Floodplain Management for Multifamily and Office of Residential Care FHA Programs, 5/12/20

SARA JENSEN: Welcome, everyone, and thanks for attending today's training on "Floodplain Management for Multifamily and Office of Residential Care Facility FHA Mortgage Insurance Programs."

My name is Sara Jensen, and I'm the program environmental clearance officer for HUD's Office of Housing. I am joined by Liz Zepeda who is a senior environmental specialist in HUD's Office of Environment and Energy and also HUD's floodplain expert.

This webinar today is intended for multifamily and Office of Residential Care Facilities FHA vendors, third-party consultants, attorneys, and HUD staff. If you do not work with HUD's FHA program, I would like to direct you to a floodplain webinar that Liz recorded in March that is for all the other HUD programs. The link for that webinar is in the chat box on your Zoom screen and is also in the Q&A panel.

On the flip side, some of you that do work with FHA may have already attended the March webinar. This webinar will have some repetition but will also include program-specific terms, policy, and guidance. So please stay with us.

And, Michelle, will you please walk us through some webinar features?

MICHELLE GRAINGER: Sure. Thank you so much, Sara, and thank you, everyone, for joining us today. Today's webinar will begin promptly at 1:00 p.m. and it will last for about two hours. We will also be taking a five-minute break during that time and will resume after.

All attendees will be muted on today's webinar, and if you do have questions that you would like to submit to our panelists today, please feel free to use the Q&A panel at the bottom of your screen to ask any questions that you may have. Please note that questions will not be answered during the webinar, but will be responded to after the webinar has ended.

For best audio quality, please feel free to listen via the phone line connection, and you can access that by going to the audio settings on the left side of your dashboard and selecting switch to phone audio in order to dial in via your phone.

Thank you so much. Sara, you may continue.

Sara Jensen: Thanks, Michelle. Here is our very full agenda for today. We are focusing not only on HUD's floodplain management regulation but also on specific multifamily and Office of Residential Care Facilities flood requirements. During the webinar we will be using the acronym ORCF for Office of Residential Care Facilities, and we will also refer to this program as 232.

And, again, if you do not work with these FHA programs, please refer to the link in the chat box and the Q&A panel for a webinar on floodplain management for all other HUD programs.

For those of you that do work with FHA programs, today we're going to give you policy overviews as well as some practical guidance, such as how to map the floodplain, including how to find and view preliminary FEMA maps, and how to conduct the eight-step process.

We'll be sharing brand-new information. One topic is FEMA's newly designated limit of moderate wave action zone and related multifamily and ORCF policy in this zone. Another new topic is updated guidance on project infrastructure in the floodway.

Where appropriate, we'll mentioned proposed changes to Chapter 9 of the MAP Guide. The Office of Multifamily Housing posted Chapter 9 to the drafting table in February. Please note that any proposed changes we mention won't be policy until the MAP Guide is published.

We're also going to discuss program-specific flood insurance requirements, and the break that Michelle mentioned will take place just before we talk about flood insurance.

You may notice that this agenda does not mention wetlands. Due to timing, this webinar is focused almost exclusively on floodplain. Where we can we will include guidance and information about wetlands, and at the end of the presentation we'll share links for more direct training on wetlands.

We have a lot to cover, and so, unfortunately, we won't be able to answer questions during the webinar today. Please submit the questions through the Q&A panel, and we'll post the answers at the same time we post a link to the recorded webinar. That will also be when we can post the slide presentation. So today you'll need to take your own notes, but you will get a full set of slides in the near future.

We will accept questions through the Q&A panel about wetlands as well as floodplains. We cannot accept questions about specific projects. Please direct those to the multifamily office processing your application or for ORCF direct your questions to Lean Thinking and the address is on the screen. And the housing staff will bring in regional and field environmental officers for consultation.

Now, I'd like to turn the presentation over to Liz Zepeda.

Liz Zepeda: All right. Thank you. So we're going to start with our regulations, which is the baseline requirement that applies to all HUD projects, before we get into the program-specific requirements.

So 24 CFR Part 55 implements two executive orders, Executive Order 11988 on floodplain management, and as of 2013 we also implement EO 11990 on wetlands protection.

So Executive Order 11988 is from 1977. It requires all federal agencies, including HUD, to act to reduce the risk of flood loss, to minimize the impacts of flood on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains.

11990 is very similar but for wetlands. Again, this webinar we are going to focus on floodplain management. We're going to have a few slides that touch on wetlands, but if you want more on wetlands, we'll have more resources later. You can also refer to the webinar I did in March which covers wetlands a little more.

