographic scope of properties in floodplains, updated maps provide new information to help bring premiums in line with today's risks. Updating maps over time will also improve consistency in implementation of the program across communities and make it fairer for everyone.

Perhaps most importantly, flood maps are the single resource that most people recognize as providing location specific information about flooding. Accurate, up to date flood maps are an indispensable tool for building wider public appreciation of the serious risks of flooding and building recognition of the benefits that the NFIP provides to households in floodplains and to communities.

Congress should authorize adequate funding for the Federal Emergency Management Agency (FEMA) to expedite updates to NFIP flood maps to reflect the most current hydrological and related information and to continue updates in the future. Maps should be updated with the latest and best available science every 5 years giving priority to areas at greatest risk.

B. Add Coastal Storm Surge and Sea Level Rise Risk Areas to Floodplain Maps: The greatest threat to the financial viability of the NFIP is the dramatic increase in flood losses expected because of more severe coastal storms and storm surges and the permanent inundation of many coastal communities due to rising sea levels in the decades ahead. Massive damages due to severe coastal storms and rising sea level have already generated NFIP claims far above premium income and this imbalance is likely to increase in the decades ahead. Over time, the coastal losses will make the entire NFIP, as presently designed, financially unsustainable, generating massive debt likely to be shifted to taxpayers.

Avoiding the financial collapse of the program requires adapting to the challenges posed by more severe storms and rising seas. Navigating the course toward a climate smart NFIP must begin with transparent description of the extent of future storms surge flooding and sea level rise inundation risks. NFIP floodplain maps are the best, most commonly available tool that property owners and buyers use to understand flood risk. Showing areas at risk of more severe storm flooding and sea level rise on these maps will significantly improve awareness of the risks.

Readily available, reliable information about these risks will inform investments in existing property and discourage new construction in unsafe places. It will also reduce the number of NFIP policies that generate claims well in excess of premiums and strengthen the NFIP financially. Finally, an informed public is more likely to support the changes to the NFIP that are needed to adapt it to a changing climate.

In addition to updating flood maps regularly to reflect current risks (see recommendation #1.A), Congress should direct FEMA and NOAA to work together to identify areas at risk of future coastal storm flooding and areas expected to be permanently inundated by rising seas and to delineate these areas on flood risk maps for advisory purposes only.

This action is consistent with recommendations of the Technical Mapping Advisory Council. Sea level rise risk areas should be those areas expected to be inundated as a result of rising sea levels by the year 2100 based on the Intermediate-High Scenario established in the 2017 "Sea Level Rise Scenarios" report of the National Oceanic and Atmospheric Administration).

C. **Create a National Standard for Flood Risk Disclosure at Time of Sale or Lease:** Public awareness of flood risk results in increased support for flood preparedness. Better prepared property owners and communities help reduce flood damages, minimize NFIP claims as well as other disaster response costs, and thus help sustain the NFIP financially. In addition, being fully aware of the flood risks to property that is often a person's single biggest financial asset, the government has a moral obligation to assure that this information is provided in a timely and useful way before purchases are finalized.

   In addition to updating NFIP maps and adding sea level rise risk information, Congress should further improve awareness of flood risk by creating a new, national standard for disclosure of these risks at time of sale or lease of properties located in floodplains (see Attachment 1 for more information on a national flood risk disclosure standard).

2. **Discourage New Construction in Sea Level Rise Risk Areas:** Significant new construction is expected to occur in coastal flood risk areas in the decades ahead to support a growing population. The population in the 100-year coastal floodplain is projected to roughly double by 2060. Under current law, much of this risky new construction will be insured by the NFIP. As these new properties are gradually flooded by storm surges and inundated by rising seas, they will put millions of people in harm's way, generate overwhelming losses for the program, and add to the future costs of relocation. Congress should amend the NFIP to:

   - stop issuing NFIP policies for new construction in areas identified as at risk of inundation by rising seas; and
   - adopting changes to the NFIP's implementation to discourage new construction in sea level rise risk areas.

