NDRC: Historic Preservation in the National Disaster Resilience Competition
Webinar Transcript

Nancy Boone: Welcome to this prerecorded webinar on Historic Preservation in the National Disaster Resilience Competition, the NDRC. I'm Nancy Boone, I'm Federal Preservation Officer for the Department of Housing and Urban Development.

A lot of people are thinking and talking about resilience these days, how we can better prepare for the next disaster and bounce back easier if and when it comes. Resilience is relevant to people and places, individuals, families, communities, and has many dimensions. Today, we're going to hear about the National Disaster Resilience Competition, an exciting program sponsored by HUD to encourage regions, states and communities to think creatively about how they can make their place more resilient physically, socially, economically. We'll look at the basics of the National Disaster Resilience Competition. We'll look at how you might be able to contribute to the development of concepts that are considered in Phase 1 of the NDRC. And, we'll look at ways in which people around the country, and in some cases, around the world are making their historic places more resilient. And, we hope that throughout, you will be inspired to think about your own communities and how they might become more resilient.

Our presenters today include Jessie Handforth Kome, who is the Deputy Director of the Office of Block Grant Assistance at HUD, Ashley Bechtold, who is an Environmental Specialist in historic preservation with HUD, and Jennifer Wellock, Technical Reviewer and Historian with the National Park Service. And, she and Jennifer Eggleston have been awesome partners in this effort to produce the webinar, and we thank them and the National Park Service for their collaboration.

Although, we may intuitively know that preservation has a logical place in resilience discussions, it's appropriate to start with a reminder from a recent report issued by the United Nations, of the role that culture and heritage can play in our collective emotional resilience. And, you can read these quotes on the screen. As you listen to today's presenters, keep that in mind and don't be afraid to bring that perspective to discussions in your state, your place, along with your ideas for building structural, economic and social resilience.

Now, we're going to hear about some of the program basics from Jessie Handforth Kome.

Jessie Handforth Kome: Hi, I'm Jessie Handforth Kome, and we're going to talk really basically about the National Disaster Resilience Competition. There's a lot more information, and we'll give you links to where you can get it, about competition details. But, this is just to give you a basic grounding for this webinar. We're running the National Disaster Resilience Competition with about a billion dollars of the remaining funding from a supplemental appropriation that was designed to deal with the most impacted and distressed areas with unmet recovery needs from 2011, 2012 and 2013, in which about 2,000 of the 3,000 U.S. counties experienced major disasters. We got $15.2 billion, and again, there's about a billion dollars left to allocate. And, one of our goals is to fairly allocate the remaining disaster recovery funds.

We're looking for science-based and forward-looking risk analysis to address recovery, resilience and revitalization needs. We are trying to get communities to, in doing recovery, not just put things back the way they were, but to consider how to position their community as a whole for the future that their community is going to be facing, and to do data analysis to consider that. And, we want to leave a legacy of institutionalizing information, the implementation of this approach, not just in disaster recovery, but throughout the community development and hazard mitigation worlds, and practice. So, the goals are stated and laid out. There's about six goals in the NOFA. We're also trying to provide resources that improve resiliency and thinking there is resilient recover, to not just threats and hazards of major disasters, but also to economic stresses and other shocks. We want to make sure stakeholders are fully involved, and we incorporated a lot of the environmental and Section 106 consultation requirements into the Phase 1 of the, developing the competition NOFA. And, we're also working very closely with the philanthropic community, particularly the Rockefeller Foundation and others to leverage their investments and help communities move forward. We feel that that will also help with the legacy issue of making sure that this practice continues in the future.

So, and we already talked about, it's about a billion dollars, it's actually $999,108,000, but you know, round numbers. The lowest award will be about a million dollars, or could be as low as a million dollars. The highest award, theoretically, could be as high as $500 million. 48 states are eligible. The two spared states, you can see on the map are Nevada and South Carolina. They did not have any disasters in the eligible time period and there are 17 cities and counties. All of the cities and counties already have an allocation from this appropriation, and therefore had, we deemed them to have capacity to compete.