So it's important to keep in mind that these are just the HUD rules. HUD projects also have to comply with state and local floodplain ordinances just like any other construction that goes on in those localities. And often those local and state laws on floodplains and policies will be more strict and require some additional mitigation measures that go beyond what we require at HUD. So we're going to be kind of talking about those baseline requirements, but they might be higher, depending on where your project is located.

Purpose of Part 55 is to avoid both developing in and residing in floodplains or developing in wetlands, unless there are no practicable alternatives.

So constructing housing in a floodplain creates two distinct problems. Obviously, you are exposing residents of the building to the risk of flooding. You're also changing the floodplain, which creates new risks. Increasing impervious surfaces, adding fill, and anything else that modifies the floodplain can change the flow of floodwaters, spread the risk of flooding to a greater area than before, and prolong flooding when it does occur. So we want to avoid any of these modifications where we can.

Wetlands are a little bit simpler, but when wetlands are removed, we lose that ecosystem permanently. Wetlands provide habitat for a variety of plant and animal species. They absorb and filter water, which makes them serve a critical role in promoting water quality, erosion control, and, maybe most important to us today, floodplain management. So we would like to avoid, again, destroying or modifying those.

Part 55 requires HUD to avoid developing in floodplains and wetlands unless there are no practicable alternative. The standard does allow us to consider financial constraints, but demonstrating that there are no alternatives to building housing in the floodplain is a very high standard. Unless the entire community is in the floodplain, which of course does happen, it's really hard to argue that there are no workable alternatives.

Where there are no other options and building in the floodplain is our only practicable option, we do want to make sure that all practicable mitigation measures are incorporated into our projects to minimize the risks and impact.

Practicability, it's not a black-and-white standard. Yes. It's legal to use HUD assistance to construct new housing in a floodplain or a wetland, but it's important that we keep in mind the real costs, not just the upfront costs. So for that let's talk about the full cost of flooding.

It's not just the direct losses like buildings, possessions, infrastructure, human lives. Floods also create a lot of indirect expenses like relocating, finding temporary housing, lost wages, and the health impacts of the exposure to unsanitary conditions, mold, and stress.

I don't have any handy numbers on multifamily properties, but, for comparison, FEMA has estimated but an inch of water in a 2,500-square-foot home can cause over $10,000 in damages to the structure and possessions. And that number jumps to $43,000 at four feet of flooding. So, obviously, this is really going to add up in a larger property.

Floods are the natural hazard with the greatest economic and social impact in the United States. So for low income residents in particular, surviving a flood can be catastrophic, and that's something that we really want to keep in the forefront of our minds when we're working on HUD projects.

I'm going to pass it back to Sara to talk a little bit more about FHA.

Sara Jensen: So FHA has higher standards than just the baseline HUD regulations on floodplains in order to protect projects and residents from flood risks. Detailed guidance can be found in Chapter 9 of the MAP Guide and Chapter 7 of the 232 Handbook for ORCF. We'll work these additional requirements into the presentation today.

And I'd also like to mention HUD's FHA program for hospitals. Although we are not focusing on this program today, the 242 hospital program also has additional floodplain requirements that are very similar to the ORCF 232.

Liz, you want to take us through some terminology?

Liz Zepeda: Okay. There's a lot of terminology to go over here. You really need to understand all of these terms to understand the requirements. So I'll spend a while here.

I also notice that we've gotten another 70 people since we last discussed this. So just a quick reminder for those of you who missed the first couple of minutes that this webinar is targeted specifically to FHA programs. Our audience is HUD staff, lenders, applicants, attorneys, third-party providers working with proposed FHA multifamily and healthcare projects.

So if you're from a local government, tribe, Public Housing Authority, anyone else, we would recommend watching the recording of our Part 55 webinar that we did in March. And Michelle has posted a link to that webinar. So I'd recommend not watching this one, which will be a little confusing, and watching the other one instead.

All right. That said, there are two basic types of floodplains, riverine and coastal. It should be fairly self-explanatory, but riverine are those floodplains that are along a channel such as a river, creek, stream, or a ditch, and coastal are those floodplains along oceans, the Gulf of Mexico, and your very large lakes. The maps and hazards are a little bit different in each of these types of floodplains, and we'll go over that in the next few slides.

