

**REBUILD THE PLANE NOW:
RECOMMENDATIONS FOR
IMPROVING GOVERNMENT'S
APPROACH TO DISASTER RECOVERY
AND PREPAREDNESS**

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The term “building the plane while it’s in flight” is bandied about a lot during disaster recovery. As natural disasters become more prevalent in the United States, all levels of government have become increasingly involved in recovery, often having to figure it out under emergency conditions. Particularly since Hurricane Katrina, the federal government has stepped up efforts to encourage and support cities and states to prepare for and mitigate disasters during a “steady state,” rather than scrambling after a disaster occurs, when communities are reeling from loss of lives and incapacitated critical facilities. Even so, how prepared states and municipalities are varies greatly. Places that have a history of, or particular vulnerability to, catastrophic events tend to prioritize disaster planning more than those that have been spared so far, but past events do not necessarily ensure future readiness.

It is, of course, impossible to predict and protect against every potential disaster. The vulnerabilities that became apparent during Katrina and Superstorm Sandy are not necessarily the same ones that would present themselves if a different type of storm hit the same regions. Even more daunting is the tremendous cost of pre-disaster mitigation, especially at a time when resources are scarce just to keep basic infrastructure operational. Though the likelihood of various natural disasters is high in many parts of the country – and the impact potentially devastating – it is a huge financial and administrative challenge for cities and states to prepare for the ever-widening range of threats the future may hold.

Tempting as it is, we must resist putting our collective heads in the sand when it comes to disaster preparedness and recovery. Disasters are inevitable, and the better prepared we are on a federal, state, local and household level, the less time and money it will take to recover. Today, we spend tens of billions of federal taxpayer dollars on disaster recovery annually,¹ but only a fraction of that on mitigation, even though a 2005 independent study by the National Institute of Building Sciences found that over a ten-year period every dollar spent on mitigation saved \$4 in recovery costs.² It is imperative that all levels of government make preparedness a top priority, while also ensuring that when disasters do occur, federal assistance is used as efficiently as possible to help the immediate victims and ameliorate future impacts.

This paper – based on my three years as Regional Administrator for the U.S. Department of Housing and Urban Development (HUD) in New York and New Jersey during the region’s recovery from Sandy, Irene and Lee and my earlier tenure at the HUD-funded

¹ According to a September 2016 report by the Government Accountability Office (GAO) that analyzed federal disaster spending between FY2005 and FY2014, \$27.7 billion was spent per year across 17 federal departments and agencies, not including state and local funds allocated for disaster recovery. An April 2013 report by the Center for American Progress found that \$136 billion was spent on federal disaster recovery between 2011 and 2013, equating to \$400 per American household per year.

² A 2014 report of the GAO on the National Flood Insurance Program found mitigation saves \$1.2 billion per year in prevented flood losses.

Lower Manhattan Development Corporation working on NYC's recovery from 9/11, and greatly informed by the wisdom of many others involved in disaster recoveries nationwide – is an effort to memorialize lessons learned and provide recommendations for improving recovery and increasing preparedness at all levels of government. While the examples cited are weighted heavily toward flooding and surge events like Sandy, most of the recommendations have broader applicability to other types of natural and manmade disasters. My hope is that these 41 recommendations will reach and resonate with federal, state and local government policymakers nationwide, regardless of political party or geographic location, since no community is immune from the threat of disaster. (To this end, I've organized the recommendations in the Appendix by intended audience, from Congress and the White House to state and local government officials.)

While one or two of the recommendations may seem a little ambitious to veterans of government and the political process, the majority are eminently doable in the near term, and there is no time to waste. And not all 41 have to be implemented – some actually preclude the need for others – but by proactively improving legislation, policies, coordination and communication now, we will reduce future risk to people and property, save taxpayers tens of billions of dollars every year, and enable communities to recover more quickly and completely when future disasters occur – which they will. We cannot afford to wait until the plane is in flight again to do the necessary rebuilding.

FEDERAL FIXES

The increasing scale of damage from natural disasters has led Congress to cobble together layers of funding programs that are administered by multiple agencies. The Federal Emergency Management Agency (FEMA) was established in 1979 to serve as the lead federal agency responsible for coordinating assistance in Presidentially-declared emergencies. The 1988 Stafford Disaster Relief and Emergency Assistance Act (“Stafford Act”) bestowed upon the FEMA Administrator authority to provide immediate financial support to state and local governments (later amended to add tribal governments) as well as individual victims of a disaster, and to coordinate other federal agencies to ensure a comprehensive, unified response. Though the Stafford Act centralizes disaster relief through FEMA, the reality is far less streamlined, in part due to statutory constraints and dollar caps on the funding FEMA can make available.

Other than FEMA, the Small Business Administration (SBA) is the agency that has traditionally been most involved in providing financial assistance after a disaster. To the surprise of many, SBA does not serve small businesses exclusively: it also offers qualified homeowners below-market loans up to \$200,000 to replace or repair primary residences damaged in a disaster, and up to \$40,000 to replace or repair personal property after insurance proceeds have been exhausted. More recently, Congress has also, on occasion, provided supplemental funding to existing non-disaster federal programs for long-term recovery. In 1992, the U.S. Department of Housing and Urban Development's (HUD) flexible Community Development Block Grant (CDBG) program was used for

the first time as a vehicle to supplement the resources available to certain state and local governments for disaster recovery. These supplemental appropriations are called CDBG-DR funds (“DR” stands for Disaster Recovery).

Unlike the traditional CDBG funds that HUD distributes annually to qualifying states and jurisdictions based on a nationwide formula, CDBG-DR funds are appropriated by Congress in response to a specific disaster or series of disasters – i.e., there is no standing authority for HUD to grant DR funds without an act of Congress. To date, Congress has appropriated more than \$46 billion in CDBG-DR funds. The two largest allocations were \$19.7 billion for the states affected by Hurricanes Katrina, Rita and Wilma, and \$15.2 billion for disasters that occurred between 2011 and 2013, encompassing Superstorm Sandy and Hurricanes Irene and Lee in the Northeast, as well as other smaller events nationwide.

How do these various funding programs and the agencies that manage them fit together? That’s where our story begins.

Wading through Federal Alphabet Soup

Before a predictable disaster like a hurricane even occurs, FEMA mobilizes a federal interagency team to the projected target region. By the time Superstorm Sandy made landfall on the eastern seaboard of the United States, FEMA, the SBA and other federal agencies were already on the ground, ready to staff Disaster Recovery Centers. Here, victims could find out what types of assistance might be immediately available to them once President Obama declared a major disaster, which triggered the Stafford Act’s authorities.

Many home and building owners’ first resource for repairs and rebuilding was proceeds from flood insurance, which is usually purchased through the National Flood Insurance Program (NFIP) administered by FEMA. NFIP was established by Congress in 1968 because private flood insurance was not available in many at-risk areas of the country. In recent years, there has been an influx of NFIP claims due to the escalating number and scale of flooding disasters. A variety of factors – including massive payouts for claims after Katrina and Sandy, statutory caps on the premiums that can be charged, and years of arguably excessive charges by companies hired by FEMA to administer policies – has left the NFIP almost \$25 billion dollars in the red. This entire paper (and countless more) could be dedicated to NFIP reform, but I will limit my discussion to a few challenges observed during the Sandy recovery.

A threshold problem was that a significant number of affected homeowners did not actually have flood insurance. Even within FEMA-mapped flood zones, many homeowners only purchase flood insurance when it is required as a condition of taking out a mortgage or receiving a government grant. Many homeowners living in the flood zones impacted by Sandy owned their homes outright and had never received federal assistance, so they were not technically required to carry flood insurance – and since

most had never been severely affected by a past storm, they had little incentive to buy insurance voluntarily. Furthermore, complacency about the level of risk, combined with lax enforcement, led to non-compliance even among some owners who *were* required to have insurance. Finally, FEMA was in the process of updating its flood maps when Sandy struck, and most homeowners living in impacted areas that were not previously mapped as flood zones did not have flood insurance.³ Given all these factors, it is not surprising that the City of New York’s 2013 Special Initiative for Rebuilding & Resiliency report found that more than 50% of the areas flooded during Sandy were outside the designated flood plain, and even within the flood plain, fewer than 50% of residential buildings were covered by flood insurance.

Another complicating wrinkle was that some homeowners who had insurance and filed claims were, by FEMA’s own admission, initially undercompensated – in some cases due to falsified engineering reports written by FEMA’s contractors. Even under the best circumstances, when affected homeowners had flood insurance and were compensated fully, all NFIP claims were capped at \$250,000 for structural repairs, and many of the homes damaged by Sandy cost significantly more to repair or rebuild. All to say, after Sandy, as in many previous flooding disasters, NFIP was only a partial solution.⁴

Homeowners with eligible unmet needs beyond insurance proceeds are eligible to apply for FEMA’s Individuals and Households Program (IHP), sometimes referred to as Individual Assistance (IA). IHP is a fairly limited grant program, currently capped at \$33,000 per household, and FEMA’s guidance states clearly that it is not intended to make homeowners whole or to supplant insurance. FEMA’s website also indicates that “most disaster aid from the Federal government is in the form of loans from the Small Business Administration (SBA) that must be repaid,” but it does not suggest that a potential applicant contact the SBA prior to applying for IHP, or that an SBA loan application is an absolute requirement.⁵

Nonetheless, Sandy-impacted homeowners and small residential building owners consistently reported that they were told by staff at Disaster Recovery Centers that they *had* to apply for an SBA loan in order to qualify for any grant money that might be available down the road. The fuzzy guidance on FEMA’s website and the more concrete in-person advice Sandy victims received about this “requirement” derive from the worthy policy and practice of prioritizing limited IHP funds for homeowners who are rejected for SBA loans and have no other financial means of recovery; however, this policy and

³ Of course, even up-to-date flood maps cannot perfectly predict what areas will be flooded in any given event, so there is rarely 100% overlap between damaged areas and mapped flood plains.

⁴ In her book *The Resilience Dividend*, Judith Rodin cites a SwissRe analysis that found on average only 30% of disaster costs have been covered by insurance over the past three decades. (p. 153)

⁵ Since Sandy, FEMA’s website has been updated to forewarn potential applicants that they *may* be required to apply to the SBA for a loan before being considered for IHP assistance, but it still does not say definitively that this is required.

practice are not actually backed up by statute or regulations, leading to vast confusion among Sandy victims and state and local government representatives trying to advise their constituents. While federal policy does favor loans over grants for those who qualify, it was not accurate that all owners were required to apply for an SBA loan in order to receive grant money. When this became clear later in the process, many owners felt duped as they watched their loan-free neighbors receive larger grants than they did (more on this later).

Lack of clarity is, unfortunately, a hallmark of the informational scum that occurs in the days, weeks and months following most disasters. After Sandy, many victims complained that communication about federal agencies' financial assistance programs was muddled at best, often contradictory, and sometimes just plain wrong. Further muddying the waters was the fact that CDBG-DR is not referenced on FEMA's website and, according to many Sandy victims, was not mentioned by government representatives at Disaster Recovery Centers. Admittedly, it could be misleading for government reps to delve into CDBG-DR immediately after a disaster since these funds are not a sure thing, and whether they get appropriated is pretty much beyond federal agencies' control. Also, even if DR funds are appropriated, there is typically a long lag time before they are available, so they tend not to be the fastest route home for people with other resources. And finally, though the program permits some flexibility with respect to recipients' income levels, CDBG-DR is intended primarily as a resource of last resort for low- and moderate-income (LMI) residents whose needs cannot be otherwise met through insurance, FEMA and the SBA. Talking about CDBG-DR in the early days after a disaster could open up a Pandora's box and mislead hopeful disaster victims if not done carefully – but rather than complete avoidance, agencies should focus on how to ensure accurate communication.

In the case of Sandy, Congress did appropriate DR funds three months after the storm. The 2013 Disaster Relief Appropriations Act, commonly called the “Sandy Supplemental,” provided \$16 billion in CDBG-DR funding to HUD (later reduced to \$15.2B due to sequestration), as well as additional money to over fifteen other federal agencies, including FEMA and the SBA. As welcome as this funding was, it made understanding and applying for all available federal assistance even more convoluted for home and building owners forced to navigate among at least three different agencies.

While some important steps have been taken since Sandy to clarify the interplay among federal agencies' various disaster recovery programs, there is much more that must be done to streamline this process. Currently, disaster victims have to toggle among different agencies' websites and materials and ultimately file separate applications to FEMA, the SBA and, if CDBG-DR becomes available, its administering state or local entity. It should be the job of government to determine the best and most appropriate source of relief for disaster victims, not that of the victims themselves. Today's disjointed process should be replaced by an online “Disaster Relief” portal that is a single entry point to all disaster aid available to residential and small business owners. Thousands of colleges have figured out how to develop and work with an online “common application” for admissions; surely government agencies can do the same for disaster relief.

One potential stumbling block to a “one-stop shop” approach to disaster relief is federal privacy laws, which prohibit the federal government from sharing personal information without an individual’s consent. It is likely, however, that most disaster victims would be happy to give consent for their information to be shared among other government agencies administering relief programs, including those outside the federal family, if doing so reduced the number of forms and paperwork they must submit. The common application would allow applicants to check a box to authorize federal agencies to release their information to other government agencies that may provide disaster assistance, including at the state and local level. FEMA, SBA and HUD would produce a joint data-sharing agreement that could be tailored by relevant federal, state and/or local agencies involved in disaster relief – this way, if a DR-funded program is set up after an individual has filled out her initial common app, the information she provided can be shared with the state or local grantee at that point to avoid duplicative information requests and further streamline receipt of aid.