So, only one application can come from each eligible state or city and county. So if you want to participate we're giving you the point of contact for that here on this slide. The Rockefeller Foundation has gotten contacts for all of the eligible applicants who plan to participate. You need to talk to that contact person or get to the eligible state or city. But, they can put multiple projects into an application, and an applicant, a state or a city or county, can have multiple partners. And, the partners can include Indian tribes and there's a lot of questions regarding tribes, some of which have been answered in the frequently asked questions, which is available on the HUD Exchange website, and was just updated, just before we began recording this webinar. And, the other limitation is that because of what the law that gave us the money says, that these funds are for unmet recovery needs in the areas that were most impacted and distressed by the disasters in the time period. Applicants have to get through what we're calling a threshold, and show that they have a most impacted and distressed area with unmet recovery needs before they can get into the competition. But, we're encouraging them to consider even larger areas, even going statewide or multi-state region-wide in changing their practice and showing us they're making a long-term commitment to resilience. And, as I mentioned, we have a partnership with the Rockefeller Foundation, and they have a web page up discussing their relationship to the competition. They're in a memorandum of understanding with HUD through Phase 1.

It is a two-phase competition and Phase 1 is primarily a planning or framing phase. The applicants have to analyze and frame the issues that their communities faced and what their community development objectives are, find partners to increase their capacity, and consult with their stakeholders. And, then they have to come up with an idea. HUD is looking for compelling ideas and concepts to fund, to help set a new watermark for, as it were, for resilient recovery practice. And, they're going to have to make a long-term commitment that they can do regardless of whether

they're funded and a long-term commitment to increasing their resilience. The Phase 1 deadline is March 16, 2015. That's when the applications have to be in from the eligible applicants and grants.gov. HUD's going then review the applications and the high Phase 1 scorers, HUD will invite to submit a Phase 2 project implementation proposal drawn out from their Phase 1 framing. So, Phase 1 framing an idea could be a 20 or 30-year vision, but they are going to Phase 2, they'll extract the CDBG NDR, as we call it, National Disaster Resilience CDBG, eligible project out of their concept. And, there's a reserve pool as well of $30 million for grantees who are not selected to go on to Phase 2, but have demonstrated a sufficient amount of unmet recovery need and that funding will be allocated by HUD possibly after Phase 1, possibly after Phase 2, possibly. It's not really clear exactly when, under a separate notice of fund availability.

There is a list of ineligible activities that you can read for yourselves. It's mostly differentiating this funding. We're looking for long-term changes. We don't want to do temporary things or contingent things or things that you were going to do otherwise. And, obviously, you don't get to be in non-compliance with fair housing or civil rights with our funding.

And the competition factors, this is a table that's repeated in several of the other webinars showing what the points are for Phase 1 and for what the minimum points are. If you have additional questions, there will be links and email address that you can send questions to about the NOFA itself, but now we're going move back to Nancy, and discussion of what we came here for.

Nancy Boone: So, I just wanted to talk for a moment about environmental review, because it's a question that comes up among preservationists. Like all federally-assisted projects, these NDRC projects will undergo an environmental review, including Section 106 review. And, if you have a review role as a state historic preservation officer or a tribal historic preservation officer, or you're a likely consulting party in a Section 106 review, we certainly encourage you to participate early on in consultation. As Jessie said, we're looking to include as much of that kind of analysis and consultation up front in the Phase 1 phase as possible. Of course, every NDRC project that's awarded in Phase 2 will have a Section 106 review.

We wanted to just point out something that, the last point here, there are program alternatives in Section 106 that can help expedite delivery of recovery assistance after a disaster. Tools like programmatic agreements can simplify and expedite Section 106 reviews of federally-funded disaster response and recovery projects. And, HUD has collaborated with FEMA to create a unified approach to review that applies to CDBG-DR projects, including these NDRC projects, and it involves having a FEMA PA and a HUD Addendum to that FEMA PA in place before a disaster contributes to resilience. It's always a good idea. We're put Ashley's email up here on the screen in case you wanted to pursue that further.