In terms of identifying floodplains, at HUD we use FEMA's Flood Insurance Rate Maps, which are called FIRMs, to identify where they are. And we rely almost entirely on FEMA's judgment here. So if FEMA says an area is a floodplain, that's final as far as we're concerned. Now, if they say it's not a floodplain, we might still want to protect it anyway out of an abundance of caution,

but we don't ever think that FEMA's overreacting about something when they say it's a floodplain, and get into why that is.

So we'll start with a 100-year floodplain, also known as the 1 percent annual chance flood. 1 percent annual chance flood is probably -- well, it's definitely a better name for it, but I'm going to use 100-year floodplain because that's what we use in our regulations and our guidance. But they're the same thing. These are areas with at least a 1 percent chance of flooding in any given year.

It's important to remember -- you understand basic statistics. We're not expecting one flood every 100 years. The chance of flooding is the same every year, if not higher and higher each year. It's always going to be at least 1 percent, which means that over the course of a 30-year mortgage, it's going to be at least a 26 percent chance of flooding at some point.

These areas have at least a 1 percent chance of flooding each year, but it could be quite a bit higher than that. FEMA's maps are based on past flooding. They're not forward-looking. They don't account for any change to the area since the map was last updated, and they don't consider climate change.

As maps age, they become less and less accurate. So that's something we want to keep an eye on is how recent the map is. And FEMA maps don't designate any higher risk than the 100-year. They don't designate the 10 percent chance or the 50 percent chance annual flood.

So there are areas that flood every time there's a heavy rain or a king tide, but they're still going to be mapped as the 100-year floodplain on these FIRMs because there isn't a higher level of risk to assign them. So do not underestimate these risks. It can be a lot higher than they appear.

100-year floodplains are designated as Zone A or any zone that starts with an A on FEMA maps. Show how that looks. This is three different style of maps. They're all Flood Insurance Rate Maps provided by FEMA but -- and they're all pulled at the same time, but they look really different depending on how recently FEMA has updated the maps and how recently they've digitized the maps in a project area.

So the one on the left is the newest map. The one on the right is, of course, the oldest map. But the 100-year floodplain is always going to be either kind of this aqua color on newer maps or gray on older maps and generally Zone A, Zone AE, something that starts with an A.

Next, we've got the 500-year floodplain. These have at least a .2 percent chance of flooding each year, which translates to a 6 percent chance of flooding over a 30-year mortgage. Again, those percentages are only that low if the map is performing perfectly.

And apologies if you can hear my dog. This is quarantine webinaring. I don't have a way of keeping her quiet.

So officially, this is called the moderate flood hazard area, and we say they only have a .2 percent chance of flooding. For reference, Houston experienced a 500-year flooding event in 2015, 2016,

and 2017. So we don't want to get complacent about thinking that the chances of flooding are very low. There could be flooding three years in a row.

So hopefully, the mailman leaves soon.

This is the maps for 500-year floodplain. They'll generally be Zone X shaded or dotted. They might also be labeled Zone B on some maps, but on your newer maps -- or your newest maps they're this orange color on. On the medium ones they're dotted, and on the older -- oldest maps they're a light gray. So you'll just need to be kind of careful as you look at the map.

Next, we have floodways. Floodways are the most dangerous part of the riverine floodplain. They're functionally part of a river during a flood. So during a flood anything in this area will have fast waters that put structures at risk of extra damage, and evacuations will be extremely dangerous in these areas.

These are also the areas that are most important to keep clear during a flood so that waters can keep moving. Any obstructions in the floodway will slow floodwaters down and potentially make flooding worse. So we want to make sure that these are unobstructed.

And on FEMA maps floodways are quite easy to pick out. They're Zone AE, and they have hatched marks. So on the newest marks they're very easy to find. They're the scary red and aqua, but wherever you find them, they'll have these hatch lines to point out where that floodway is. And kind of clarify that we don't want to have anything anywhere near these.

All right. So floodways are the most dangerous part of a riverine floodplain. Coastal high hazard areas are then the most dangerous part of a coastal floodplain. They're also known as V Zones. That's how they appear on maps, as Zone V, which is quite a bit easier to say than coastal high hazard area.

But in addition to flooding, these are coastal areas that are subject to storm-induced waves and high velocity waters. So during a 100-year flood, FEMA anticipates waves of at least three feet high in a coastal high hazard area. All this makes these areas especially vulnerable and unstable.

All right. And my dog has come into my office and she's calm and hopefully she stays that way.