The common app should be as comprehensive as possible in the information it collects, including some data that might not be relevant or available on day one, such as insurance proceeds, but could be added to an applicant’s file as it becomes available. In addition to insurance proceeds, other critical information to collect on the common app is whether a victim’s home is a landmark or in a historic district, or might otherwise be environmentally significant. Some homeowners may not know the answers to every question right away, but being as comprehensive as possible up front provides an early opportunity for agencies to put homeowners on notice about important issues that will arise later, like environmental review requirements with which they may have to comply prior to commencing work (more on this later). Collecting as much information from applicants as early as possible, and enabling that information to be shared among all relevant government agencies that might provide aid to applicants throughout the course of their recovery, may be the most important thing the federal government can do to expedite victims’ early post-disaster experience and to ensure consistent delivery of important, accurate information that applicants need to navigate the recovery process.

To achieve these goals, once homeowners, multifamily building owners or small business owners submit even partially completed common applications (the app would differ for each of these three populations), they would be registered in a centralized database that would keep track of their location if they are temporarily displaced, provide regular updates about their application status, and generally serve as the conduit through which relief agencies distribute both generic and personalized information to program applicants, ensuring greater accuracy and consistency in communications.

Of course, a disaster common app is only possible if policies and procedures are well coordinated among FEMA, the SBA and HUD to begin with, and the following sections make recommendations about how these agencies can achieve better definition and integration of their relief programs. But while these more systemic improvements are under consideration and development, federal agencies must find immediate ways to improve communication with disaster victims. Both in-person and written communications must clearly and precisely communicate what relief options are

immediately available and, in the case of large-scale disasters, explain CDBG-DR and how it interacts with short-term funding programs when it is appropriated. Agency representatives interacting with disaster victims, elected officials and the press must be trained and well versed not only in their own agencies' programs and policies but also those of their sister agencies. They also must know the right people at their sister agencies to contact if questions arise about program overlap and coordination. Close interagency working relationships among federal staff are essential.

Recommendations:

- FEMA, in partnership with the SBA and HUD, should develop a single “Disaster Relief” website with a common application for impacted homeowners, multifamily building owners, and small business owners. This portal would lead to a seamless interagency data system, enabling ongoing communication and updates to flow between applicants and relief agencies at the federal, state and local levels.
- The common application should allow applicants to check a box to give consent for their personal information to be shared with other government entities providing disaster assistance, including at the state and local levels, so that fewer information requests are made of victims, thus streamlining the process to apply for disaster relief from multiple funding sources.
- Federal agencies’ post-disaster communications with victims and the public – whether in person, online or in printed materials – must be comprehensive, accurate and consistent, including up-to-date information about each agency’s programs and policies and how they interact with those of sister agencies.

Brightening Programmatic Lines

Because of urgent demand in recent decades, federal disaster assistance has had to evolve perhaps a little too organically in order to keep up. The National Disaster Recovery Framework (NDRF), a post-Katrina initiative designed to make interagency disaster response more cohesive, aims to improve coordination and efficiency, but it does not tackle underlying federal program requirements, some of which are unnecessarily stringent, while others could benefit from brighter lines to sharpen murky definitions and alleviate overlap between agencies. Targeted changes to clarify agencies’ roles and tighten programs to achieve specific policy objectives would make the programs easier to administer for both federal agencies and their grantees.

Just as a single “Disaster Relief” portal and common application would help alleviate confusion and overlap among FEMA, the SBA and HUD disaster programs, Congress’ granting of standing authorization to HUD to issue CDBG-DR funds up to a capped amount without a supplemental appropriation would accelerate delivery of a comprehensive federal aid package for disaster victims. This action would make CDBG-DR part of the standard toolkit of resources automatically available under the Stafford

Act after the President declares a major disaster. Carefully crafted criteria would have to be established to limit when these existing funds could be tapped and what the capped amount would be, but the benefit of standing authority would be to decrease the current uncertainty and unpredictability about whether DR funding will be made available after a disaster. Coordinating and communicating disaster victims' relief options would be much easier if all of the relief options were known in the immediate aftermath of most events. (Major disasters that would exceed the cap and require a supplemental appropriation would still have some uncertainty.) This change would also enable HUD to shape a more standardized CDBG-DR program with consistent regulations that could be aligned with other federal disaster assistance right after most events.

Going a step further, consideration might be given to consolidating disaster loan and grant programs so fewer agencies are in the mix – perhaps by extending grant funding and authority to the SBA so that it would administer all housing and small business assistance directly, without involving FEMA or HUD and its grantees. Like home and residential building owners, many small business owners found themselves caught betwixt and between various federal agencies after Sandy. SBA provided recovery loans, but once CDBG-DR funds were allocated, HUD's three major grantees (the States of New York and New Jersey and New York City) offered grants to small businesses with unmet needs above their SBA loans. Rather than requiring small business and residential owners to apply to SBA for loans and CDBG-DR grantees for grants, it may make more sense to consolidate loans and grants so applicants only have to deal with a single agency.

This programmatic shift would be admittedly more complicated than my other recommendations in this section, but it may not be necessary if federal agencies effectively develop and institute a single online portal and common application. "Effectively" is the operative word here – government is not known for its technological prowess, and unless the system can truly shepherd victims through the application process seamlessly, without them having to navigate their way through multiple agencies' programs individually, the next best solution would be to at least limit the number of agencies with which they must interact. If SBA handled both loans and grants, business owners that today may not qualify for a loan would be reviewed simultaneously for eligibility for a forgivable loan or grant rather than simply being denied and having to apply all over again to another agency for aid. Homeowners who initially qualify for loans but later have financial troubles could appeal to SBA to be shifted to a grant based on hardship, something much more easily accomplished without impacting their credit if funding is provided through a single agency providing ongoing case management. This would provide greater flexibility for the single administering agency to respond to changes in owners' circumstances over time. And without housing and small business grants to administer, state and local CDBG-DR grantees could focus on infrastructure and large public projects, which tend to be more in their realm of experience and expertise.

Recommendations:

- Congress and the White House should give HUD standing authority to issue CDBG-DR funding up to a set amount immediately following a Presidentially-

declared disaster so that a supplemental appropriation is only necessary after major disasters.

- Consideration should be given to whether disaster recovery would be expedited if all housing and small business loan, forgivable loan and grant programs were handled by a single agency, most likely the SBA, rather than divided among multiple federal and state/local agencies.

Even if Congress does not make CDBG-DR a standing program or consolidate housing programs within a single agency (two of the more ambitious recommendations in this paper), standardizing some CDBG-DR regulations across disasters would help ensure that the program consistently achieves its policy goals and that its limited dollars are directed to the people and projects most in need. As mentioned above, the CDBG-DR program, like the traditional CDBG program, is intended to prioritize low- and moderate-income (LMI) populations, defined as persons making up to 80% of Area Median Income (AMI). Some DR appropriations have mirrored the CDBG program's requirement that grantees spend at least 70% of their allocated funds on activities that benefit LMI persons, but more often the LMI threshold has been set lower. For Sandy, the threshold was lowered to 50% since many of the communities and individuals affected were not LMI.

Congress and HUD have the ability to tailor the LMI floor because, since CDBG-DR is not a standing program, each supplemental appropriation gets implemented by new legislation and a new set of regulations issued by HUD in a Federal Register Notice laying out that appropriation's requirements and spending parameters. Rather than reducing the LMI floor in the appropriations legislation or the Notice, the floor should be kept consistently at 70%, with the caveat that the HUD Secretary may waive the requirement upon a showing of compelling need by a grantee. This would establish the presumption that the floor must be met, and since evidence shows that low- and moderate-income people and communities are the most severely impacted by disasters and are the slowest to recover, HUD's mission would be well served by making the 70% LMI threshold a bright line in the DR program.

If CDBG-DR continues to be used for housing recovery, Congress and HUD should place an income cap on DR-funded single-family housing programs. This cap could be increased by the HUD Secretary upon a showing of compelling need by a grantee, but it could not be waived entirely. An example of a compelling need that might justify bumping up the income cap would be evidence that an affected area is a particularly expensive market in which to repair and rebuild homes. For most of the country, 120% of Area Median Income would be a reasonable cap, but had an income cap existed at the time of Sandy, grantees likely would have made a convincing case that a higher income cap would have been justified in this market.

Many DR grantees have elected on their own to restrict eligibility for their housing programs based on income, but New York City and New York State did not. Though

both prioritized LMI households, New York City ultimately committed to serving applicants regardless of income. This decision will not prevent the City from meeting its 50% LMI floor requirement, but it does raise the policy question of whether tax dollars should go to homeowners who have sufficient income and other resources to recover without government grants. Since CDBG-DR is such a precious resource and each appropriation is a finite pie, placing income restrictions on single-family housing programs means more funds are available to address other needs, such as infrastructure projects that protect entire communities and critical facilities.

Income caps on single-family housing programs would also mean that fewer homeowners who qualify for SBA loans would be eligible for DR grants. Decreasing this overlap would bolster the policy goals of encouraging those with financial capacity to take out loans for their recovery, while ensuring that those without the means to get loans are the primary recipients of government grants.

Recommendations:

- Congress and HUD should standardize the CDBG-DR program to require that at least 70% of every grantee's allocation benefits low- and moderate-income (LMI) persons (as required by the regular CDBG program), alterable only by a waiver from the HUD Secretary if a grantee proves compelling need.
- Congress and HUD should place an income cap on CDBG-DR-funded single-family housing programs that can only be increased, but never eliminated, by a waiver from the HUD Secretary if a grantee proves compelling need.

Trimming Red Tape

While everyone loves to call upon federal agencies to cut red tape and streamline bureaucracy, doing so can be next to impossible within the complex web of existing federal laws, rules and regulations (not to mention politics). However, red tape can be trimmed where there are policies squarely within the purview of federal agencies, that create extraneous administrative burdens that do little to protect meaningful government interests.

One of the most glaring examples within the realm of CDBG-DR is HUD's written guidance requiring that receipts for repairs to damaged homes be provided as back-up for all DR reimbursement payments. The three major Sandy grantees utilized widely-accepted cost estimation systems to estimate applicants' repair costs during preliminary site visits, and grants were sized based on this system's formulaic analysis. When HUD's Inspector General insisted that the grant amounts had to jibe with original receipts, the grantees argued (I think convincingly) that the cost estimation system was a far more reliable, consistent, equitable and administratively efficient way of determining grants.

First, the mere existence of a receipt does not automatically mean a homeowner was charged the fair market rate for work done. Sometimes variations are legitimate, but

owners may be victims of contractor fraud (particularly prevalent after disasters) or may collude with contractors to defraud the program. A standardized cost estimation system catches such inconsistencies. In addition, using standardized cost estimates to size grants ensures that the government only pays for basic fixtures. The example often used is granite counters: if someone wants a granite kitchen counter, she – not the taxpayers – should bear the cost of that upgrade. Again, a cost estimation system flags this differential more reliably than a review of receipts.

In addition, when someone is displaced from a badly damaged home, receipts often get lost, or in some cases, owners may have performed work before they were told they needed to save their receipts. It does not seem fair to deny these owners reimbursement for eligible costs simply because they do not have every receipt for every nail used to repair their home or building under emergency conditions. And finally, as New York City and New York State convincingly argued, enormous staff resources are required to pore over receipts from every applicant to ensure that there are no ineligible candy bars lurking within a 2-foot Home Depot receipt. This is not the most efficient use of highly restricted administrative dollars.

There may be cases in which the legitimate cost to repair a home exceeds that estimated by the system's formula – for example, if a house is a designated landmark – and in those cases, an applicant could appeal for additional grant money based on a review of receipts showing actual costs. In most cases, however, cost estimating ensures greater consistency and fairness in determining the amounts that applicants receive for their home repairs, thwarting disreputable contractors and residential owners who may try to game the system through falsified or bloated receipts. Providing grant amounts based on an objective analysis of the standard costs for the required scope of work – with an appeals process for extenuating circumstances – is a more efficient and reliable approach and should be encouraged, not prohibited.

Recommendation:

- HUD should allow CDBG-DR grantees to utilize industry-standard cost estimation systems to size repair grants, subject to a receipt-based appeals process for extenuating circumstances, rather than requiring receipts for all reimbursements.

An additional CDBG-DR requirement that is overly stringent without a meaningful policy rationale is the burdensome process for calculating how many tenants in a multifamily building qualify as low and moderate income. Currently, HUD requires that tenants fill out and submit a form self-certifying their incomes; however, many tenants do not want to provide this information for privacy reasons, and since they are not the direct recipients of the CDBG-DR funds, there is little or no incentive for them to do so. Residential building owners typically have to spend a lot of time and effort haranguing reluctant tenants to fill out their forms, and even then, they rarely get 100% participation. HUD should allow owners to quantify LMI status by submitting documentation that is directly under their auspices, such as rent rolls and census data on the median income in

the census tract in which a building is located. This information is more readily available to the building owner and still provides a sufficiently accurate picture of tenants' incomes for HUD's LMI monitoring purposes.

Recommendation:

- HUD should allow multifamily building owners to submit rent rolls and census data to certify their tenants' low- and moderate-income (LMI) status rather than requiring tenants to self-certify their incomes.

FEMA, too, has regulations and guidance that make program implementation more challenging than necessary. After Sandy, its Public Assistance (PA) program – which provides disaster grants to state, local and tribal governments and some not-for-profits for a variety of recovery needs – required a 10% funding match by grantees. New Jersey argued that when PA funds are used for infrastructure projects, FEMA should allow grantees to fulfill this cost-sharing requirement the same way it does for its Hazard Mitigation Grant Program (HMGP). Under HMGP, a global match is permissible, meaning that 10% of the total amount the grantee spends program-wide – as opposed to project by project – must come from non-FEMA funds. This is relatively easy and cost efficient to administer because the grantee can elect to consolidate the non-FEMA match in one or two large projects, thus only having to reconcile multiple funding sources with different regulations for a handful of projects at most. For PA, however, FEMA's stance is that the match must be met on every individual project funded through the program, making it far more cumbersome and costly to administer.