One of the first things about preparing for disaster, obviously, is making sure that you have some sense of what it is that you have. And, including identification of historic properties through inventories or surveys is a good step, including less obvious historic resources like bridges, dams and shipwrecks and other underwater resources. You see on the right here a display of New Jersey's geographic information system, and how they incorporated a historic data layer that includes information about historic properties, is able to show outlines of historic areas, archeologically sensitive areas. And, then, once information is included in a geographic information system, a GIS system like that, it can be considered. Those historic resources can be considered as an integral part of community planning. Such readily available data facilitates short-term response and long-term

planning. So, it's a good idea, and obviously, there's an obvious advantage to having a survey in place before the disaster.

I'm going to hand this off now to Jennifer.

Jennifer Wellock: Hi, I'm Jen Wellock. I work for the National Park Service as a Technical Reviewer and Historian. And, you might ask why is the Park Service interested in this competition. One of the things is we have over 400 units that have a ton of historic properties within them, many of them at risk along the shorelines. We also have more than we can handle in terms of our historic preservation funding. We give grants to states and tribes and in that way we work with our partners in the preservation world to make sure that they are accessing information and making sure they realize when they're putting something on the National Register, they're creating a risk survey. And, one of the things we've been trying to do is talk to states and tribes about getting there early. We really want to enhance the process to make sure that the inventory that we collect isn't just about the style and the type of building, but it's also about where we might have the highest potential for sea level rise, where we might see wildfires. And, this is something you have to do in advance. You can't change people's minds about how important a building is in your downtown if you don't get out there first to assess what you have. You need a benchmark.

This is why you have to be fast. This is Phil Campbell in Alabama after the tornadoes. They had severe damage. They thought they had some time to look around and assess what they were going on, but within a week, they had lost the entire downtown, except for one bank building. Now, it's, the owners, property owners here had the right to do this. This is their private property. But, it's something that will be hard to recreate, and also will be hard to explain what was once there. So, we're trying to make sure people work quicker and understand what they have.

One of the ways you can do this is there's a FEMA tool, actually called Hazus. And, that gives you potential loss estimates. So, the way you really figure out what your risk is and you assess it is you decide sort of the cost to put it back. Well, in preservation, our cost is a little bit more than just financial. We know that is has an economic benefit, but we also have an intrinsic, maybe, cost that we might lose, our culture. So, one of the hard things here is to try and sort of estimate the potential from a natural disaster to your community. But, it's worth doing and it's one of the harder parts is trying to get the community buy-in. So, this is a way to show the community what you have.

Now, there's many ways and many risks out there. I'm going to talk a little bit about flooding. There's six ways that we can protect from flooding. There is elevation, which is rising out of the water. That's probably the one most people know. You can relocate, you can just move. You can say, "Well, it doesn't look like this is going to get any better. It's time to go." And, take the buy-out, maybe, if you're being offered one from FEMA. But, you might actually think about adding infrastructure to your property. Perhaps, you want to add a berm, perhaps, you want to do more internal changes like moving things around. There's dry flood proofing and wet flood proofing.

These are some images from historic preservation fund grants that were taken out of a special appropriation after Hurricane Katrina. We have additionally gotten some from the Hurricane Sandy grant and these were in the affected regions that were hit by the storm, preservation grants. Now, just to realize that historically, we've been dealing with the same issue. It's not a new problem. This is the Sands House in Annapolis, Maryland, which is relatively close downtown to the tidal flooding. And, it went up 18 inches, historically, and it seems to be doing pretty well outside of it. It

probably should come up a little bit more with potential sea level rise. We have a different response we seem to see in the modern world. Today's homeowners typically respond in a much more drastic way, because they don't want to be hit again. No one can, unless you've gone through it, it's very devastating to have a flood and you never want it to happen again. But, you're also dealing with insurance issues for making you higher than the recommended flood plain. This may be a factor of fear or insurance, but how we do it and how we do it in our communities is one of the things we want to look at.

We talked about adding infrastructure, again, not a new idea. We have examples below of different types of embankments and sea walls. There's the Roman first century sea wall. The project on the left that looks like a seashore, that's in the United Kingdom. That's a 1623 seawall that's still there, archeologically. And, on the bottom right with the trees, that's Arcadia National Park, and that's a natural sea wall. That's nature doing the job for you, adding some glacial response.