A. **Stop Issuing NFIP Policies for New Construction in Sea Level Rise Risk Areas:** The availability of federal flood insurance encourages new development in risky coastal areas because future sale value of properties increases when they have access to federal flood insurance, even though the premium is paid by the owner rather than the developer. Without federal flood insurance, a lower expected sale price would be a factor encouraging locating a project in a safer area.

From the point of view of the NFIP, newly constructed properties pose a risk of becoming complete financial losses. The NFIP insured value of many of these properties is commonly $250,000. Average annual premiums are under $1,000 per year. Even assuming that property in a sea level rise risk area is paying a much higher annual premium (e.g., $2,000) the NFIP would need to collect that premium with no damage claims for 125 years to avoid insuring the new construction at a net loss. Recent research found that, had a new construction prohibition been in place starting in 1980, the program's payouts between 1990 and 2019 would have been roughly 13 percent smaller, representing $16.5 billion in savings.

From the point of view of coastal communities, new development in risky coastal places may seem to offer short-term tax benefits. But, damages to, and the eventual removal of inundated properties, including those constructed going forward from now, as well as removal of public utilities, will pose significant safety risks and removal costs.

To meet these challenges, Congress should direct FEMA to stop issuing policies for new construction, with an appropriate phase in period, in areas identified as being at risk of rising sea levels. Recommendation #2.B below describes additional steps to discourage new construction in sea level rise risk areas.

B. Limit New Construction in Sea Level Rise Risk Areas: The risk posed to the financial integrity of the NFIP by new construction in sea level rise risk areas is substantial.

In the unfortunate event that Congress decides to continue offering NFIP policies for these projects, it should consider several alternative strategies for steering new construction to higher, safer ground. More specifically, Congress should:

- provide that FEMA adjust premiums for new construction policies in sea level rise risk areas to eliminate subsidies (see Barr/Peters; HR 2632) and to fully reflect both updated and future risks (i.e., anticipated increases in risk due to more severe storms and rising sea level, rather than simply historical risk that does not capture likely future claim costs);
- increase the points currently available to communities participating in the Community Rating System for community adoption of zoning or related ordinances or policies limiting new development in sea level rise risk areas (see section 420 of the Community Rating System Manual);
- provide that FEMA include in NFIP policies for new construction in floodplains a new provision requiring the insured party to certify that new structures are elevated not less than two feet above base flood elevation (see Price/Zeldin; H.R. 481) and that elevation is accomplished using measures that do not appreciably increase nearby flooding (e.g.; piers that include a permeable surface below a structure rather than fill); and

- provide that FEMA include in NFIP policies for new construction in sea level rise risk areas a new provision requiring the insured party to purchase a bond from a third party in an amount sufficient for the costs of future removal of structures and supporting utilities.

3. **Focus on Relocation of Property at High Risk:** As a changing climate drives more severe coastal storm surges further inland and sea level rise threatens to inundate coastal communities, the country needs to develop and implement plans to relocate communities, infrastructure, and ecosystems to higher, safer ground.

   This key adaptation to a changing climate will require the combined efforts of governments and the private sector. The NFIP can't accomplish this shift of coastal assets to higher ground alone, but it has an important role to play in conjunction with other FEMA programs, such as disaster relief and the Building Resilient Infrastructure Communities (BRIC) Program. To meet this challenge, Congress should adopt three key NFIP policies:

   - expand investment in flood mitigation and relocation planning under the existing Flood Mitigation Assistance program;
   - revise the NFIP community participation requirements and CRS to focus on relocation of at-risk property to higher ground; and
   - authorize significant new funding to the National Flood Mitigation Fund for acquisition or relocation of high-risk properties.

   A. **Expand Investment in Relocation Planning:** The Flood Mitigation Assistance program within the National Flood Insurance Act (42 USC 4104c) currently provides about $200 million per year for state and local flood mitigation planning and for projects to reduce payments from the NFIP by demolishing, elevating, or relocating repetitive loss structures.

      With significant new funding devoted to acquisition of high-risk properties (see Recommendation 3.C below). Congress should focus the existing Flood Mitigation Assistance grant funds on assisting state and local government in developing more complete plans to identify areas and communities that include high-risk structures and work with willing sellers to remove properties from floodplains and prohibit rebuilding. These plans should also identify steps to convert land where structures are removed to natural infrastructure, storm buffers, and forests and wetlands providing carbon sequestration benefits.