Sandy grantees were technically permitted to use their CDBG-DR funds toward other agencies' cost-sharing requirements, but it proved so difficult to reconcile FEMA's and HUD's regulations across every individual PA-funded project, grantees ultimately limited the number of projects in which they used DR for their PA match. It may not be the worst outcome that grantees had to put some of their own resources into these projects, but the match can put great stress on state and local resources, without a clear policy reason for treating it differently under PA and HMGP. Going forward, FEMA should consider whether tweaks to PA's administration could make the more streamlined global match approach of HMGP viable for infrastructure projects funded through its PA program.

Recommendation:

- FEMA should explore administrative or regulatory fixes that would enable a global match for infrastructure projects funded through its Public Assistance (PA) program, akin to how it administers the cost-sharing requirement for its Hazard Mitigation Grant Program (HMGP).

Reconciling regulations and agency procedures is an ongoing challenge for grantees trying to marry funding from multiple federal agencies in a single project.⁶ Simply put, there are too many federal policy goals vying against each other at a time when speed is paramount. For “steady state” projects, the additional time these policies incur may be justified, but disaster recovery is urgent. If our primary goal is to repair and improve damaged, vulnerable infrastructure as quickly as possible, some of these competing policies have to give way. One remedy: when only 10% of a project is funded by CDBG-DR to meet another agency’s match requirement, Congress should specify in the supplemental appropriation that the rules and regulations of the primary funding agency trump those of HUD. This would enable a much smoother reconciliation of different federal funding sources, particularly when one is only being used to fulfill a small match requirement.

Recommendation:

- Congress and the White House should specify in future disaster appropriations legislation that the regulations and rules of an infrastructure project’s primary funding agency override those of a second funding agency if the second agency’s funds are used strictly to meet a cost-sharing requirement.

Streamlining Environmental Reviews

While the Sandy Supplemental legislation waived many regulatory requirements of the traditional CDBG program for the sake of expediency, it did not waive federal environmental laws, including the National Environmental Policy Act (NEPA), which requires a federal environmental review be conducted and approved before any reimbursable work can commence. Let’s be clear: a strong public welfare rationale underpins NEPA and related environmental laws. Federal resources should not be used to put people back into unsafe or unhealthy homes, nor to create or exacerbate broader environmental harm. These laws and regulations are incredibly important policy drivers that protect Americans’ health and wellbeing, as well as countless significant environmental, historic and archeological resources.

That said, the lack of any wiggle room on these laws in the Sandy Supplemental had unintended consequences for homeowners. When the States of New Jersey and New York and New York City got their housing programs up and running, many owners applied for reimbursement for repairs completed between the storm and program launch, only to be told that that work would not be eligible for CDBG-DR reimbursement because it was performed before an environmental review was completed. Additionally, owners were advised to cease further work until an environmental review was completed

⁶ For example, HUD has a number of requirements that do not apply to other agencies’ funding, including the 1931 Davis-Bacon Act, a labor law that requires workers to be paid prevailing wage; and Section 3 of the Housing and Urban Development Act of 1968, which requires grantees to ensure that a set percentage of total workers hired on HUD-funded projects are local and low income.

if they wanted to be eligible for reimbursement for any future work. Many homeowners complained that this requirement punished them for undertaking work on their own to quickly stabilize and repair their homes and buildings during the period before CDBG-DR funds became available.

This situation presented a policy dilemma for HUD. It was understandable that NEPA would not be on the radar screens of most owners eager to start repairing their homes and buildings right after Sandy, and HUD was sympathetic to those who felt blindsided by retroactive legal requirements that were unknown to them when they did the work. HUD ultimately permitted reimbursement for work that had been completed up to the point of grant application and allowed contracts for work to continue without regard to environmental review if the contracts were dated before an owner applied to the DR program (at which point they would have been informed about environmental requirements).

Though HUD worked with its grantees to provide relief for most owners in this situation, this common predicament harkens back to the discussion above about what gets communicated to victims in the immediate aftermath of a disaster. Just as federal staff assigned to disaster response need to better explain the interplay among FEMA, SBA and HUD relief programs, so, too, do they need to better explain potential regulatory restrictions that may apply if CDBG-DR grants are offered down the road, including environmental laws like NEPA. Home and multifamily building owners should not be dissuaded from performing immediate repairs, especially since the passage of a DR supplemental appropriation is not guaranteed in those early days, but they should understand the potential implications of environmental laws so they can make decisions with as much information as possible. This information can be conveyed through the common application process recommended above but also should be communicated by Disaster Recovery Center staff and in written guidance.

Even with better upfront communication, however, the Sandy Supplemental's rigidity on environmental review would have placed owners in the unenviable position of either foregoing immediate repairs to their damaged homes or risking that any work they did would not be reimbursed when DR grant money became available. The better solution would be for Congress to either incorporate the resolution that HUD crafted for Sandy homeowners in future disaster appropriations legislation, or go a bit further by waiving the requirement for an environmental review for eligible, adequately-documented repairs or replacements of homes and multifamily buildings if: 1) the grantee makes a showing of compelling need, 2) all activities are completed within the same footprint as the damaged structure, sidewalk, driveway, parking lot, or other developed area, and 3) the building is *not* a local landmark, in or eligible for the National Register of Historic Places, or within a local, state or national historic district or other area designated as environmentally sensitive, including but not limited to protected wetlands and watersheds. Certified proof that the home or building was strictly a repair or replacement of what was originally there would have to be submitted by a licensed architect, contractor or engineer. Writing this very limited, highly conditional relief into future supplemental appropriations would pave the way for faster recovery for owners of homes

and residential buildings whose repairs or replacements do not have environmental impacts.

Recommendations:

- Federal agencies must communicate to impacted home, building and small business owners immediately after a disaster that federal environmental laws like the National Environmental Policy Act (NEPA) may apply to them.
- Congress and the White House should consider standardizing in future disaster supplemental appropriations a narrow exemption from the National Environmental Policy Act (NEPA) and related environmental laws for eligible in-kind repair or replacement of homes and buildings that are not historically or otherwise environmentally significant – i.e., they are not local landmarks, in or eligible for the National Register of Historic Places, or within a local, state or national historic district or other area designated as environmentally sensitive, including but not limited to protected wetlands and watersheds.

Another onerous element of the environmental review process is that grantees and their sub-recipients often have to complete multiple environmental reviews to comply with NEPA as well as state and/or local environmental laws, even when there is significant overlap among their requirements. Perhaps most duplicative is when multiple federal agencies fund a single project, but each requires its own NEPA review. Under the Sandy Supplemental, if a grantee completed NEPA review under FEMA's process, FEMA's approval would automatically satisfy HUD's NEPA requirement. However, the reverse was not true: if a grantee had gone through HUD's NEPA process, additional paperwork was required for FEMA to review and adopt the HUD approval. Moreover, there was no process at all for reconciling NEPA approvals if other agencies' funds were involved. So, for example, if a project was funded with HUD and Department of Transportation (DOT) money, two distinct NEPA reviews were required.

In future supplemental disaster appropriations, Congress should allow one NEPA process to cover all federal funds used in a project. Once one agency approves a NEPA review, that approval should extend automatically to any other federal agencies' funding added to the project, without requiring additional paperwork or procedures for another agency to adopt the original approval.

As for overlap between NEPA and state and local environmental laws, there are existing models for how these various legal reviews might be streamlined. For example, the Sandy Federal Notice allows grantees to substitute their state's procurement laws for HUD's procurement regulations if the requirements are deemed equivalent. Even more on point, the Environmental Protection Agency (EPA) defers to state and local environmental review procedures for its annual revolving loan fund if substantial equivalency with NEPA is proven. It is worth considering similar deference to state and local environmental laws in disaster recovery, where speed is of the essence. This would

enable grantees to conduct a single environmental review without substantively reducing environmental oversight.

Recommendations:

- Congress and the White House should stipulate in future disaster appropriations legislation that when a federal agency approves a project's National Environmental Policy Act (NEPA) review, that approval automatically applies to all federal funds in the project, even if additional funds are provided by other agencies with different NEPA requirements or procedures.
- Congress and HUD should allow CDBG-DR grantees to comply with state or local environmental review laws in lieu of the National Environmental Policy Act (NEPA) if they can show those laws are substantially equivalent to NEPA.

Feeling Duped by Duplication of Benefits

As mentioned above, a significant portion of the \$4+ billion in CDBG-DR funds that New Jersey, New York State, and New York City each received was dedicated to housing programs that provide grants to homeowners and multifamily building owners with unmet repair, replacement and elevation needs. To calculate the amount of each eligible applicant's grant, HUD instructed the States and New York City, based on Stafford Act prohibitions, to deduct all insurance proceeds, assistance from FEMA, and SBA loans to avoid duplication of federal benefits (known as "DOB"). Most owners anticipated that their insurance proceeds and FEMA funding would be deducted, but many were shocked that their SBA loan counted against their CDBG-DR grant. Owners who applied for SBA loans as recommended by FEMA guidance and instructed by staff at the Disaster Recovery Centers now found themselves at a financial disadvantage compared to their neighbors who had done nothing to kick-start their repairs and were now eligible for more interest-free grant money. This was particularly common in New York City, which did not limit program eligibility based on income, meaning that more owners who qualified for and received SBA loans were also eligible for the City's CDBG-DR grant program, known as Build It Back.

Hardest hit by this policy were those owners who qualified for and received SBA loans but over time were not able to make their loan payments or apply for additional grants to complete their repairs. Why were these owners approved for loans in the first place? The SBA's eligibility review assesses a homeowner's situation at the time the disaster occurred, but it cannot account for the financial domino effect that often follows. A homeowner who loses her car in a flooding event may ultimately lose her job if she can no longer get to work; a displaced family may be staying with relatives when they apply for an SBA loan, but eventually they have to rent their own an apartment, which creates a significant additional monthly expense: any number of unanticipated hardships may emerge in the wake of a disaster, placing tremendous financial and psychological burdens on people whose lives are already upended. It is difficult to predict what may befall victims in the months and years following a disaster, but all three Sandy grantees dealt

with applicants whose financial security declined significantly during this period of instability.

Under the current relief system, once a homeowner uses any part of her SBA loan, the full loan amount must be deducted from her CDBG-DR grant award, even if she subsequently abandons the loan because she cannot make the payments. After Sandy, many who did not apply for SBA loans ended up receiving more debt-free relief (though much later) than those who took loans pursuant to the guidance they received. Between this and NEPA, many owners felt that federal programs and policies penalized those who took the initiative to start rebuilding on their own dime or by taking out a loan.

Several earlier recommendations would help ameliorate this inequity. A common application, better coordination among federal aid programs, and clearer communication would help disaster victims better understand their options and the implications of going down a particular path right after an event, eliminating some of the confusion and misinformation disseminated after Sandy. Also, if CDBG-DR becomes a standing program, there typically would not be lag time before DR availability and eligibility are known, so DR's requirements would be explained right away. Similarly, if one agency administers both loans and grants and it becomes easier for someone to move from a loan to a grant based on ensuing hardship, it should be easier to avoid situations in which a person is stuck with a loan she can no longer afford, without the opportunity to apply for more grant funding.

But unless and until such improvements are made, the prevailing federal interpretation of DOB could lead to a repeat of the situation described above. Like the policies underpinning NEPA and other federal environmental laws, the Stafford Act's restriction against duplication of benefits (DOB) makes abundant sense: no one would argue that disaster victims should receive payment from different federal sources to cover the same expenses twice, and there is certainly merit in a policy that encourages those who have the resources to repay a loan to go that route rather than tapping into limited government grant money. Still, it is worth considering whether SBA loan-holders who are eligible for DR grants should be permitted to pay off at least part of their SBA balance with DR funds, particularly if an income cap is imposed on CDBG-DR. Though DR housing programs would likely cost more if this were allowed, it would not result in owners receiving a windfall or double payment.

An agency-level shift in this policy is not prohibited by the Stafford Act, but if it were to be instituted as a permanent change, it would make sense to amend the Stafford Act to explicitly allow for loan repayment with DR grant funds under certain circumstances. This change, which would eliminate the perverse incentive that currently exists for people to avoid undertaking repairs after a disaster until they know whether CDBG-DR will be available to them, would be most palatable if an income cap is placed on CDBG-DR, thereby limiting the pool of people who could get stuck in this conundrum since those above the cap would be categorically ineligible for DR. And those who would be eligible for DR would have more incentive to apply for an SBA loan to get their recovery

started – arguably a good policy outcome – if they would be able to repay the balance with grant money if and when DR became available.⁷

Recommendation:

- If an income cap is placed on CDBG-DR housing funds, Congress and HUD should reconsider the current prohibition against using CDBG-DR grants to repay SBA loans, which can result in inequitable outcomes among similarly situated homeowners.

Remembering the Renters

Some affordable housing advocates involved in the Sandy recovery asserted that renters did not get as much attention or support from the CDBG-DR programs as homeowners. To combat this in New Jersey, the State, HUD and a coalition of not-for-profit advocacy organizations entered an agreement in 2014 which, among other things, nearly doubled the amount committed to Tenant-Based Rental Assistance (TBRA) and requested that HUD extend the time limit on receiving TBRA from 3 months to 24 months. New York City also discovered that it needed to provide longer and greater rental assistance for displaced renters than originally estimated, especially for low- and moderate-income (LMI) residents.

Unquestionably, TBRA needs to be available for displaced renters for more than three months, given how long it often takes for home and building repairs to be completed and units to be habitable. While HUD did lengthen the TBRA time period for Sandy grantees, a longer duration should be standardized in the CDBG-DR program so that a request for an extension from grantees is not necessary. Twenty-four months is a reasonable standard, but there should be flexibility for HUD to extend it up to 48 months in two additional 12-month increments if a grantee shows good cause.

Recommendation:

- The standard duration for CDBG-DR-funded Tenant-Based Rental Assistance should be 24 months, with the ability for HUD to extend that up to 48 months if a grantee shows good cause.