We have, when people come in after a disaster, and this is a historic example. Galveston had the terrible, terrible hurricane in 1900, and by 1903 they had come up with a plan to build a three-mile long cement sea wall, and they also raised the entire city a full 12 feet. So, you have tremendous change that went on with government intervention, changed the city.

But, here's some historic examples that I find fascinating. Here's a drainage issue this is in Istanbul. This is the cistern called the basilica and that's from the 6th century. You can make even a catch basin beautiful if you think about it. On the right is the drainage canal from West Bengal, it's India. And, so you can think of them as new types of waterways in your downtown.

There's dry flood proofing, which is just trying to keep the water out when it's rising. And, you'll see here some gates that people have put in as the floodwaters are rising. This is a small intervention, but one that could be done, a community-wide approach. They just need to map out sort of where the risk is.

Here's a dry flood proofing on a larger scale. This is here in D.C., this is Georgetown, and you'll see the light stanchions are actually floodwall protections. So, it's been designed in to sort of blend away. And, then when the waters of the Potomac rise, on the bottom picture, you can see they've pulled up that inner section and raised the floodwall. And, so you can have a design highly successful economic area, but also one that's protecting against a known risk.

Wet flood proofing is a little hard to get your brain sometimes. It's saying, "Okay, let the water in. I'm okay with it." And, in this case, this is an interior that has glazed brick. This is a historic building in New Orleans that they were typically flooded. So, they went ahead and they hard-scaped, if you will, the entire interior so they could hose it out. These are all some recommended materials that one would use, naturally decay resistant lumber.

This is the house on the outside. You wouldn't think it was like that on the inside. It's a steamboat house. You want to fill any basement voids; you want to locate systems above. We know this, but sometimes it's hard to get our brain around, as a community, how can we go ahead and do this together, in making sure that we're, all of us have automatic shutoff systems for our water. It's a simple thing, but when the waters rise, so does everybody's water inside their home. And, storage tanks that are floating down the river, become a bomb that can go off for someone else. So, you

really need to think about the community as a whole when you're thinking about different wet and dry flood proofing techniques.

This is one of the ideas about moving, relocation. This tends to happen with the government intervention, and so like in this case, this is a 1942 TVA project in the Tennessee Valley Authority, where they raised the entire area to create a dam. They had to stop during the war, and then they came back finished. But, it does help to do things on a grand scale sometimes, because you can have one design vision.

And, then in terms of how a building can retain its historic integrity, when you're doing things like elevating it out of the flood plan, it's very difficult, but there are ways to go about it. Here's some ideas about how to minimize the height or how to deal with grading. There is different entry treatments, you have to maintain your historic integrity, and that can be very hard. But, it's worth doing, primarily because if you look here, downtowns need to kind of work together if they're in a historic district. And, so if one house is going to do something drastically different than the others, you might change the entire integrity of the district.

Here's some examples of historic elevations. We have one in coastal Mississippi on the upper right, where that was done historically. They just raised the whole house. And, this is still going on, of course.

And, there's some guidance out there, but there could be a lot more. We at the Park Service, have been looking for different communities, particularly after Sandy and other events, this was after Katrina. You know, how does it work in your town? How is going to work for your community if you raise a building up? What kind of buildings do you have? And, so again, we're back to that inventory first, and then maybe preferred alternatives.

Oh, I did want to put this in, part of the risk analysis is also thinking about where things should go in a disaster. This is what happens, lot of debris, a lot of damage. Materials get thrown out and where you're going to put these giant debris piles is important. This could be a historic archeological site. I always say it's best to put it on the ball field, which is already blank. Nobody's going to be playing baseball during a disaster. But, you might think about, you know, beach parking lots or places that are large enough. And, of course, you want to work with your local community to find ways that this is in your local ordinance and things like that.

So, oh, and lastly, protection from wildfires. We know a lot of our out West disasters were linked to fire damage. At the Park Service, of course, these are our lodges, and they do have a lot of potential loss. This might be the only tourist building miles around, and a huge economic generator for the community. And, so one of the techniques that we have is if it's a historic building, is we will wrap it. And, I just put this in here to make you think. I mean, who would think you could wrap a building to keep the fire away. But, you can, so you just have to have sort of an innovative approach, and when you think about disaster.