   B. **Revise Community NFIP Participation Requirements and CRS to Focus on Relocation:** FEMA regulations establish the requirements for communities to participate in the NFIP and generally focus on flood mitigation measures for new construction or substantial renovation in floodplains. Regulations provide for additional standards for mudslide and erosion risk areas. In addition, the CRS provides additional, optional measures to reduce flood risk and incudes some incentives for communities to relocate properties most at risk and to consider the best places for assets to be relocated to.

Congress should direct FEMA to amend existing regulations for community participation in the NFIP to include a new section, modelled on existing mudslide and erosion provisions, addressing additional requirements for risks due to sea level rise. New, minimum requirements for areas at risk of permanent inundation due to sea level rise should address both existing property and new construction/substantial renovation. In the case of existing property, communities should be required to:

- identify property at highest risk;
- develop plans and schedules for withdrawal of utilities and related services;
- remove abandoned property; and
- notify property owners of inundation risk and planned response measures.

In addition, if Congress does not prohibit issuance of flood insurance for new construction in sea level rise risk areas (see Recommendation #2.A), new minimum requirements for community participation in the NFIP should limit types of new development or substantial redevelopment in these areas to those that are temporary or easily relocated.

Congress should also direct FEMA to make several changes to the CRS to encourage NFIP communities to develop and implement plans to guide property acquisition and relocation. Specifically, Congress should direct FEMA to:

- increase the CRS points now provided for community actions to relocate repetitive loss properties and relocation of properties in high risk coastal zones (see section 520 of the CRS Manual);
- amend the Floodplain Management Planning element of the CRS to include a new element, modelled after the existing Repetitive Loss Area Analysis, giving points for addressing property at risk of sea level rise (see section 510 of the CRS Manual); and
- amend the Floodplain Management Planning element of the CRS to include a new element giving points for including in a Floodplain Management Plan consideration of places outside of the floodplain where existing homes and buildings in the floodplain should be relocated or where new construction proposed for a floodplain should be relocated.

Finally, in some cases, implementing property-specific flood mitigation practices, such as elevating structures, raising critical equipment, and filling in basements, may offer useful flood protection until a property can be relocated. **Congress should direct FEMA to amend the CRS to increase points for community actions to encourage or require flood mitigation action by individual homeowners.**

C. **Expand Existing NFIP Buyout Program for High-Risk Properties:** Millions of properties are at risk of storm flooding or inundation by rising seas. Many of these properties will be damaged or destroyed under private ownership at a cost to the owner. Some will need to be demolished at government expense.

In some cases, however, purchase of an at-risk property may be in the long-term financial interest of the government and the owner may be a willing seller. For example, in the case of NFIP insured properties likely to be repetitive losses and then be a total loss due to sea level rise, it may be in the government's long-term interest to purchase the property from a willing seller to avoid higher insurance and disaster payments.

Congress should authorize significant new funding for the existing National Flood Mitigation Fund within the NFIP to purchase high-risk properties when a buyout is determined to improve the financial sustainability of the NFIP and to be in the best financial interest of the federal government (e.g., avoid NFIP claims and help reduce disaster assistance spending).

Under this new program, the FEMA Administrator should establish criteria to determine the degree to which a property is likely to experience repetitive flooding or permanent inundation from rising sea levels over the next thirty years. For these properties, the Administrator should estimate a purchase price that is the fair market value of the property or the price that is expected to be in the best financial interest of the government, whichever is the lesser.

Those properties where the Administrator determines that there is a willing seller and a buyout is consistent with applicable state or local plans should be listed by the Administrator as high risk properties eligible for a buyout. The Administrator should annually report to the Congress the number and approximate location of these high-risk buyout eligible properties, the projected cost of potential buyouts, and the projected savings to the federal government as a result of buyouts.