After Hurricane Katrina, Congress provided the Gulf Coast states with special allocations of two critical affordable housing tools to address displacement: Housing Choice Vouchers and Low Income Housing Tax Credits. Katrina was unique in having an extremely high volume of impacted residents who relocated outside the region, but what was not unusual was the fact that New Orleans did not have enough Section 8 vouchers

⁷ One logistical note: for this to work, the SBA would have to keep its loan application period open longer than it currently does after a disaster, to ensure that once it is known whether DR will be available and for whom, those who are ineligible or have additional needs can still apply for loans.

on hand to meet the emergency housing needs of those displaced from their homes. Most cities have long waitlists for Section 8 vouchers – New York City’s is over 200,000 – and displacement after a disaster puts additional pressure on this already-scarce resource. Without a special allocation of vouchers, it is unlikely that most places struck by a disaster will have the ability to quickly re-house displaced low- and moderate-income (LMI) renters, especially if a significant portion of the area’s affordable rental housing stock is rendered uninhabitable.

Congress also made a special allocation of Low Income Housing Tax Credits to assist the Gulf Coast’s recovery after Katrina, known as the Gulf Opportunity Zone (or GO Zone) LIHTC program. The GO Zone LIHTC program encouraged construction of new affordable housing to help replace the region’s lost rental housing stock, including public housing. Once the appropriation was amended to drop unrealistic deadlines for their use, the \$325+ million in tax credits spurred the development of nearly 30,000 affordable housing units in Alabama, Louisiana, Mississippi, Florida and Texas. The credits were used by the Housing Authority of New Orleans to partner with private developers on the redevelopment of multiple severely damaged public housing complexes, creating well-designed, mixed-income housing and new amenities in neighborhoods that had been struggling prior to the storm.

In New Orleans, developers vying for CDBG-DR funds were required to pair those funds with GO Zone credits to ensure that affordable units would be part of any new housing development funded by the City’s DR program. While there was some initial grousing from market-rate developers about this requirement, it proved to be critical in ensuring that post-Katrina rebuilding benefitted the area’s LMI population, which was disproportionately displaced. And through the tax credits, Congress encouraged leveraging of private resources that would not otherwise have been invested in building housing affordable across the region’s socioeconomic spectrum.

Congress did not adopt an equivalent tax credit program after Sandy, and far fewer multifamily rental buildings have been built to augment the supply of affordable housing damaged by Sandy. There is a direct correlation between these two outcomes. Without tax credits, it is all but impossible to finance affordable rental housing, making the LIHTC program a critical part of any effort to stimulate replacement affordable rental housing. New Jersey allocated significant CDBG-DR funds for construction of new multifamily housing in impacted areas, but since those funds could not be paired with extra tax credits, developers had to compete for the State’s sparse annual allocation of regular LIHTCs, always in huge demand. Advocates and developers complained that Sandy projects cannibalized pre-Sandy projects that had been in the pipeline by sucking up all available tax credits and leaving those projects in the lurch. Had Congress allocated a GO Zone-like program for the states affected by Sandy, even at a smaller scale, there is little question that more new affordable rental housing would have been built in New York and New Jersey to replace units damaged or destroyed by Sandy.

Catalyzing development of new affordable rental housing is good policy in the wake of any disaster that results in the loss of or severe damage to a region’s rental housing stock,

including public housing. A targeted allocation of LIHTCs, paired with CDBG-DR funding, is the best mechanism for achieving this goal at scale. DR grant funds alone will not produce many units, as tax credits are critical for leveraging private equity to make an affordable rental building financially viable. The size of this allocation can vary by disaster, depending on the extent of and damage to the affected area's rental market – but even places that are dominated by homeownership benefit from new rental housing when a disaster results in displacement of residents and loss of homes. Tax credits are a cost-effective, well-tailored government tool that leverages significant private resources while serving the LMI population that HUD's CDBG-DR funds are primarily intended to benefit.

Recommendation:

- Congress and the White House should make an additional allocation of permanent Housing Choice Vouchers a standard component of post-disaster supplemental appropriations to house displaced residents in need.
- Congress and the White House should make an additional allocation of Low Income Housing Tax Credits (LIHTC) a standard component of post-disaster supplemental appropriations to catalyze development of new affordable housing to replace lost and damaged rental units.

Coordinating Federal Agencies Regionally

A recurring theme in disaster recovery is the need for close coordination across government agencies, both within the federal family and among federal, state and local agencies and officials. It is essential that federal agencies immediately engage with each other after a disaster to coordinate response efforts, and FEMA is the agency designated under both the Stafford Act and the NDRF to ensure this occurs. Immediately after a disaster, FEMA conducts Preliminary Damage Assessments (PDAs) with affected state officials, touring the area to gauge the extent of damage and begin estimating the cost of recovery. The PDA should be expanded to include other relevant federal agencies likely to be involved in long-term disaster recovery, such as HUD, the U.S. Army Corps of Engineers (USACE), DOT, and the Federal Aviation Administration (FAA). Joint field visits would enable federal agencies to share expertise, more comprehensively assess a disaster's impact, and coordinate resources and response from the outset.

Immediate interagency coordination not only helps alleviate conflicting communications and decision-making right after a disaster, it also has significant advantages for long-term recovery, particularly with respect to complicated infrastructure projects. In recognition of this, President Obama created the Hurricane Sandy Rebuilding Task Force in December 2012, directing federal agencies to take a comprehensive, integrated approach to recovery. A number of the 69 recommendations the Task Force presented in its August 2013 report reinforce the importance of long-term regional coordination for infrastructure projects that require approvals and permits from multiple federal agencies, dovetailing on

President Obama's March 2012 Executive Order that called upon federal agencies to improve and shorten federal permitting and review of infrastructure projects.

To implement the Task Force's regional recommendations, the Region 2 offices of HUD and FEMA, based in New York City, launched the Sandy Regional Infrastructure Resilience Coordination group (SRIRC) in early 2014 to bring together the local offices of all relevant federal agencies, along with state and local Sandy grantees. The group spent the first several months learning about each other's missions, priorities and regulations, and identifying potential conflicts that might stymie or delay projects down the road. This was the first time many of the federal employees, even seasoned ones, learned the nuts and bolts of their sister agencies. This new understanding enabled agency staff to flag potential regulatory and policy conflicts early and work together to troubleshoot issues before projects were ripe for review.

When actual projects started to materialize in the ensuing months, SRIRC staff developed and continuously refined a database of more than 400 infrastructure projects slated for funding through the Sandy Supplemental. Several additional coordination teams were launched over time. When it became apparent that senior decision-makers from key agencies needed to be more closely engaged in the most complex infrastructure projects, the NY/NJ Federal Leadership Resilience Collaborative (or "the Collaborative") was born to focus on areas with overlapping or potentially duplicative projects. This executive committee, comprising regional leadership from the six major agencies responsible for funding and permitting most Sandy recovery projects (i.e., HUD, USACE, FEMA, DOT, the Environmental Protection Agency (EPA) and the Department of the Interior (DOI)), hones in on the most project-intensive geographic areas, sharing technical and planning information to foster decision-making and working closely to coordinate timelines and streamline projects. Technical Coordination Teams (TCTs) of subject matter experts from various federal agencies were started to work with each grantee to refine the technical details of their projects as they evolve, and the Federal Review and Permitting Team was stood up to identify potential permitting issues, giving grantees an opportunity to resolve them before formal environmental review commences.

In the early days of regional coordination, there was some resistance on the part of both federal agencies and grantees to dedicating staff resources to SRIRC, as the value added was not immediately obvious. However, over the course of 2014, it became evident to the federal partners that these discussions and relationships were useful for identifying opportunities to eliminate foreseeable problems. And when the grantees finally had tangible projects in the pipeline, they became converts as well. In fact, the federal agencies, particularly the six involved in the Collaborative, found their closer coordination to be so helpful, they resolved to continue meeting at periodic intervals even after the Sandy funding is expended, to make coordination part of their "steady state" way of doing business. Not only do the agencies have other projects that could be expedited by closer collaboration, but it was evident that if another disaster strikes, the region will be far better positioned to respond in a cohesive, integrated way if these interagency relationships continue to thrive.

SRIRC was successful for two main reasons. First, its creation was recommended by the Sandy Task Force and adopted by the President and relevant Cabinet Secretaries, which forced regional staff to participate despite initial skepticism. Second, SRIRC leadership from FEMA and HUD allowed the group to evolve over time as the needs of the agencies and grantees changed. At the beginning, it made sense to gather a broad spectrum of staff from a multitude of agencies, but as projects came to fruition, it became clear that smaller groups with specific roles – whether specialized technical expertise or high-level decision-making authority – were more critical, spawning the Collaborative and the Technical Coordination Teams. Because the SRIRC group remained responsive and nimble to changing needs, agencies felt their time and expertise were being respected, and they never abandoned the initiative.

The evolution of regional coordination may look different after different disasters, but the beauty of the SRIRC model is that it brings all the relevant agencies together with a mandate from “on high.” Once critical staff is engaged with each other, they can determine the best approach or approaches for their particular circumstances, but it is critical to have an initial mandate endorsed (and enforced) by the White House and relevant Cabinet members. The SRIRC, along with the other interagency initiatives that grew out of it, is a best practice from the Sandy recovery that should become a standard part of the NDRF.

Recommendations:

- FEMA must ensure that all agencies involved in both short- and long-term disaster recovery engage with each other immediately following a disaster, which includes bringing relevant federal agencies into its Preliminary Damage Assessment (PDA) process.
- The Sandy Regional Infrastructure Resilience Coordination (SRIRC) group and its subsidiaries are a flexible model for regional interagency collaboration throughout the different phases of disaster recovery and should be incorporated into the National Disaster Recovery Framework (NDRF) and related protocols.
- FEMA and HUD should archive the Sandy Regional Infrastructure Resilience Coordination (SRIRC) group’s governing documents for future replication and incorporation into the National Disaster Recovery Framework (NDRF).

The National Disaster Recovery Framework, or NDRF, was rolled out by the Obama Administration in 2011, creating a series of support roles at six federal agencies with the goal of preparing an interagency team to coordinate disaster recovery. Many of the regional staff members involved in the NDRF staff Joint Field Offices (JFOs), temporary onsite coordination centers that FEMA stands up right after disasters. Just as interagency coordination evolves over time, staffing needs also change across the different phases of recovery, though the NDRF’s staffing framework does not necessarily reflect or respond to this evolution.

The multi-agency, all-hands-on-deck JFO model makes sense in the immediate aftermath of a disaster, but it is less effective once recovery shifts from crisis response to longer-term recovery. The Sandy JFOs – which morphed into New York and New Jersey Sandy Recovery Offices (SROs) as recovery entered its third year – could have been downsized sooner than they were and certainly did not need to be staffed full time for multiple years with representatives from every NDRF agency. Agencies cannot afford to dedicate full-time staff to JFOs for that long, so over time agencies tend to send representatives that are or become less involved in the agency’s core functions. This, combined with the fact that these staff members are stationed at a JFO rather than in their regular offices, usually means they are disconnected from the day-to-day operations of their home agencies and often cannot speak with authority on behalf of their agencies.

A better model would be to limit the multi-agency JFO’s tenure to 12 months, depending on the disaster, making every effort to ensure that each agency’s staff stays consistent within that timeframe. FEMA could then absorb its deployed staff within its regional or local office to continue working with grantees, and Interagency Agreements (IAAs) could be used for supplemental term hires with specialized skills needed for long-term recovery. IAAs were used very effectively in Sandy – first, to fund employees from various agencies to staff the JFOs, and later to augment the long-term recovery team with contract employees who had specific professional expertise the agencies lacked. For example, an IAA enabled FEMA and HUD to share a seasoned CDBG-DR expert from the HUD-led Sandy Task Force who launched and oversaw the SRIRC and its subsidiary teams. In addition, almost two years after Sandy, FEMA and HUD entered into an IAA for two urban planners and a GIS mapping specialist who were housed at HUD and helped staff the SRIRC and the Collaborative and shepherd grantees’ HUD-funded infrastructure projects through the federal process. Through renewable two-year IAAs, FEMA and its sister agencies were able to quickly respond to the recovery effort’s staffing needs as they shifted from emergency response to long-term recovery.

Interagency Agreements may not always be necessary, but they can be a useful tool for enabling agencies other than FEMA to bring on temporary staff with specific skills and expertise needed during different phases of recovery.

Recommendation:

- Staffing needs change over the course of disaster recovery, requiring a more flexible, fluid model than Joint Field Offices (JFOs). JFOs’ life span should be shorter, and if additional recovery staff are needed thereafter, Interagency Agreements (IAAs) can be utilized to bring in short-term experts to meet specific long-term recovery needs.

While never a slam dunk, it is easiest to catalyze interagency coordination after a disaster, when the urgency of the situation motivates people, especially if supplemental funding is appropriated. However, a unanimous takeaway from Sandy and other past disasters is how much smoother response and recovery are (or would have been) if strong interagency relationships existed before the disaster occurred.

Sandy was the first disaster in which the NDRF was fully tested, and it exposed areas that need to be strengthened and refined. There are many employees at agencies that are critical to disaster response but are not intricately involved in the “steady state” NDRF – notably, most regional senior leadership. Frankly, absent an actual disaster, the day-to-day demands on senior staff at federal agencies make it unlikely they will gather as regularly as NDRF participants do, much less every month as the SRIRC and Collaborative did.

That said, it is reasonable to require regional and local leadership and key senior staff from agencies that would be involved in disaster response to participate in an annual workshop, hosted by FEMA, that walks them through the phases of coordination, from immediate response to longer-term recovery. One goal of this workshop would be to learn about response and recovery, of course, but equally important is the opportunity for participants to develop in-person relationships with their counterparts at sister agencies, upon whom they would undoubtedly have to call should a disaster occur. True interagency coordination requires more than updated contact lists; it requires good working relationships at all levels. These relationships need to be well established and cultivated before a disaster occurs.