I'm going to hand it over to Ashley to talk about wind.

Ashley Bechtold: Thank you. Hi, I'm Ashley Bechtold, and I'm a HUD Environmental Specialist. I'd like to talk a little today about protection from extreme wind events, and how this in historic preservation can be factored into your community's disaster plan.

So, since 1953, tornadoes, hurricanes and other wind-related events have caused an average of 69% of all the U.S. insured catastrophic losses. The death and destruction associated with these types of disasters are huge. This map illustrates tornado activity in the U.S. from 1950 to 2000. The darker the shade of blue, the stronger the event. As you can tell, these events are not confined to just tornado alley. They happen over a large portion of the U.S., and are unaffected by mountain ridges, rivers, valleys and bluffs. So, even if your state isn't known to have much tornado activity, it's always important to have a plan in place.

So, what can you do to plan for an extreme wind event? First and foremost, there needs to be a warning system in place to notify people. While TV and radio are good ways to broadcast emergency notifications, a tornado siren may be the most effective for a fast-approaching storm. Educating the community is also important. People need to understand what it means when these sirens go off. Someone who may have recently moved to the area might not know what to do or where to go. Some of the best ways to reach people are public meetings, mass mailings, flyers and news broadcasts. And, exercises should be routinely conducted to insure that residents of a neighborhood know what to do. So, what if there are tourists or people who are visiting your community? It's important that hotels and local tourist attractions would also have a plan in place to direct visitors, so their safety is also taken account for. Signage can also help with this, and it needs to be clear and directing people to storm shelters or safe rooms in an event of an emergency. Also, hurricane shutters and safe rooms are other ways to protect against strong wind events. Most structures are not built to a building code high enough to provide necessary protection needed during an event. So, while hurricane winds lend some time for preparations with advanced warning, a tornado arrives with little notice. So, safe rooms and storm shelters can be affordable options for protecting the lives of homeowners and their families.

So, what is a safe room? Safe rooms are designed and constructed based on meteorological records and extensive investigations of damage from extreme wind events. They provide near absolute safety and are not intended for use for more than 24 hours. There are two different categories of safe rooms, residential and community. Residential safe rooms can be small residential rooms that are retrofitted to the interior of a building, something like a bathroom with hardened walls or a closet. They can also be an exterior addition or a standalone structure. This is a photo of an underground safe room after the Moore, Oklahoma, tornado that destroyed over 2,000 homes and killed 24 people.

So, here are a few more examples of residential safe rooms. That's an old FEMA coworker of mine holding the door open to a safe room after the Moore tornado. As you can tell from the photograph, this safe room is entirely intact, while surrounded by complete destruction. A safe room should be constructed or retrofitted to be structurally independent of any building that surrounds it. In the second photo is an interior example where a safe room was constructed into the foundation of the house during its original construction. This is a great way to successfully disguise a safe room while making it incredibly accessible to its users. This technique can also be retrofitted to properties after they are already constructed, although that is much harder to do, but it is possible. And, the last photo is a more whimsical design, and it's a bit over the top. But, it does show how there are some creative solutions available if you want a safe room in your back yard. It doesn't have to just look like a concrete pod.

So, there also is a community room, and they are designed to protect a large number of people from a natural hazard event. And, they're usually located near or within neighborhood schools, hospitals and other critical facilities. If a public building has been identified as a community safe room, people who live or work in the surrounding area may expect it to be open during an event and this might not always be the case. So, certain facilities such as schools and commercial buildings may not be accessible at night. So, these safe room owners should make this clear to potential users. This is a photo of a rest area along major I-40 in Texas, which is part of tornado alley. The Texas DOT has completely updated the state's safety rest areas to provide more services, including operating as tornado shelters for Texas travelers. If you notice, this one is underground and it has an interesting architectural design that is really hard to miss. So, this is a great example of using a safe room for dual purposes, and how it can also protect travelers.