Congress should annually appropriate funds, other than funds paid to the NFIP as premiums, to National Flood Mitigation Fund and states should have the option of matching federal funds for buyouts in the state. In the event that available funding is not adequate to make buyout offers for all eligible properties, the Administrator should give priority to purchases that have the greatest financial benefit to the federal government and that promote social justice. Buyouts should include demolition and removal of structures and utilities, restoration of natural conditions, and a strict prohibition on construction of another home or permanent structure on the site. Congress should reserve not less than forty percent of annually appropriated funds for eligible purchases from owners who are low income.

In the case of properties identified as eligible for the high-risk buyout except that the owner is unwilling to sell, Congress should authorize FEMA to offer a discounted annual premium in exchange for a binding agreement to sell the property to FEMA for fair market value in the event that the property suffers flood damages greater than 50 percent of the pre-flood value of the property.

Although this relocation policy is costly in terms of capital and administrative costs, it has the important advantages of improving the long-term financial outlook for the NFIP while reducing the health, safety, and financial risks faced by policyholders. By helping policyholders move to safer places, the government is moving away from the moral hazard it faces when it provides flood insurance that encourages people to remain in risky places.

4. **Improve Affordability of Flood Insurance for Low-Income People:** Many NFIP policyholders have limited financial resources making paying premiums a financial hardship. In addition, FEMA is now working to implement Risk Rating 2.0 to adjust premiums to reflect the current flood risk of a property. Unfortunately, new premiums will increase for some policyholders and some of these policyholders will be low-income people with limited ability to pay higher premiums.

   Looking to the future, more severe coastal storms and rising seas will steadily push premiums higher. Adapting the NFIP to the challenges of a changing climate (e.g. shifting to higher ground) will help reduce claims and thus help control premium escalation. As premiums escalate, keeping policyholders and communities in the NFIP will be increasingly difficult. Defections from the program erode its financial sustainability and jeopardize the flood reduction and climate adaptation practices it must increasingly support.

   In addition, policyholders faced with unaffordable premiums may be forced to sell their property, often a long-standing and much-loved home, and this process is likely to gradually undermine the social diversity of communities. Some policyholders unable to pay premiums will face a risk of a major or total financial loss of the property in the event of a damaging storm. For many people, the uninsured loss of a home is tantamount to financial ruin.

   As Congress works to make the NFIP more effective and financially sound, it must recognize that policyholders have very different financial resources and ability to pay premiums and that new measures are critically needed to improve affordability, avoid devastating financial impacts on households, prevent the gradual erosion of

community social diversity, and avoid defections from the program that would undermine its financial stability.

Some key policies that Congress should adopt to make NFIP policies affordable for low-income people are:

- make the discounts available under the Community Rating System (CRS) fully available to disadvantaged communities;
- offer premium discounts for agreements to sell damaged property;
- discount premiums to assure affordability; and
- focus expanded property flood mitigation and buyout investments on disadvantaged communities.

A. **Make the Discounts Available Under Community Rating System (CRS) Fully Available to Disadvantaged Communities:** Base premiums will evolve over time to better reflect current and future risk. Today, the NFIP provides discounts to premiums based on participation of communities in the CRS, which encourages communities to adopt flood reduction measures. A key first step in improving affordability of premiums is to bring premiums down in exchange for community flood reduction measures, which also benefits the NFIP by reducing future claims, especially in disadvantaged communities.

   The CRS benefits NFIP policyholders in a participating community by lowering premiums by up to 40 percent based on a community's implementation of actions from a menu of options to reduce flood impacts. Each action by the community earns points that translate into premium reductions for all policyholders in the community (see CRS Manual; The CRS Coordinator's Manual - CRSresources).

   Recent research, however, shows that wealthier communities are more likely to participate in the optional CRS program and generally earn more CRS points than other communities. Earning CRS points requires a community to expend resources and staff time to develop and adopt flood reduction actions. Policyholders in communities not participating in the CRS suffer the increased risks of flooding due to lack of supplemental flood reduction actions and pay premiums that both account for risk and make up the cost of CRS discounts provided to policyholders in CRS communities.