Recommendation:

- Regional leadership and senior staff from key federal agencies nationwide should be required to attend an annual, in-person disaster preparation workshop to become familiar with response and recovery and sister agencies’ authorities and mandates, and to get to know their counterparts at other agencies.

CDBG-DR: Who Knows Best?

Generally speaking, HUD gingerly navigates its relationships with CDBG grantees. CDBG was built on the notion that states and local jurisdictions, rather than bureaucrats in Washington, should determine how to address their community development needs. This harkens back to the original language of the Housing and Community Development Act of 1974, which mandates that HUD “give maximum feasible deference” to grantees’ interpretation of the statute and its regulations. In practical terms, this means there is a fine line between what jurisdictions perceive as useful guidance versus unwelcomed meddling, and members of Congress are quick to protect their districts’ autonomy. Thus, unless a grantee solicits technical assistance, HUD tends to take a back seat when entitlement communities (i.e., the states, cities and urban counties that receive annual formula funding) are in good standing, monitoring grants for regulatory compliance but not delving into the nitty-gritty of what projects are selected, as long as they are eligible uses that meet a defined national objective. When a grantee runs into compliance problems, HUD staff becomes more involved, advising them how to repurpose ineligible-used funds to come into compliance or, on rare occasions, requiring repayment.

Though not perfect, considering the anemic staffing of HUD's Community Planning and Development division that oversees the program across more than 1200 jurisdictions, the process runs relatively smoothly. Most communities receiving grants directly from HUD have learned how to use CDBG funding properly; the rules, procedures and grant amounts are relatively consistent year to year; and grantees (and their elected officials in Congress) are comfortable with HUD's light touch that leaves most decision-making to state and local officials.

To date, CDBG-DR has more or less followed this same model, though it involves more assistance and more frequent and intensive monitoring. However, it is increasingly clear that closer collaboration between HUD and DR grantees would benefit all parties. No matter how well run an entitlement community's regular CDBG program is, CDBG-DR is a different animal. Each disaster is unique, and every CDBG-DR supplemental appropriation has been distinct from preceding ones. What's more, though major disasters are more commonplace than they once were, they are still rare enough that no city or state is a seasoned veteran when it comes to emergency response and recovery (though some are getting close). With 25 years of DR experience under its belt, HUD's disaster recovery staff – housed within the Disaster Recovery and Special Issues (DRSI) division in the Office of Community Planning and Development – has seen a broad range of state and local approaches to recovery and has greater expertise than most DR grantees about what makes a disaster recovery program successful (or not).

As mentioned above, the DRSI team already provides more hands-on support for CDBG-DR grantees than is the norm for regular CDBG grantees. They augment the basic programmatic parameters outlined in the appropriations legislation and Federal Notices with an online DR Toolkit, document templates, direct technical assistance provided through early advisory visits to grantees, weekly calls and regular meetings throughout the life of a grant, and funding to hire local technical consultants. Still, grantees are given a lot of discretion in how they structure and staff their recovery efforts.

Accustomed to relative independence with CDBG, DR grantees may not initially seek increased HUD input into or involvement in their program design, but the Sandy grantees have said that they wish, in retrospect, that the DRSI staff had provided more in-depth guidance than they did, particularly early on. Specifically, grantees cited the difficulty of making informed decisions on administrative structure and staffing, consultant hires, and housing programs. While the answers to complicated programmatic questions will not be the same for every disaster, HUD can provide more online guidance, combined with more in-person staff support, to help grantees weigh the pros and cons of various approaches to recovery.

Working with current and past DR grantees, HUD should develop a detailed decision tree for inclusion in its online Toolkit that will help guide grantees through early decision-making on difficult threshold questions – for example, should we hire our own contractors to administer home repairs and rebuilds, or allow homeowners to manage that process themselves? An effective decision tree would not dictate the answer but would provide pros and cons of each approach, case studies from past disasters, and models of

past grantees' policies and procedures. A comprehensive decision tree would help new grantees shape their programs with a deeper understanding of best practices from past programs, and potential pitfalls to avoid.

HUD should also develop a standard online project tracking system that grantees can easily adapt rather than having to invent their own system from scratch. Again, HUD should solicit help from past grantees to develop this tool, compiling the best elements from existing systems to create a flexible template. New Jersey developed a specialized system that tracks expenditures and prepares quarterly DR reports for HUD. Rather than reinventing the wheel after every disaster, grantees should have access at the time of their allocation to a battle-tested system like this, which they can tailor to meet their specific needs.

In addition to these technological tools, an even closer partnership between HUD staff and grantees is critical. The additional assistance most sought by DR grantees is not a greater focus on grant monitoring and compliance, though those are important, but rather an ongoing, informal dialogue that enables grantees to tap into HUD expertise without fear that a candid conversation will generate findings against them. To accomplish this, HUD would need to divide DRSI staff between these informal advisors and those on the grant monitoring/compliance side, to avoid any potential conflicts. The advisors would be available to travel to an affected region with regularity, if not be actually deployed there. For this type of partnership to work, HUD staff and grantees need first to agree that increased involvement by HUD in the details of grantees' DR programs is desirable, and then to establish this division of labor between HUD compliance staff and informal advisors. This type of relationship is a mindset shift on both sides, but it will pay off in expediting recovery.

Recommendations:

- HUD should work with past grantees to make its online CDBG-DR Toolkit more comprehensive and responsive to grantees' questions and issues, including a detailed decision tree to aid in program set-up and a standardized but adaptable system for tracking projects and expenditures.
- HUD's Disaster Recovery and Special Issues (DRSI) team needs increased capacity to partner effectively with CDBG-DR grantees throughout the life of a grant, providing not just hands-on technical assistance regarding compliance but also informal advice and guidance.

Managing Expectations

Among the often unforeseen hardships of disasters is just how long recovery takes, particularly for those relying on government assistance. As the second anniversary of Sandy approached in fall 2014, not a single home had been elevated or rebuilt in New York or New Jersey using CDBG-DR funds, generating understandable frustration among homeowners and elected officials, and rumblings in the press. Meanwhile, experts

who worked on past disasters seemed unphased. One veteran consultant estimated that the minimum amount of time to stand up a housing program, if everything runs like clockwork, is eighteen months from the day of the disaster.

Eighteen months is a shockingly long time to be described as the ideal recovery timeframe, especially for displaced residents making do in temporary accommodations. But a quick calculation of how long it took for the Sandy Supplemental funds to start flowing – arguably the most adroit recovery to date – provides some perspective. The storm hit the Eastern seaboard on October 29, 2012. The Sandy Supplemental was enacted in January 2013, and HUD announced the first tranche of funding allocations days later. HUD issued the first Federal Register Notice for CDBG-DR funds in early March, which gave grantees 90 days to submit Action Plans proposing how they would spend their first allocations. The Notice indicated that HUD would review those Action Plans within 45 days, and if revisions were necessary, the grantees would have another 45 days to resubmit. Adding this up, we were well into September 2013 – close to a year after the storm – before grantees were approved to start implementing their programs and spending CDBG-DR funds. When you factor in the ramp-up time to create and staff a housing program from whole cloth, eighteen months starts to sound pretty conservative.

We must do better than this – 18 months is a laughable “gold standard” and can be improved upon if even a handful of this paper’s recommendations are implemented – but the Sandy chronology highlights yet another significant breakdown in communication between government and those most affected by disasters. Individuals and businesses need accurate information about how long the recovery process takes so they can make informed decisions about their lives at a time of tremendous upheaval. This is not easy news to deliver, and often in the wake of a disaster, officials and community leaders, with the best of intentions, overpromise how much and how soon relief will be delivered. Assurances that people will be back in their homes quickly may be comforting and even motivating, but they can create unrealistic expectations that ultimately lead to disappointment, anger and ill-informed decision-making on the part of disaster victims. Time and again, Sandy-impacted homeowners said that if someone had just been forthright in the beginning about how long and complicated the recovery process would be, they would have made different decisions, particularly with respect to their interim living arrangements.

The federal agencies involved in disaster know first hand that recovery is not as quick or smooth as anyone would like it to be and, at least under the current approach, will likely take years, not months. Until government can actually deliver upon promises of an expedited recovery process, it is incumbent upon federal disaster experts to convey a realistic timeframe to everyone affected by a disaster – from residential and small business owners and renters, to elected officials, to the grantees developing the programs, to the press – and it is the responsibility of those officials, grantees and reporters, in turn, to communicate this message publicly, especially to disaster victims faced with difficult life decisions.

Recommendation:

- While changes must be made so that the “ideal” disaster recovery is shorter than 18 months, anyone communicating with the public about recovery – from government at all levels to the media – must be accountable for providing realistic and informed timeframes about its duration, particularly to disaster victims, who need to make informed decision about how to order their lives in the interim.

STATE AND LOCAL SOLUTIONS

Even if the Congress, the White House and federal agencies implement many of the recommendations above, successful disaster recovery and preparedness will continue to depend heavily on state and local governments. While the federal government can share and, in some cases, even mandate proven best practices, state and local officials are better situated to tailor those practices to the specific needs and circumstances of the affected region. For example, after Sandy, FEMA was prepared to deliver trailer homes to New York City to house displaced residents, an approach to temporary relocation that has worked in other parts of the country but would not work in New York, where vacant land is too scarce to make trailers a viable option. FEMA had to consult and coordinate with local officials to devise an alternate solution within the geographic constraints of a densely built urban environment.

Ongoing close collaboration among all levels of government is critical to recovery. FEMA, HUD and the other federal agencies most involved in response and recovery have experience and expertise in what has worked and has not worked in past disasters, but that knowledge needs to be informed by the realities on the ground, as neither response nor long-term recovery is a one-size-fits-all process. That said, there are some overarching lessons that apply pretty much across the board, and as discussed above, a pro/con analysis of different approaches to recovery can assist future grantees as they assess how to set up recovery programs. To this end, following are considerations and recommendations for state and local officials who find themselves immersed in disaster recovery, as well as those who need to prepare for the possibility that they could be next.

Organizational Structure and Staffing

The decision to create an office fully dedicated to recovery obviously depends on the extent of the disaster and the amount of federal funding received; it would not make sense to develop a complex organizational infrastructure if a recovery program will be small and short lived. However, if a state or municipality receives significant federal funding that will be spent over the course of years, there is much to be said for consolidating recovery activities within a single entity created for that purpose.

Like multiple CDBG-DR grantees before them, New York State and New Jersey stood up new offices dedicated to recovery, called the Governor’s Office of Storm Recovery

(GOSR) and the Governor's Office of Recovery and Rebuilding (GORR), respectively. GOSR is technically a subsidiary of the NYS Department of Housing and Community Renewal, but it functions relatively autonomously. GORR was created as a new division within the NJ Governor's office. Though GOSR and GORR rely on multiple state agencies to implement their programs and execute projects, both are the locus for programmatic and budgetary decisions and centrally coordinate and oversee other state and local agencies' involvement in Sandy recovery.

By contrast, New York City dispersed recovery responsibilities among multiple agencies reporting to different deputy mayors (despite HUD's repeated advice to centralize management). Budgetary decisions are overseen by the Office of Management and Budget (OMB), which administers the DR grant. A new entity, the Housing Recovery Office (HRO), was set up to run most of the City's single-family housing programs, while multifamily housing and the majority of single-family rebuilds are handled through the City's existing Department of Housing Preservation and Development (HPD). Both HRO and HPD are under the same deputy mayor, but the entity leading Sandy infrastructure and resilience projects, the Mayor's Office of Recovery and Resiliency (ORR), falls under a different deputy mayor. (If you're thoroughly confused at this point about who is responsible for what, you're in good company.)

The slicing and dicing of recovery responsibilities among these and a host of other agencies resulted in disjointed prioritization of DR funds as various agencies vied early on for their share of the City's allocation. Even after all the DR funds were divided among the City's selected program areas, coordination has remained a challenge; there are simply too many cooks in the proverbial kitchen. The decision New York State and New Jersey made to centralize decision-making and oversight of DR-funded programs in one entity has led to greater accountability and efficiency and fewer steps in getting to finality on issues. As a result, things move more quickly with a single go-to person who is trusted and invested with authority by the governor and oversees all programs and budget.

There were a number of unique circumstances that led New York City to divide its recovery functions as it did, including a midstream change in mayoral leadership. However, the decision to designate the City's OMB as the grant's lead agency rather than creating a new dedicated recovery agency does have relevance for future grantees pondering how to structure and staff their recovery efforts. Though OMB did not have prior experience with CDBG-DR, it administers NYC's regular CDBG funds, so there was some logic in adding the DR program to the portfolio of existing CDBG staff. However, past DR grantees' experiences suggest that relying on existing CDBG compliance staff to administer a DR program is not as effective as it may seem at first blush.

Grant compliance and administration are very different than program development and implementation, and they require different skills and experience. NYC OMB's staff has experience in the former, but they have not designed or implemented the programs and projects their grants fund; that is the responsibility of the panoply of agencies described

above. This bifurcation tends to slow down decision-making at a time when speed is of the essence. In addition, piggybacking a CDBG-DR grant onto a regular CDBG portfolio can overtax staff capacity. The most effective DR grantees have had teams dedicated full time to disaster recovery, usually including some staff that previously worked with CDBG-DR and FEMA programs in other disasters.

That said, because every CDBG-DR appropriation has been different, and Congress' and HUD's DR policies are so fluid, over-reliance on past experience can lead grantees astray. Grantees often contract with outside consultants that specialize in disaster recovery, but it is essential they also hire talented staff in house that have sufficient expertise and experience to manage these consultants and are empowered to develop their own close relationships with HUD DRSI staff. If a grantee has the resources, hiring one or two well-vetted consultants may make sense, especially in the early days of program development, but consultants are not an adequate substitute for internal staff with the know-how to work directly with HUD.