Safe rooms are exceptionally site-specific facilities. They must be located in the closest proximity to their potential users. They should also be located away from large objects and multistory buildings that may topple during an event. There are also environmental and historic preservation factors that can play an important role in the site selection and these should be considered from the very start of the process. Safe rooms should be located out of areas known to be flood-prone, including areas within a 500-year flood plain and that are susceptible to storm surge. The last thing you'd want is to be a safe room that is beginning to flood. So, check the FEMA maps online to determine what flood zone your area is in. Placement within a historic district or near historic properties should also be sensitive. There may be archeological resources nearby that could be affected by ground disturbance. So, when placing an exterior standalone safe room near a historic building, there are things that can be done to lesson any negative visual impacts to the area. If possible, you can place safe rooms in the back yard of a property, away from a main room, or a main road. You can also build a privacy fence around the structure, or even enclose it inside of a small shed. When possible, try installing it partially below grade to reduce visual prominence even more. As you can see in this photo, they built a stone wall around their safe room and made it a flower bed. So, there are many options you can do to make a safe room more compatible with its surroundings.

In addition to safe rooms, hurricane shutters are also a great way to protect your building during a strong wind event. Shutter systems for windows are a great option to prevent damage. Historically, exterior wood shutters were not only aesthetically pleasing, but were used for security and added an extra layer of insulation during the winter and provided shade during the summertime. This is a couple of houses here in New Orleans that historically had shutters to protect them, and as you can tell, they add a nice architectural detail to the building while serving a very important purpose.

Roof tie-downs are also a very inexpensive option and a secure way to secure the frame of a house so the roof does not blow off during an event. They can be placed discreetly along the rafters and are not seen from the exterior of the building, making them a useful device to historic structures.

And, briefly, I would like to talk about a few things you can do to protect your building from earthquakes. The seismic strength within buildings is achieved through reinforcement of structural elements. Such reinforcement can include some anchored ties, reinforced mortar joints, braced frames, bond beams, movement-resisting frames, sheer walls, and horizontal diaphragms. Most historic buildings can use these standard, traditional methods of strengthening successfully if properly designed to conform to the historic character of the building. Shown here in the top photo is an interior diagonal frame, which will dampen and transfer seismic loads in a designed path from the foundation to the roof. In this instance, the frame was placed back from the exterior glass wall

of the historic building so that it was not visible from the outside. This is a successful example of how these upgrades can fit in with the historic character of a building. It is typical during an earthquake for wood-frame houses to slide off their foundation. You can see in this diagram that the anchor bolts can be placed within the wall joists to reinforce their strength to prevent this from happening. Also, in the bottom photograph, this seismic upgrade of a former railroad car facility in Spokane, Washington, included horizontal metal strapping along long expanses of masonry and this project actually the historic tax credits. The National Park Service has also issued a preservation brief on the seismic retrofits of historic buildings, which is an excellent resource, and this can be found online and at their website.

So, in summary, while there are many things you can do to protect your historic structure from the damages of a disaster, overall, the most important thing is that people in the community are protected because without the people, you can't have a community. So, with that, I'd like to turn it over to Nancy.

Nancy Boone: Thanks, Ashley. As has been mentioned several times, there are some very rich resources that you can turn to for more information about the program. And, first up is the National Disaster Resilience Competition web page, shown here. On that web page, you'll find a whole array of webinars like this one that you can review when you have a particular interest, and get a lot more information. As many of you know, the Secretary of Interior's standards are a terrific resource put out by the National Park Service with lots of guidance on how to treat historic buildings as you adapt them. And, we wanted to point out that if you have questions following this webinar, please feel free to submit them to ResilientRecovery@HUD.gov. This is not a black hole. This is a website and an email address with a real person, Jessie, on the other end, who will answer your questions quickly and thoroughly. And, we encourage you, if you have outstanding questions to please, about the program, please use that website. If you are already part of the resilience discussion, that's great. If not, we hope that you may use the NDRC as a means to get involved, and share your ideas on how historic preservation can be an integral part of resilient efforts, resilience efforts in your state. And, we hope that this webinar has inspired you to keep thinking and acting to promote resilience of the historic places in your community, in Phase 1 of the competition, and in Phase 2 if your state is selected, and beyond into the future. So, thank you very much for your attention. Send your questions to ResilientRecovery@HUD.gov, and we wish you good luck. Thank you.