   Congress should authorize FEMA to provide substantially increased technical and financial support to disadvantaged communities to improve their access to the CRS program and increase the points that translate to greater premium discounts. As part of this assistance, Congress should direct FEMA to develop a core package of basic flood reduction actions drawn from the CRS Manual that a disadvantaged community can easily adopt at low or no cost. The core package should result in premium discounts of at least 20 percent. This assistance should also include updates to flood maps and support for implementation of base NFIP community program requirements.

B. **Offer Premium Discounts for Agreements to Sell Damaged Property:** Section 3.C of this *White Paper* calls for significant expansion of buyout programs focused on high-risk areas. In the case of properties that would be eligible for the high-risk buyout except that the owner is unwilling to sell, FEMA should be able to offer a discounted annual premium in exchange for a binding agreement to sell the property to FEMA for fair market value in the event that the property suffers flood damages greater than 50 percent of the pre-flood value of the property.

   As discussed in Section 3.C, this policy is financially smart for the NFIP and for the policyholder. Like the premium discounts for community participation in the CRS program, premium discounts for policyholders willing to agree to sell the property in the event of major damage will have the effect of reducing the dollar amount of premiums and thus making them more affordable.

C. **Discount Premiums to Assure Affordability:** In conjunction with offering reduced premiums for CRS participation and for agreement to sell property with major damage, the NFIP should take additional steps to make premiums affordable for low-income people, including directly discounting premiums as needed to make them affordable.

   In 2018, FEMA responded to Congress' request for a study of affordability options, including assessment of who should be eligible for premium discounts and how much of a discount to provide. For example, FEMA describes advantages and disadvantage of eligibility thresholds and of determining need based on income or on housing costs as a percentage of income or assets. Challenges with these approaches include high administrative overhead costs in relation to the discount offered and policyholders not realizing a discount due to documentation burdens.

   Congress should work with FEMA and stakeholders to identify the right mix of eligibility and discount criteria that allow low-income households to participate in the NFIP without an unsustainable financial burden while recognizing the need to sustain the NFIP financially. In designing an affordability amendment to the National Flood Insurance Act, Congress should also consider the following:

   - **Waive Premiums for Very Low-Income Households:** Congress should waive premiums for very low-income households in flood risk areas. For example, FEMA reports that about 6% of policyholders in floodplains (i.e., about 100,000 households) have "extremely low" income below 30% of Area

Median Income. In addition, some 500,000 extremely low-income households in flood risk areas do not have NFIP policies. A waiver reduces administrative costs to FEMA and reduces documentation burdens for households.

- **Show True Cost of Insurance:** Congress should direct FEMA to provide households eligible for affordability discounts or waivers with information on the full premium that reflects the flood risk (i.e., premium that would be charged absent an affordability adjustment and absent any CRS or storm damage purchase agreement discount).
- **Provide for Monthly Payment of Premiums:** Congress should allow for monthly payment of premiums but waive any additional charge for monthly payments for low-income households.
- **Limit Affordability Discounts to Primary Residences:** Congress should limit affordability discounts to premiums to primary residences.
- **Report Progress and Needed Adjustments:** Congress should direct FEMA to monitor affordability discounts and waivers closely and identify needed improvements to program criteria or administration.

D. Focus Expanded Property Buyout Investments on Disadvantaged Communities: In areas facing the highest flood and sea level rise risk, relocation of a home to safer, higher ground is often in the interest of the homeowner and in the financial interest of the federal government. Recommendation 3.C of this *White Paper* calls for significantly increased funding for buyouts from willing sellers to support relocation to safer places and to prevent redevelopment of buyout properties. It also calls for increased investment in property flood mitigation practices.

A key element of an expanded buyout and flood mitigation program should be to reserve at least 40 percent of funds for low-income people. President Biden's Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" provides for identifying how "Federal investments might be made toward a goal that 40 percent of the overall benefits flow to disadvantaged communities." **Congress should direct FEMA to follow the procedures developed to implement this Order to identify disadvantaged communities and to focus at least 40 percent of support for planning and implementation of buyout programs or property specific flood mitigation improvements programs to benefit these communities on a priority basis.**

Attachment: Flood Risk Disclosure at Time of Sale or Lease

The *Coastal Flood Resilience Project* is a coalition of organizations working for stronger programs to prepare for coastal storm flooding and rising sea level in the United States. The views expressed in this *White Paper* are those of the contributors and do not represent the views or endorsements of their organizations.