Recommendations:

- Large-scale recovery programs benefit from administration by a single office or entity dedicated to disaster recovery.
- It is critical to hire sufficient full-time staff to run a recovery office, including some with both disaster funding and program expertise, rather than relying solely on existing CDBG staff and/or outside consultants.

Designing Housing Programs

As discussed earlier, the division of residential grant and loan programs among multiple federal agencies creates unnecessary confusion for those trying to access disaster assistance as well as for the agencies themselves. Unless housing programs are totally consolidated at the federal level, state and local governments will likely still be responsible for implementing them whenever CDBG-DR is appropriated, and doing so presents one of the biggest challenges in disaster recovery. There is no other recovery program that has as much public visibility as housing, but it is probably the hardest to implement. The application and review process can be onerous, and as anyone who has renovated a home knows all too well, managing even a relatively small construction project is difficult, invariably taking longer and costing more than anticipated.

It is tempting for grantees, with the best of intentions, to develop a single-family housing program that offers applicants multiple paths and strives to make every disaster victim whole. This was New York City's route after Sandy. New Jersey, by contrast, chose a more limited approach that provided gap funding only to homeowners with the greatest economic need. New Jersey's Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) program was restricted to households with incomes under \$250,000 that sustained at least \$8000 in damage or were verified by FEMA as having had at least a foot of water on their first floor. Grants were capped at \$150,000. While the income cap

did not receive much negative attention (in fact, advocates were successful in getting GORR to implement a second program only for LMI applicants), there was widespread criticism of the cap on the total grant amount.

New Jersey's per-grant cap proved too low to meet some homeowners' needs, leaving them unable to finish their reconstruction. The \$150,000 cap was based on an analysis of various criteria, including preliminary repair estimates, but GORR found themselves in a Catch-22, committed to launching their housing program as quickly as possible but not yet having complete data on costs or knowing what the State's total CDBG-DR allocation would be. While it is impossible to completely eliminate guesswork in estimating the cost of a housing program at its outset, HUD and grantees should work together to expedite the determination of total allocation amounts as soon as possible. In Sandy, DR allocations were announced in three tranches, the final one not until summer 2014. There were practical and policy reasons for HUD to spread the allocations out, including the fact that it took time for the grantees to have sufficient data to fully document their unmet needs, but it is clear from the Sandy experience that the sooner grantees know their full DR allocation, the better equipped they are to accurately split their allocation among their various needs.

In retrospect, New Jersey's \$150,000 cap was probably more conservative than it should have been or needed to be in light of their final allocation amount – but the fact that the State imposed a grant cap did actually help applicants move quickly through the review and approval process. By contrast, New York City's Build It Back program did not have a grant limit, and many applications stalled as homeowners tried to negotiate with HRO for a larger award and engaged in a prolonged back-and-forth since there were few established boundaries. Some felt paralyzed by the host of options the program offered, unsure which path was best for them. The lack of set parameters led to delays in work getting underway and ultimately in getting people back in their homes. The RREM program, though not perfect, was comparatively straightforward, with fewer decision points and in general a shorter lag time between application and construction.

New York State's housing program falls somewhere between that of New Jersey and New York City, as has the speed of its implementation. The experience of Sandy's grantees, supported by that of other disasters, suggests that placing some restrictions on eligibility and narrowing program choices tends to make the application process faster and program administration easier. Grantees must weigh tradeoffs in determining what restrictions and parameters are appropriate for their programs, and the full implications of those tradeoffs are unlikely to be completely knowable when they first launch their programs, as New Jersey and New York City both learned in different ways. (This, by the way, is a perfect topic to be fleshed out in a decision tree as part of HUD's guidance materials for DR grantees, since HUD's experience with past grantees can help illuminate the potential ramifications of decisions made early on with incomplete information.)

Similar consideration of the tradeoffs between more options and increased speed should be given when shaping multifamily residential programs. There is an understandable inclination on the part of grantees to enter sub-recipient agreements with multiple

financing institutions, under the assumption that dividing multifamily rehab projects among several entities will expedite completion. However, the experience of Sandy suggests that having more institutions involved does not necessarily lead to faster execution. In New York City, every aspect of the multifamily program had to be coordinated among multiple Community Development Financial Institutions (CDFIs) to ensure consistency, slowing down the program's start-up. In the end, either selecting a single CDFI, or choosing several but assigning each a discreet geographic area of the city, would arguably have been more expeditious – again, a tradeoff to be weighed against the benefits of giving building owners several financing partners from which to choose.

Recommendations:

- HUD should announce total grantee allocations as soon as possible after a CDBG-DR supplemental appropriation is passed, so that grantees know their total funding before they size and launch their recovery programs.
- Streamlining housing program options – for example, by imposing income and/or total grant caps on single-family housing programs or limiting the number of financial institutions that handle multifamily rehabilitations – can expedite program execution.

Perhaps the most complicated program design question for grantees is whether to procure a stable of contractors to conduct single-family repairs, elevations and rebuilds, or allow homeowners to choose their own contractors and manage their construction projects themselves. There are pros and cons for each approach – and again, tradeoffs to be considered – but in the end, a hybrid of the two probably makes most sense.

A homeowner-driven program tends to be the default approach, as grantees often do not want to incur the potential liability and additional administrative burden of hiring and overseeing contractors. Offering both options typically delays housing recovery since it takes time for homeowners to weigh their choices and pick a path, and, if Sandy is any indication, even once homeowners commit to a path, it is not uncommon for them to switch paths midway. For all these reasons, the Sandy grantees that elected to offer two paths had misgivings about that decision a couple years into their programs. However, over time, some pluses to grantee-run construction programs have emerged.

When grantees run housing repair and rebuild programs, they have significantly more control over completion, timeliness and quality. Some homeowners are not able to manage the construction process themselves, and their homes simply would not be completed without the grantee's intervention. Since New York City and New Jersey had both tracks, they were able to move struggling homeowners into their contractors' pipelines to finish the work. New York State – whose single-family housing program was initially exclusively homeowner driven – ultimately created what they call a "hot spot" program, engaging a small number of contractors to complete work for a select pool of applicants, including languishing cases and people with special needs. GOSR did not

offer this option to homeowners up front; rather, they unilaterally determined which applicants to move to their “hot spot” program based on individual case management.

Another advantage of a grantee-run housing program is that poor quality work is easier to remedy when the contractor is hired by and under contract with the grantee. Homeowners may not have the technical expertise to identify shoddy workmanship, or it may be too late to rectify by the time it comes to light. Grantees, by contrast, have program managers overseeing and inspecting their contractors’ work to ensure it meets their standards, and if it does not, they can directly enforce remedies. In addition, contractor fraud is less common and more readily detected when government oversees construction.

Homeowners, particularly vulnerable populations like seniors, are prime targets of disreputable contractors after disasters. When discovered, these cases take time to make their way through the court system, but New Jersey is actively prosecuting fraud cases and has found far fewer among contractors hired directly by the State than those hired by homeowners.

On balance, New York State’s limited hybrid may be the best approach in most circumstances, but there must be strong controls in place to prevent fraud and enforce quality standards among contractors hired by homeowners. Requiring that contractors put up a bond or guaranty and escrow funds until their work has been completed and inspected by program monitors helps protect homeowners, though it may also limit the pool of contractors able to qualify for these jobs. Small contractors, who tend to be more interested in single-family work than larger construction companies, often do not have the capacity to provide a bond or guaranty. Unfortunately, given the history of contractor fraud in disaster recovery, these requirements are important, even if they preclude some competent small contractors from participating in housing recovery programs.

Recommendation:

- Grantees should carefully weigh the pros and cons of homeowner-driven versus grantee-run housing programs before choosing their approach.
- If a grantee chooses to offer only a homeowner-driven housing program, it should still procure a small number of contractors to perform work for select applicants who may not otherwise complete their homes.

Providing Case Management: The Personal Touch Matters

One lesson that everyone involved in disaster recovery agrees upon is the importance of sustained, knowledgeable case management for homeowners, residential building owners and small business owners. The need for intensive case management begins with the initial outreach to inform those affected by a disaster about available assistance, continues through the application process, and does not ebb until the project is completed.

Grantees sometimes underestimate how difficult it can be for disaster victims to navigate the complex process of identifying and accessing relief programs. Many victims have little or no experience with government programs and may be leery of them. This concern ties back to my earlier discussion of how important clear and accurate communication is from the outset of disaster response, but it also highlights how critical effective, proactive outreach is. Some of the populations most in need after a disaster are the least likely to seek aid, particularly non-English speakers. Government typically cannot identify or reach all these victims on its own, and the most effective outreach programs tap into existing local not-for-profits that work in the region with vulnerable populations such as seniors and immigrants. Partnering with organizations that have expertise in the many issues facing disaster victims, as well as familiarity with impacted neighborhoods and the legal ins and outs of the jurisdiction, helps grantees ensure they are maximizing inclusivity and avoiding missteps, as does door-to-door outreach by qualified, well-trained case managers.

While building broad awareness of programs through copious and well-informed public outreach is the first step, grantees must also have the structure in place to begin individualized case management immediately. The application process can be cumbersome and time consuming, exacerbated by the fact that home and business owners may be displaced and not have access to important records. At an already overwhelming time, being inundated with reams of information, forms and decision points can be too much for some applicants. Qualified case managers are critical to help applicants understand their options and make well-informed decisions, as well as to assist them in pulling together their necessary documentation and completing their submissions.

New Jersey initially received a meager response to its small business grant program. After surveying a number of small business owners, GORR realized that most could not spare a day away from their businesses to go to a government office and complete the application requirements. The State responded by beefing up its case management for the program and sent case managers into the field to help business owners assemble the necessary documents and complete the application onsite at their places of business. New York State held over 50 meetings with homeowners after their program was launched, but they found the most effective support system was a 24/7 call center, which in retrospect they wish they had set up at the outset of the program. New York City, too, moved applicants forward in the process much more rapidly once they had neighborhood-based Construction Service Centers up and running, staffed by qualified and well-trained case managers.

Two common pitfalls in outreach and case management are doing it on the cheap with under-qualified contractors, and over-relying on consultants that are not place based. Not just anyone can do this work: it requires knowledge of the assistance programs as well as related issues that may complicate a victim's situation. For example, a displaced homeowner may fall behind on mortgage payments on her damaged home while having to pay rent for a temporary place to live; an effective case manager will know how to help her navigate her options to avoid foreclosure. In addition, knowledge and familiarity with an impacted area's neighborhoods and diverse populations is essential to ensure that

outreach is as inclusive and far-reaching as possible. Spending a little more money and energy getting this right from the beginning pays dividends down the road.

Once an application is submitted, there is a waiting period while it is reviewed, during which applicants need to be able to check on their status. This should be trackable online via the aforementioned “Disaster Relief” portal, and case managers should also be able to provide timely updates for people who do not have easy access to the internet. Once an application is approved, ideally the same case manager should be assigned to the owner through the design and construction process. Many Sandy homeowners complained that they were switched to different case managers once they shifted from “applicant” to “participant” status. Particularly at such a tumultuous time, continuity with a single, highly qualified case worker who knows the details of your story and can be your ongoing advocate is a godsend.

Recommendations:

- Extensive and well-informed public outreach, accompanied by ongoing, consistent case management by qualified, place-based experts, is essential to recovery program success.
- Disaster relief applicants need up-to-date public access to their application status. An online “Disaster Relief” portal, 24/7 call center and place-based support offices are effective means of providing real-time, ongoing support to applicants.

Rebuilding and Rethinking

In the wake of Sandy, NYC Mayor Michael Bloomberg proclaimed that the City would not retreat from its waterfront, instead vowing to rebuild more resiliently. Big picture, this position was necessary in a land-strapped city like New York that was already facing a severe housing crisis and relied on waterfront areas to sustain significant portions of its (and the national) economy. No one could fathom abandoning thousands of homes even if they were in a flood zone, nor envision Wall Street firms fleeing Lower Manhattan for higher ground.

However, in order to rebuild resiliently, some neighborhoods needed to start over, which realistically could only happen if the government was willing to invest in improved infrastructure and acquire entire blocks of damaged homes that could be demolished, assembled, and sold for large-scale, planned redevelopment. Then-Councilman James Oddo, a Republican representing the middle of Staten Island (and a sponsor of this paper), approached both City and State officials with a plan to fund the acquisition of homes in heavily-damaged Midland Beach, a community where many residents were interested in relocation options. Oddo saw an opportunity for a win-win: if the City or State would purchase their damaged homes, traumatized homeowners eager to leave would quickly have the financial means to move on with their lives, and the government would be left with a clean slate to build a new, thoughtfully planned neighborhood that would be more resistant to and protected from future storm damage.

However reasonable, Oddo's vision was not embraced by the City or State quickly enough to execute on a meaningful scale, and the situation devolved into exactly what the Councilman hoped to avoid. These neighborhoods of tiny bungalows, most of which were never intended to be year-round residences, became crazy quilts of incompatible structures a few feet apart: homes metastasizing to absurd heights to comply with FEMA regulations, next to homes that got repaired but not elevated, next to abandoned homes in various states of destruction. Homeowners who stayed but did not have the resources to elevate found themselves squeezed between homes whose first floors started at their rooflines. Sadly, these once-cozy beach communities were radically disrupted not just by the storm itself but also by a haphazard approach to recovery.

Once CDBG-DR funds became available, New York State did establish both a buyout program and an acquisition-for-redevelopment program for parts of Staten Island and Long Island, but it was too late for the neighborhoods Councilman Oddo first identified as ideal candidates for resilient redevelopment. The window in which most victims are willing to relocate is small; once they begin repairing their homes and rebuilding their lives, that window usually closes. For government acquisition to be a meaningful tool in the recovery toolkit, it has to be put on the table immediately following a disaster – or even better, prior to a disaster as part of mitigation planning (more on this later). And importantly, there must be sufficient incentives to encourage homeowners to sell. Eminent domain is the third rail of disaster recovery, and the greater the incentives for homeowners to sell voluntarily, the less likely condemnation will have to be considered.