Before we get into coastal high hazard area maps, we're going to cover one more area, the limit of moderate wave action or LiMWA. This diagram shows how V Zones relate to A Zones in a coastal area.

All the way to the left we have your coastline. Just to the right of that, that's where we have your coastal high hazard area, or V Zone, where we'd expect wave heights to be over three feet. And beyond that we have the coastal AE Zone. This is the area where we would expect wave heights to be between one and a half and three feet high during a 100-year flood. And the LiMWA marks the end of that one-and-a-half-foot line.

LiMWAs are relatively new. You'll only see them on the more recent coastal maps or from the last five, six years, anyway. But research indicates that structures within the LiMWA suffer about as much damage as those in the V Zone. So at HUD we're still in an adjustment period on how we treat the LiMWA.

Our regulations haven't been updated since FEMA began mapping them, but individual programs have been able to add some extra precautions to deal with the risk there. Our understanding is you want to avoid this area just as much as you avoid the V Zone. So we'd like to move towards keeping our projects out of there where they'd be exposed to that level of damage.

Coastal areas tend to be a bit trickier on these Flood Insurance Rate Maps. It can be a little difficult to untangle A Zones versus B Zones. You want to make sure that you're looking very carefully at coastal areas.

On all of these maps you'll notice these kind of white or black contour lines. Those are what separate zones within the coastal area. And, where available, the LiMWA will be marked with this dark line with triangles on it. The triangles will be pointing you towards the coastal AE Zone, so indicating what direction the LiMWA is going.

So -- and then with each of these we can see a rough estimate of the elevation levels. So here on this newest map the E Zone is expecting water -- a base flood elevation of 16 feet that goes down to 14 feet, it looks like, within the LiMWA and then 13 feet beyond that. So we're looking at very high levels of flood and then these high wave heights as well.

All right. We have some other flood designations to go through here. The 100-year floodplain, floodway, and coastal high hazard area are all considered the special flood hazard area of the highest risk.

500-year floodplains are officially designated as areas of moderate flood risk. Along with 500-year, we also included in this category is areas with lesser hazards such as those that would be protected from flooding by a levee or a dam I think in some cases. So where there's the possibility of flooding but it should be protected.

Below that is the area of minimal risk. These are mapped as Zone X unshaded or Zone C. Theoretically, these areas have less than a .2 percent chance of flooding each year, but it's critical that in practice we remember that we still see quite a bit of flooding in these areas in the real world.

One-third of all federal disaster assistance for flooding and more than 20 percent of flood insurance claims go to areas that are mapped as having minimal or moderate flood risk. That's a huge chunk of flooding that's happening outside the floodplain -- the map's floodplain. So we want to try to be as careful as we can.

In an extreme example, almost three-quarters of residential properties damaged during Hurricane Harvey were in the moderate and minimal risk zones. So that resulted in tens of thousands of homeowners uninsured and unprepared because they thought they weren't at risk.

Finally, we have areas that aren't mapped at all. These are Zone D. Generally, these are areas with very low populations where FEMA either hasn't been able to determine the risk or hasn't performed any studies at all.

So that's it for our types of floodplains. We're going to have a few more terms that relate to types of activities.

So first is critical actions. These are project types where even a small risk of flooding is considered too risky. These include a few different types of activities, but there's really only one that's relevant to FHA, those of you attending this webinar, and that's structures that contain occupants who may not be sufficiently mobile to avoid floods.

So okay. Hospitals and nursing homes. So all 232 and 242 projects are critical actions because they cater to these populations. Now, independent living housing for the elderly is not considered a critical action. We assume that those residents are more mobile. So evacuation should be more similar to a regular residential property.

Under Part 55 we hold these types of projects to a higher standard because the risks and costs of a flood are much higher, potentially, particularly when it comes to evacuations.

In some ways, functionally dependent uses are the opposite of critical actions. These are land uses that must be in proximity to water like docks, marinas, bridges, dams, waterfront parks. We have some special rules that apply to functionally dependent uses, but they apply only where the entire project is functionally dependent.

We see this with community development bloc grants or Native American programs where HUD funds can be used to build or repair infrastructure but not within FHA. We do see FHA-insured projects that might have an on-site bridge or dam, but there aren't any special rules that apply to those kinds of land uses if they are incidental parts of a larger project.

So the important takeaway for you all today is that we don't need to cover the rules on functionally dependent uses because they do not apply to FHA projects.