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Attachment 1
Flood Risk Disclosure at Time of Sale or Lease

Congress should include in legislation reauthorizing the National Flood Insurance Program (NFIP) a national standard for the mandatory disclosure of flood risks from storms and rising sea level at the time of sale or lease of property.

Benefits of Flood Risk Disclosure

Key benefits of disclosure of flood risk at time of sale or lease are described below:

- **Disclosure of Flood Risk Improves Flood Awareness and Encourages Flood Preparedness:** Disclosure of flood and sea level rise risks increases individual and community awareness of these risks and encourages owners of property in flood risk areas to implement measures to reduce flood risks at their property and to support community wide efforts to reduce flood risks, such as the Community Rating System. FEMA recognizes the value of flood risk disclosure by including flood risk disclosure as an element of the Community Rating System (see section 340 of the CRS Manual).
- **Flood Preparedness Reduces Flood Damages and NFIP Claims**: Increased efforts to prepare for floods at a property and community scale will reduce the likely extent of loss of life and property in the event of flooding or extreme weather events. A reduction in losses translates to a reduction in NFIP claims and helps maintain the balance between premiums and claims that is essential to the financial viability of the NFIP.
- **Flood Preparedness Reduces Disaster Recovery Costs**: Improved flood preparedness will reduce loss of life and property during flood events and will reduce costs to federal, state, and local governments associated with disaster recovery. In the case of major disasters, these costs are often paid largely by federal supplemental appropriations.
- **Flood Risk Disclosure Property Financial System Stability:** Mortgage institutions benefit from flood risk disclosure because they can use flood risk information to more accurately determine risk to a property and reflect this risk in financing decisions. These mortgages are often resold as part of Residential Mortgage Backed Securities and better pricing of these securities reduces the potential for large scale defaults and thus improves stability of the financial system more generally.

Finally, the public recognizes these benefits of disclosure and strongly supports a “right-to-know” of flood risk at time of sale. A 2019 study by the Pew Charitable Trusts found that 74 percent of Americans support a national requirement for flood risk disclosure.

National Minimum Flood Risk Disclosure Standard Needed

Despite public support and the substantial benefits of flood risk disclosure at time of sale or lease, there is no national standard for disclosure. Some states have flood risk disclosure standards but there are significant differences in disclosure requirements and weaknesses in these programs. A recent evaluation of state flood risk disclosure requirements by the Natural Resources Defense Council found that programs in only five states ranked "best" or "better" while 17 ranked as "adequate" and seven as "inadequate." The remaining 21 states have no disclosure program.

In addition, the variation in state flood risk disclosure laws can cause confusion or misunderstanding for buyers or potential leaseholders moving from one state to another. In many states, disclosure of information concerning flood risks to a specific property is difficult because key information is not readily available to the public and pertinent information can be difficult to interpret. In addition, home buyers and potential leaseholders, especially disadvantaged persons, face challenges in gaining access to flood risk information located in disparate places.

Finally, some of the past obstacles to implementation of flood risk disclosure requirements have been overcome by improved data systems. Recent developments in use of online geospatial data systems relating to flood risks, such as "Flood Factor," demonstrate that complex flood risk data for specific locations can be simplified and made widely available online.

Recommendations

Given the significant benefits of flood risk disclosure and the strong public support, Congress should adopt a national flood risk disclosure standard applying effective minimum requirements consistently across the country. Legislation creating a national standard for disclosure of flood risk at the time of sale or lease of property should include the key elements described below.

1. **Create National Flood Risk Disclosure Standard:** Congress should amend the National Flood Insurance Act to establish a national minimum standard for disclosure of flood risk at the time of sale or lease of a covered property beginning after an appropriate effective date (e.g., September 30, 2023).

2. **Property Coverage:** Sale, or lease of more than 90 days, of any improved real estate located in a Special Flood Hazard Area (i.e.; the 100 year floodplain) on a current map of such areas published by FEMA) should be covered by the disclosure requirement.