Offering homeowners the pre-event value of their homes is one obvious incentive, but less utilized is the creation of life estates. Many homeowners, especially elderly ones, are more willing to sell their homes to the government if they can stay there for the duration of their lives, which a life estate permits. Life estates can also make eminent domain more politically palatable. But life estates are often overlooked as a recovery tool, perhaps because it could be decades before the government is actually able to possess a home with a life estate. Similarly, land-banking can be a long-term strategy for buying up properties as owners are willing to sell and assembling them over time for eventual redevelopment. Many government officials are not accustomed to thinking in decades, but successful recovery demands this kind of out-of-the-box, long-term approach.

All three Sandy grantees ended up offering voluntary buyout programs. As mentioned above, New York State launched both a targeted buyout program for permanent retreat as well as an acquisition-for-redevelopment program through which they purchase homes from willing buyers and resell them to buyers that agree to rebuild or elevate them to comply with FEMA standards. In a few locations, adjacent properties were purchased through GOSR's program, providing an opportunity for some coordinated redevelopment, though nothing on the neighborhood-wide scale that Councilmember Oddo envisioned. New Jersey launched its very successful Blue Acres Buyout Program in May 2013, initially using FEMA funds and adding DR funds once the program took off. Blue Acres is strictly a residential retreat strategy: hundreds of homes have been

purchased and demolished in targeted areas, in exchange for preserving the land as permanent public open space.

Even New York City is pursuing targeted retreat in a handful of places, including the Edgemere Urban Renewal Area in Far Rockaway, Queens. At the strong urging of HUD, the City reconsidered its approach to this neighborhood, which is located on an exposed peninsula in Jamaica Bay and experiences extreme flooding even after garden-variety rainstorms. Though several homes in Edgemere were originally deemed eligible for elevation through the Build It Back program, the City recognized that this neighborhood, where it owns a significant amount of vacant land as part of a longstanding Urban Renewal Plan, lends itself to a more comprehensive approach to rebuilding. Rather than investing in homes that would remain in harm's way, the City offered those applicants the opportunity to relocate to new homes that will be built on City-owned sites further inland; in exchange, the City will purchase and demolish their at-risk waterfront homes and create a green buffer zone to protect the neighborhood.

New York City ultimately realized that it could not completely dismiss retreat as a recovery strategy, despite the challenges it presents in a city desperate for more land and more housing. Targeted acquisition (including through life estates, land-banking and even eminent domain) is a key tool for a comprehensive and well-planned recovery. It can be difficult in the throes of a disaster for government officials to think beyond the immediate crisis and embrace what might be a jarring – and in some cases, forcible – rethinking of an at-risk community's future, but to do otherwise is not in the best interests of either their constituents or American taxpayers.

While the federal government should not force state and local governments to adopt a strategy of acquisition for redevelopment or retreat, it is important that they provide support – even political cover when necessary – to jurisdictions that are willing to pursue targeted acquisition, especially if condemnation is involved. New York City did not employ eminent domain, but its comprehensive plan for Edgemere did necessitate turning away some homeowners who had applied to Build It Back for elevation. HUD's strong support for this plan helped the City move it forward, even in the face of some initial resistance among homeowners. State and local governments will often need the partnership of federal government to effectuate long-term, comprehensive recovery plans that may be politically difficult.

Recommendations:

- Grantees' strategic acquisition of at-risk properties for resilient redevelopment and/or managed retreat should be a component of disaster recovery programs.
- State and local governments should not shy away from acquiring at-risk properties – including using life estates, land-banking and even condemnation in rare cases – to facilitate responsible, comprehensive redevelopment of, and/or managed retreat from, vulnerable areas.

Preparing Before a Disaster Happens

A comprehensive approach to recovery, like that envisioned by Councilman Oddo for Midland Beach, is easier to accomplish if meaningful planning and proactive mitigation efforts have been undertaken prior to an event. This means government and citizens must expend time and resources during a “steady state” to identify potential threats and ameliorate their impacts, as well as put the operational framework in place to respond quickly and effectively should a disaster happen.

FEMA’s Hazard Mitigation Assistance program is a rare source of non-emergency funding for disaster mitigation. To qualify, state, local and tribal governments must develop 5-year hazard mitigation plans that flag risks and prioritize mitigation strategies, with a roadmap for implementation. All 50 states, 150 tribal governments, and thousands of local governments have adopted Hazard Mitigation Plans, and they are an important step toward preparedness. The most prepared governments go beyond these plans, however, pursuing a multi-pronged approach that combines buyouts and acquisition; resilient infrastructure projects; protective land use and zoning measures; pre-certification of necessary disaster response and recovery services; and robust public education.

Since Sandy, New York City has been a leader on many of these fronts. It is investing a large chunk of its CDBG-DR allocation, as well as additional City capital, into resilient infrastructure projects from the South Bronx to the South Shore of Staten Island, aiming to protect vulnerable neighborhoods and critical facilities. In addition to the aforementioned community-based plan for the Edgemere Urban Renewal Area, the NYC Department of City Planning is creating a Special Coastal Risk District designation in the City’s zoning code that will restrict future building in flood-prone areas. Finally, the City is entering into on-call contracts for services and materials that are in great demand after a disaster, to preempt procurement delays in the midst of crisis.

Not many cities have the resources and staff capacity of New York City, but some smaller cities affected by Sandy are nonetheless dedicating significant resources to preparedness. Secaucus, New Jersey, which was badly flooded during Sandy, developed an extensive plan to build a berm along the Hackensack River, investing in permanent infrastructure solutions as well as temporary protections that city employees are being trained to deploy in the case of a flooding emergency. Hoboken, New Jersey, which was inundated from all sides during Sandy, is using City and State resources to purchase six acres downtown that will not only become the city’s largest park but also will have an underground retention system capable of holding millions of gallons of water during a storm or surge event.

States are critical partners in supporting local preparedness projects. Some states now provide up-to-date hazard and risk maps, place-based data and checklists to help communities plan for and respond to a disaster, information on best practices for disaster response and available financial resources, case studies, and model ordinances and other templates to inform local law-making. Some have created offices dedicated to disaster preparation and resilience, or task forces that convene relevant agencies to undertake

disaster planning and mitigation projects. Perhaps the most helpful support states can provide to localities is financial assistance for mitigation. North Carolina, in response to a spate of major storms and flooding since the 1990s, is on the forefront of funding “steady state” mitigation. The State works with targeted communities on an annual basis to fund voluntary buyouts of at-risk homes and provide grants to property owners to flood-proof their buildings, primarily using stormwater utility fees and some FEMA HMPG funds. These initiatives piggyback on large-scale acquisition programs that the State implemented with FEMA funding after Hurricanes Fran, Floyd, Dennis and Matthew.

While North Carolina’s buyout program enables local communities to partially implement mitigation plans that many developed after Hurricane Fran struck in 1996, there is not enough State funding to purchase all the at-risk homes identified for future acquisition in those plans. However, the City of Kinston had the foresight to submit a pre-disaster application to FEMA for acquisition funding just before Floyd hit in 1999, which enabled FEMA and the State to approve and fund Kinston’s full buyout program within a week of the storm. The quick turnaround meant that acquisitions could commence almost immediately after Floyd, at the critical moment when homeowners are most likely to sell voluntarily.⁸

North Carolina’s preemptive approach has not been limited to residential buyouts. Renowned for its pork barbecue, the state’s hog industry suffered tremendously during the storms of the 1990s. After almost 21,500 hogs perished in Floyd, the State used its Clean Water Management Trust Fund to purchase conservation easements on 43 hog farms located in the 100-year floodplain. Farmers’ use of the land under these easements is restricted to certain light agricultural uses that will not taint the water supply or cause significant damage if flooded. Thanks to these easements, only 2,800 hogs were lost in Hurricane Matthew in 2016, and the State is looking to expand the program further, with strong support from the North Carolina Pork Council.

North Carolina is a good case study for the economic benefits of pre-disaster planning and mitigation. Because of its buyout and easement programs, the extent and cost of recovery in areas like Kinston and Lenoir Counties was significantly lower after Matthew than Floyd, though they experienced similar flooding in both storms. Other states that have experienced disasters – particularly those with a pattern of such events – are increasingly engaging in “steady state” planning to prepare their infrastructure and residents for potential future disasters. Such efforts need to be pursued more broadly and with even greater urgency. New York City, for example, should launch the same type of community-based planning process that resulted in the Edgemere plan in all its vulnerable waterfront communities, in order to develop neighborhood maps that delineate areas for future acquisition for redevelopment and retreat. Even places that have not suffered a major disaster need to be convinced that now is the time to go beyond their Hazard Mitigation Plans and make disaster preparedness a priority.

⁸ See *Building Resilient States: Profiles in Action*, a 2015 report by the Governors’ Institute on Community Design and Smart Growth America, for this and other examples of state and local government preparedness initiatives.

Recommendation:

- State and local governments should pursue a multi-pronged approach to disaster preparedness that combines planning, buyouts and acquisition for redevelopment; resilient infrastructure projects; protective land use and zoning measures; pre-certification of necessary disaster response and recovery services; and robust public outreach.

Engaging the public is a critical component of preparedness, both to educate people about their personal risk and to involve them in communal solutions like the Edgemere plan. Following Hurricane Irene, the State of Vermont launched the Community Recovery Partnership, convening over 500 government representatives, staff from local organizations, and citizens to identify priorities for the state's ongoing recovery from Irene, as well as to discuss lessons learned in order to prepare for future events. As part of its outreach effort, Vermont developed a Flood Preparation Toolbox with information sheets and checklists to help households and businesses prepare for future floods, and made flood maps and other resources publicly available.

While it is important for state and local governments to be out in front on preparedness initiatives, their effectiveness is greatly bolstered by strategic partnerships that build capacity and capitalize on the innovative thinking that is happening outside government, from universities to not-for-profit organizations. In Texas, the Lower Rio Grande Rapid Re-Housing Program – or RAPIDO – is a coalition that formed in response to the slow pace of re-housing, especially for low-income families, after a series of hurricanes struck the region. Advocates, community groups and architects comprising RAPIDO joined with the Texas Society of Architects to sponsor a design competition to develop an inexpensive prototype that could be deployed quickly post-disaster as temporary housing, and then expanded and converted into permanent housing over time. RAPIDO also partnered with Texas A&M University to develop what they call a “pre-recovery strategy” for at-risk communities. The strategy includes community disaster planning, outreach to vulnerable households to familiarize them with the disaster relief application process in advance of an event, and coordination with local contractors and builders to ensure that materials and workers will be available within 48 hours of an event. Last year, the City of Brownsville became the first local government to adopt RAPIDO's “pre-recovery strategy.” The City hopes that HUD and FEMA will encourage replication of this approach and the RAPIDO re-housing model in other at-risk places.⁹

Following the example of Brownsville, other state and local governments would be wise to tap into the expertise (and funding) of the private sector and share good ideas and best practices with their peers. The Sandy grantees consulted with past DR grantees but did not work extensively together, particularly in the early days of recovery. Some mistakes might have been avoided, or at least corrected sooner, if they had collaborated more. If this is too much to hope for in the midst of recovery, it certainly is not too much to expect

⁹ Eillie Anzilotti, “How a Texas Town Is Overhauling Disaster Relief,” *CityLab*, December 2, 2016.

local and state governments to collaborate on preparedness, identifying opportunities to share expertise and resources before a crisis occurs.

Recommendations:

- Public engagement and public-private partnerships are essential components of disaster preparedness since building social resilience through broad-based networks is as important to recovering quickly from a disaster as hardening infrastructure and other critical physical assets.
- States and local governments should proactively solicit guidance from their peers, especially those on the forefront of preparedness and those that have gone through disaster recovery.

If it is not already, readiness needs to become an ingrained part of “business as usual” for state and local governments, especially in high-risk regions. New York State passed the Community Risk and Resiliency Act in June 2014, requiring State agencies to take sea-level rise and flood risk into account in all project planning and permit approvals, and to incorporate resilience and risk assessment into guidance to local governments. Adopting this mindset means that when a disaster does occur, rebuilding, relocation and overall recovery must reflect the reality that it may not be an isolated event. Mitigation standards should be required for all residential and commercial new construction and rehabs, as well as for infrastructure projects.

To effectuate this mandate, the federal government needs to be on board, too, since attaching these requirements to its funding would provide one of the strongest and most far-reaching incentives for implementation. We must ensure that we take advantage of every opportunity to increase readiness at all levels and that disaster assistance continues to evolve along with our understanding of effective mitigation and recovery strategies. Federal agencies must continue working to make their funding more responsive to the place-based needs of different types of grantees. For example, New York City’s Department of City Planning has done extensive analysis of retrofitting unique urban building types such as attached homes and mixed-use buildings, which FEMA’s guidelines currently do not address.¹⁰ FEMA should build upon this work and update its technical guidance and standards to address a broader spectrum of at-risk building typologies. In the same vein, FEMA should credit partial mitigation techniques, particularly for multifamily buildings that cannot be elevated. Moving mechanicals to higher floors and dry- and wet-proofing are viable mitigation techniques for multifamily buildings that do not lend themselves to more traditional flood-proofing, and building owners should be given incentives to make these types of improvements before a disaster strikes.

¹⁰ New York City Department of City Planning, “Retrofitting Buildings for Flood Risk,” October 2014.

Finally, if a much-discussed (and much-needed) federal infrastructure bill becomes reality, funding should be conditioned upon grantees conducting risk assessments and incorporating mitigation measures into all funded projects. Preparedness is simply too important to ignore this opportunity to strengthen and protect our infrastructure from known and possible future threats. And if we are successful in making our infrastructure more resilient, we may discover that some of today's vulnerable areas can be reclaimed and redeveloped down the road. For example, at-risk homes on the Raritan Bay in New Jersey were purchased through the State's Blue Acres program, using FEMA funds that currently require that land to remain open space in perpetuity. However, USACE is planning a long-term green and gray infrastructure project that aims to protect this entire area, potentially making redevelopment viable where those at-risk homes were once located.