Finally, substantial improvement. Improvements are substantial if the cost of repairs, rehabilitation, or reconstruction is equal to or greater than 50 percent of the market rate of the structure either prior to improvement or if the structure is being restored after a flood or other disaster before the damage occurred.

Improvements are also substantial if the activities result in an increase in the capacity, meaning the number of dwelling units or number of customers and employees on site, by more than 20 percent.

So if a project description includes repairs, rehab, or reconstruction, then it's important to refer to 55.2(b)(10) to determine if those improvements are substantial under our definition in Part 55. Some types of improvements are specifically not ever considered substantial. So where those

exceptions apply, you'll never be designated as a substantial improvement. So you'll want to check the regulation and make sure whether each individual project falls under this definition.

And now, I'll turn it back to Sara for a minute.

Sara Jensen: Thanks, Liz. So now that we've defined some key terms, we're going to give you an overview of the floodplain requirements for multifamily and ORCF FHA programs. As a reminder, please submit questions through the Q&A panel, and we'll follow up in writing after today's webinar.

So the first requirement, HUD's floodplain regulations require notification of floodplain hazards. This requirement applies to all projects in the 100-year floodplain, and for ORCF projects it applies to projects in the 500-year floodplain. The requirement applies to the property as a whole, not just the building. And Map and ORCF program guidance requires that this be done via new and renewal leases.

And, Liz, you want to take us through the next requirements?

Liz Zepeda: All right. Sorry for the delay there.

So our next, we'll talk about HUD assistance in the 100-year floodplain. HUD assistance can potentially be used for just about any type of project in the 100-year floodplain as long as HUD completes the eight-step process and finds that there are no practicable alternatives.

However, since we can insure projects in these areas, we get to spend a lot of time asking whether we should. Hopefully, in most cases we do find another safer alternative because in most cases this is not going to be a good place to put housing. FHA strongly discourages any new construction and substantial improvement projects in the 100-year floodplain, and they'll also look at anything new to HUD's portfolio extremely carefully, whether it's new construction or not.

Since risks are somewhat lower in the 500-year floodplain, Part 55 does not require the eight-step process for a typical housing project in the 500-year floodplain. However, HUD must conduct the eight-step for critical actions in the 500-year as well as the 100-year floodplains to provide an additional margin of safety.

And, again, all ORCF and hospital projects, everything under the 232 and 242 programs, are critical actions.

Part 55 does allow new critical actions in the 500-year and 100-year floodplains, but we strongly discourage new construction and substantial rehab, again, of any critical action in any floodplain. There are also some extra requirements that apply to critical actions in the floodplain, including some additional elevation and mitigation measures, and we're going to cover those in the next slide.

But none of these rules apply to FHA multifamily projects. So they're not going to be required to complete the eight-step process in the 500-year floodplain. However, HUD will still carefully evaluate those risks and consider that potential hazard there.

So, as I said, Part 55 does have some specific requirements for critical actions in the floodplain, and ORCF has outlined more specifically how to comply with those requirements.

So first, we require the facility to have an early warning system in effect. ORCF requires that this system involves methods to monitor weather conditions and flooding alerts.

Second, Part 55 requires an emergency evacuation and relocation plan, and ORCF mandates this plan includes similar facilities that have agreed to serve as a temporary relocation site.

Third, the facility must identify evacuation routes out of the floodplain, including road maps and relocation sites that are mapped outside of the 500-year floodplain.

And, finally, all structures must be permanently marked with the past or estimated flood levels.

Under Part 55 there are three types of projects that are permitted in the floodway. However, only one of them applies to FHA-assisted projects, and that is projects that are exempt from Part 55 under Section 55.12(c). And we'll talk more about 55.12(c) and when FHA projects may be exempt under that section later on.

Beyond that limited exception, FHA cannot approve any projects with a floodway anywhere on the site.

Part 55 has some fairly complex rules for projects in the coast high hazard area, but we don't need to get into them today because, for our purposes today, this is a really easy one. FHA prohibits applications in the coastal high hazard area for any multifamily, ORCF, or hospital project.

And now, I'll pass it back to Sara.

Sara Jensen: Okay. Thanks. So as Liz noted earlier, LiMWAs, which are the Limit of Moderate Wave Action, are relatively new designations, and the MAP Guide, the ORCF Handbook, and Part 55 do not specifically mention this zone.

LiMWAs are directly adjacent to V Zones and have waves between 1.5 and 3 feet during storm events. So multifamily and ORCF are extremely concerned about proposed projects in this zone. The current policy is to conduct a thorough and conservative eight-step with rejection a likely outcome. In some cases, HUD may recommend rejection before conducting the eight-step.