3. **Sea Level Rise Risk Areas:** The Administrator of FEMA, in consultation with the Administrator of the National Oceanic and Atmospheric Administration, should be directed to provide a web-based service indicating Sea Level Rise Risk Areas (i.e., areas

expected to be inundated as a result of rising sea levels by the year 2100 based on the Intermediate-High Scenario established in the 2017 "Sea Level Rise Scenarios" report of the National Oceanic and Atmospheric Administration).

4. **Property Flood Risk Score:** FEMA should be directed to develop a consumer-friendly rating system for the flood and sea level rise inundation risk of a covered property that accounts for various aspects of flood risk and results in a single numerical "Flood Risk Score" for a property.

5. **Disclosure Requirements for Sale of Covered Property:** Disclosure of flood risk should be required not less than 14 days prior to the sale of a property and should include at a minimum:
    a. The Flood Risk Score of the property determined by the Federal Emergency Management Agency;
    b. Whether the property is located in a Sea Level Rise Risk Area;
    c. Whether the property is designated by the Federal Emergency Management Agency as a repetitive loss structure or severe repetitive loss structure;
    d. The amount and date of any claims paid by the National Flood Insurance program for damage to the property; and
    e. A statement of the most recent annual premium paid for insurance under the NFIP, if any.

6. **Disclosure Requirements for Potential Leaseholders:** Disclosure of flood risk by persons leasing property for more than 90 days should be made in writing not less than three days prior to a lease agreement and include the information required to be disclosed at the sale of a property as well as notification of the availability of coverage under the National Flood Insurance Program for contents located in a structure on the property.

7. **Supporting Flood Risk Data System:** To facilitate the ability of persons selling or leasing property to comply with flood risk disclosure requirements, FEMA should be directed to establish, in conjunction with implementation of a disclosure requirement, a national database providing web-based public access to property specific information and maps needed to comply with disclosure requirements and the Flood Risk Score for the property.

8. **Flood Risk Disclosure Certificate:** The Administrator of the Federal Emergency Management Agency should be directed to establish a Flood Risk Disclosure Certificate applicable to the sale of covered property and a comparable Certificate applicable to the lease of covered property. Certificates should provide flood risk disclosure information in a user-friendly format. Any person selling of leasing a covered property, or a representative of such person, should be authorized to request a completed disclosure certificate for a property from FEMA.

9. **Obligation of Financial Institutions:** In the case of any covered property for which disclosure is required at the time of sale, the issuer of a mortgage for the property should be required to provide to the buyer not less than 14 days prior to sale a Flood Risk Disclosure Certificate and to include the Certificate, signed by the buyer, in financial documentation.

10. **Resale of Mortgages:** Lending institutions should be prohibited from selling a mortgage for a covered property to another financial institution unless they provide the Flood Risk Disclosure Certificate to the purchasing institution at the time of sale. Federal home financing institutions should be prohibited from acquiring a resold mortgage for a covered property unless it includes a signed Flood Risk Disclosure Certificate. This requirement will help ensure that disclosure requirements are met in original transactions and that resale of mortgages to other institutions and into residential mortgage-backed securities is informed by flood risk information.

11. **Non-preemption:** States should be allowed to adopt flood risk disclosure standards if the Administrator of FEMA finds that the state standard is more stringent than the national standard.

12. **Information for Lessors:** The Administrator of FEMA, in cooperation with the Secretary of the Department of Housing and Urban Development, should be required to conduct a public information initiative to make persons leasing property for more than 90 days aware of the availability of a Flood Risk Disclosure Certificate for a leased property. This initiative should give special attention to informing disadvantaged, minority, and low-income persons of flood risks and flood disclosure requirements.

13. **Report to Congress:** The Administrator of FEMA should be required to provide, not later than three years after the date of enactment of a national flood risk disclosure standard and biennially thereafter, a report to the appropriate Committees of the United States Congress on the operation of the standard and recommendations for improvements. In developing such reports, the Administrator should be directed to provide the draft report for public review and comment and to consult with interested stakeholders and state and federal agencies.