Does this scenario suggest that FEMA's open space mandate for buyouts should be reconsidered? Perhaps. Taking the long view on preparedness and recovery means acknowledging that today's needs may not be the same as those of tomorrow, and flexibility over time is essential. We have learned a lot about disaster preparedness and recovery in the years since the Stafford Act was passed, and even more since the CDBG-DR program was inaugurated. Now is a good time to revisit how government at all levels provides disaster assistance, but it will hardly be the last time this assessment is necessary. As natural disasters continue to escalate, it is incumbent on all levels of American government to continue questioning and refining our approach to recovery and preparedness as new lessons and best practices come to the fore. That is what good government does.

Recommendations:

- Readiness standards should be incorporated into all local, state and federally funded capital projects and relevant laws and regulations, including any future federal infrastructure bills.
- The federal government must continue to identify and plug holes in its disaster recovery programs and in the National Disaster Recovery Framework (NDRF), striving for greater responsiveness to place-based realities such as differing building typologies, and adapting programs and procedures as better approaches are found.

FINAL THOUGHTS

To be clear, there are no villains in this story. Everyone I met working on disaster recovery cared deeply about the people and places they served and was constantly searching for ways to improve and expedite the process. We were all learning as we went, and we fixed some things along the way. Disaster recovery folks are an ingenious lot, and I'm grateful to have worked with so many smart, committed problem-solvers. Still, I'd wager none of us would do things exactly the same if we had it to do over again.

Though this paper's 41 recommendations will not flatten every speed bump on the road to disaster recovery, their implementation would give federal agencies and state and local governments many of the tools they need to help individuals and communities prepare for, respond to, and recover from future disasters significantly faster and more cost effectively than we do today. Unlike many areas of government, the laws and policies governing disaster recovery are relatively nascent – we are not steeped in generations of bureaucratic rules, regulations and codes that can barely be comprehended, much less reformed. We can do this – and we may even be able to do it before the next Hurricane Katrina or Superstorm Sandy strikes our shores.

APPENDIX:
SUMMARY OF RECOMMENDATIONS
(grouped by intended government audience)

For Congress and the White House:

- Congress and the White House should give HUD standing authority to issue CDBG-DR funding up to a set amount immediately following a Presidentially-declared disaster so that a supplemental appropriation is only necessary after major disasters.
- Consideration should be given to whether disaster recovery would be expedited if all housing and small business loan, forgivable loan and grant programs were handled by a single agency, most likely the SBA, rather than divided among multiple federal and state/local agencies.
- Congress and HUD should standardize the CDBG-DR program to require that at least 70% of every grantee's allocation benefits low- and moderate-income (LMI) persons (as required by the regular CDBG program), alterable only by a waiver from the HUD Secretary if a grantee proves compelling need.
- Congress and HUD should place an income cap on CDBG-DR-funded single-family housing programs that can only be increased, but never eliminated, by a waiver from the HUD Secretary if a grantee proves compelling need.
- Congress and the White House should specify in future disaster appropriations legislation that the regulations and rules of an infrastructure project's primary funding agency override those of a second funding agency if the second agency's funds are used strictly to meet a cost-sharing requirement.
- Congress and the White House should consider standardizing in future disaster supplemental appropriations a narrow exemption from the National Environmental Policy Act (NEPA) and related environmental laws for eligible in-kind repair or replacement of homes and buildings that are not historically or otherwise environmentally significant – i.e., they are not local landmarks, in or eligible for the National Register of Historic Places, or within a local, state or national historic district or other area designated as environmentally sensitive, including but not limited to protected wetlands and watersheds.
- Congress and the White House should stipulate in future disaster appropriations legislation that when a federal agency approves a project's National Environmental Policy Act (NEPA) review, that approval automatically applies to all federal funds in the project, even if additional funds are provided by other agencies with different NEPA requirements or procedures.

- Congress and HUD should allow CDBG-DR grantees to comply with state or local environmental review laws in lieu of the National Environmental Policy Act (NEPA) if they can show those laws are substantially equivalent to NEPA.
- If an income cap is placed on CDBG-DR housing funds, Congress and HUD should reconsider the current prohibition against using CDBG-DR grants to repay SBA loans, which can result in inequitable outcomes among similarly situated homeowners.
- Congress and the White House should make an additional allocation of permanent Housing Choice Vouchers a standard component of post-disaster supplemental appropriations to house displaced residents in need.
- Congress and the White House should make an additional allocation of Low Income Housing Tax Credits (LIHTC) a standard component of post-disaster supplemental appropriations to catalyze development of new affordable housing to replace lost and damaged rental units.
- While changes must be made so that the “ideal” disaster recovery is shorter than 18 months, anyone communicating with the public about recovery – from government at all levels to the media – must be accountable for providing realistic and informed timeframes about its duration, particularly to disaster victims, who need to make informed decision about how to order their lives in the interim.
- Readiness standards should be incorporated into all local, state and federally funded capital projects and relevant laws and regulations, including any future federal infrastructure bills.
- The federal government must continue to identify and plug holes in its disaster recovery programs and in the National Disaster Recovery Framework (NDRF), striving for greater responsiveness to place-based realities such as differing building typologies, and adapting programs and procedures as better approaches are found.

For all Federal agencies involved in disaster response and recovery:

- Federal agencies’ post-disaster communications with victims and the public – whether in person, online or in printed materials – must be comprehensive, accurate and consistent, including up-to-date information about each agency’s programs and policies and how they interact with those of sister agencies.
- Federal agencies must communicate to impacted home, building and small business owners immediately after a disaster that federal environmental laws like the National Environmental Policy Act (NEPA) may apply to them.

- The Sandy Regional Infrastructure Resilience Coordination (SRIRC) group and its subsidiaries are a flexible model for regional interagency collaboration throughout the different phases of disaster recovery and should be incorporated into the National Disaster Recovery Framework (NDRF) and related protocols.
- Staffing needs change over the course of disaster recovery, requiring a more flexible, fluid model than Joint Field Offices (JFOs). JFOs' life span should be shorter, and if additional recovery staff are needed thereafter, Interagency Agreements (IAAs) can be utilized to bring in short-term experts to meet specific needs.
- Regional leadership and senior staff from key federal agencies nationwide should be required to attend an annual, in-person disaster preparation workshop to become familiar with sister agencies' authorities and mandates and to get to know their counterparts at other agencies.
- While changes must be made so that the "ideal" disaster recovery is shorter than 18 months, anyone communicating with the public about recovery – from government at all levels to the media – must be accountable for providing realistic and informed timeframes about its duration, particularly to disaster victims, who need to make informed decision about how to order their lives in the interim.
- Readiness standards should be incorporated into all local, state and federally funded capital projects and relevant laws and regulations, including any future federal infrastructure bills.
- The federal government must continue to identify and plug holes in its disaster recovery programs and in the National Disaster Recovery Framework (NDRF), striving for greater responsiveness to place-based realities such as differing building typologies, and adapting programs and procedures as better approaches are found.

For the Federal Emergency Management Agency (FEMA):

- FEMA, in partnership with the SBA and HUD, should develop a single "Disaster Relief" website with a common application for impacted homeowners, multifamily building owners, and small business owners. This portal would lead to a seamless interagency data system, enabling ongoing communication and updates to flow between applicants and relief agencies at the federal, state and local levels.
- The common application should allow applicants to check a box to give consent for their personal information to be shared with other government entities providing disaster assistance, including at the state and local levels, so that fewer

information requests are made of victims, thus streamlining the process to apply for disaster relief from multiple funding sources.

- FEMA should explore administrative or regulatory fixes that would enable a global match for infrastructure projects funded through its Public Assistance (PA) program, akin to how it administers the cost-sharing requirement for its Hazard Mitigation Grant Program (HMGP).
- FEMA must ensure that all agencies involved in both short- and long-term disaster recovery engage with each other immediately following a disaster, which includes bringing relevant federal agencies into its Preliminary Damage Assessment (PDA) process.
- FEMA and HUD should archive the Sandy Regional Infrastructure Resilience Coordination (SRIRC) group’s governing documents for future replication and incorporation into the National Disaster Recovery Framework (NDRF).
- Staffing needs change over the course of disaster recovery, requiring a more flexible, fluid model than Joint Field Offices (JFOs). JFOs’ life span should be shorter, and if additional recovery staff are needed thereafter, Interagency Agreements (IAAs) can be utilized to bring in short-term experts to meet specific needs.

For the U.S. Department of Housing and Urban Development (HUD):

- FEMA, in partnership with the SBA and HUD, should develop a single “Disaster Relief” website with a common application for impacted homeowners, multifamily building owners, and small business owners. This portal would lead to a seamless interagency data system, enabling ongoing communication and updates to flow between applicants and relief agencies at the federal, state and local levels.
- The common application should allow applicants to check a box to give consent for their personal information to be shared with other government entities providing disaster assistance, including at the state and local levels, so that fewer information requests are made of victims, thus streamlining the process to apply for disaster relief from multiple funding sources.
- Congress and HUD should standardize the CDBG-DR program to require that at least 70% of every grantee’s allocation benefits low- and moderate-income (LMI) persons (as required by the regular CDBG program), alterable only by a waiver from the HUD Secretary if a grantee proves compelling need.

- Congress and HUD should place an income cap on CDBG-DR-funded single-family housing programs that can only be increased, but never eliminated, by a waiver from the HUD Secretary if a grantee proves compelling need.
- HUD should allow CDBG-DR grantees to utilize industry-standard cost estimation systems to size repair grants, subject to a receipt-based appeals process for extenuating circumstances, rather than requiring receipts for all reimbursements.
- HUD should allow multifamily building owners to submit rent rolls and census data to certify their tenants' low- and moderate-income (LMI) status rather than requiring tenants to self-certify their incomes.
- Congress and HUD should allow CDBG-DR grantees to comply with state or local environmental review laws in lieu of the National Environmental Policy Act (NEPA) if they can show those laws are substantially equivalent to NEPA.
- If an income cap is placed on CDBG-DR housing funds, Congress and HUD should reconsider the current prohibition against using CDBG-DR grants to repay SBA loans, which can result in inequitable outcomes among similarly situated homeowners.
- The standard duration for CDBG-DR-funded Tenant-Based Rental Assistance should be 24 months, with the ability for HUD to extend that up to 48 months if a grantee shows good cause.
- FEMA and HUD should archive the Sandy Regional Infrastructure Resilience Coordination (SRIRC) group's governing documents for future replication and incorporation into the National Disaster Recovery Framework (NDRF).
- HUD should work with past grantees to make its online CDBG-DR Toolkit more comprehensive and responsive to grantees' questions and issues, including a detailed decision tree to aid in program set-up and a standardized but adaptable system for tracking projects and expenditures.
- HUD's Disaster Recovery and Special Issues (DRSI) team needs increased capacity to partner effectively with CDBG-DR grantees throughout the life of a grant, providing not just hands-on technical assistance regarding compliance but also informal advice and guidance.
- HUD should announce total grantee allocations as soon as possible after a CDBG-DR supplemental appropriation is passed, so that grantees know their total funding before they size and launch their recovery programs.

For State and Local Governments impacted by a disaster:

- While changes must be made so that the “ideal” disaster recovery is shorter than 18 months, anyone communicating with the public about recovery – from government at all levels to the media – must be accountable for providing realistic and informed timeframes about its duration, particularly to disaster victims, who need to make informed decision about how to order their lives in the interim.
- Large-scale recovery programs benefit from administration by a single office or entity dedicated to disaster recovery.
- It is critical to hire sufficient full-time staff to run a recovery office, including some with both disaster funding and program expertise, rather than relying solely on existing CDBG staff and/or outside consultants.
- Streamlining housing program options – for example, by imposing income and/or total grant caps on single-family housing programs or limiting the number of financial institutions that handle multifamily rehabilitations – can expedite program execution.
- Grantees should carefully weigh the pros and cons of homeowner-driven versus grantee-run housing programs before choosing their approach.
- If a grantee chooses to only offer a homeowner-driven housing program, it should still procure a small number of contractors to perform work for select applicants who may not otherwise complete their homes.
- Extensive and well-informed public outreach, accompanied by ongoing, consistent case management by qualified, place-based experts, is essential to recovery program success.
- Disaster relief applicants need up-to-date public access to their application status. An online “Disaster Relief” portal, 24/7 call center and place-based support offices are effective means of providing real-time, ongoing support to applicants.
- Grantees’ strategic acquisition of at-risk properties for resilient redevelopment and/or managed retreat should be a component of disaster recovery programs.
- State and local governments should not shy away from acquiring at-risk properties – including using life estates, land-banking and even condemnation in rare cases – to facilitate responsible, comprehensive redevelopment of, and/or managed retreat from, vulnerable areas.

For all State and Local Governments:

- State and local governments should not shy away from acquiring at-risk properties – including using life estates, land-banking and even condemnation in rare cases – to facilitate responsible, comprehensive redevelopment of, and/or managed retreat from, vulnerable areas.
- State and local governments should pursue a multi-pronged approach to disaster preparedness that combines planning, buyouts and acquisition for redevelopment; resilient infrastructure projects; protective land use and zoning measures; pre-certification of necessary disaster response and recovery services; and robust public outreach.
- Public engagement and public-private partnerships are essential components of disaster preparedness since building social resilience through broad-based networks is as important to recovering quickly from a disaster as hardening infrastructure and other critical assets.
- States and local governments should proactively solicit guidance from their peers, especially those on the forefront of preparedness and those that have gone through disaster recovery.
- Readiness standards should be incorporated into all local, state and federally funded capital projects and relevant laws and regulations, including any future federal infrastructure bills.

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