The MAP Guide proposes more specific guidance regarding these zones as shown on this slide. And, essentially, they're the prohibition on new construction or sub-rehab, strong discouragement in most other cases, along with a requirement for coastal high hazard construction, and case-by-case consideration for currently insured projects that do not exceed level one repairs. So that is proposed language.

So here is an example. In addition to sites that have mapped floodplains on the site, the MAP Guide and the 232 Handbook require that integral offsite development like parking, ingress, and egress comply with HUD's floodplain management regulations.

The two programs also require that HUD consider offsite risks from flooding and may reject sites with unacceptable proximity to hazards. In this example, the only entrance to this development crosses the floodway, and this represents an unacceptable risk to residents.

Thinking back a slide to LiMWAs, I've seen recent applications where the property itself is elevated out of the LiMWA but is an island surrounded by flood zones with the only way in or out during a flood event through the LiMWA. These sites also represent unacceptable proximity to hazards.

So we have a second example of offsite -- to illustrate offsite risks from flooding. In this case the proposed project is marked in red. It was in -- 100 percent in the floodplain with the main ingress and egress in the floodway and the secondary road in a combination of 100-year and 500-year floodplain.

The floodway runs inches from the HUD collateral boundary and the buildings. Even without the floodway, this site has significant flood concerns and would need a thorough floodplain analysis. But here we also have a floodway that may be technically offsite, but when HUD evaluated the separation distance, site elevation, and nature of the hazard, we found no separation distance, flat topography, and multiple past flooding events that required boat rescue. This application was rejected.

So I want to talk a little more with a case study. Again, this is considering offsite hazards. So this project came to HUD in 2008 as a 221(d)(4), and you can see that the floodway is just outside the edge of the property line. In fact, if you look closely, you will note that the floodway actually crosses some improvements, and so wouldn't meet current Part 55 regulations. But HUD did endorse this loan in 2008 based on the current FIRM at the time, which was a 1983 map.

And, Liz, if you can go to the next slide, in -- you'll see in 2012 FEMA updated the FIRM, and the floodway line moved significantly, not only crossing onto the property but also crossing several buildings.

In 2014 HUD closed on a 223(a)(7), which is actually allowed because a 223(a)(7) is categorically excluded, not subject to the related laws and authorities, and therefore, does not require compliance with Part 55. A 223(a)(7) does require flood insurance.

In 2019 HUD received an application for a 223(f) with rehab, a project that is subject to Part 55, and had to reject the application because HUD cannot consider this type of mortgage insurance at this site due to the floodway.

So what are some key lessons from this case study? One is that HUD and applicants must always consult and consider preliminary, pending, and other FEMA maps. And, Liz, go ahead to the next slide, if you don't mind.

In fact, this is a regulatory requirement. For projects with offsite risks like this, we must take a step further and look into state and local data sources to understand future trends. Finally, HUD must consider topography and future risk from offsite hazards, including future risks to refinancing opportunities.

In this scenario, HUD can only consider a 223(a)(7) or a 223(f) with no repair beyond maintenance as defined in the CPD maintenance memo at this site. No rehabilitation at all is allowed here under FHA programs.

So, Liz, I'm going to turn it over to you to discuss how to map the floodplain.

Liz Zepeda: All right. Thanks. So as I said, we rely almost entirely on FEMA's Flood Insurance Rate Maps or FIRMs to determine whether projects are in the floodplain. FEMA also publishes Flood Insurance Studies which provide more precise information than you can get just from the maps, and they can also issue Letters of Map Revision, which are formal corrections to the floodplain maps.

FEMA requires that -- or sorry. Not FEMA. FHA requires that we look at the entire site, as well as any integral offsite development, such as ingress, egress, or parking. So when you pull up your FIRM, you want to delineate the entire insured property on your map. The eight-step may be required if any part of the site or any integral offsite elements are in the floodplain, not just looking just at structures.

In addition to the effective current products provided by FEMA, Part 55 and program guidance also require HUD to rely on any newer interim resources when those are available. So if FEMA has provided preliminary or pending maps or advisory base flood elevations that update the current FIRM, HUD must rely on that map even before they are officially final.

We will always rely on the newest available information unless it is less protective than the effective FIRM. We do sometimes see new maps that reduce the size of the floodplain. You can see this especially if there's something new like a levee, and in those cases we would continue to rely on the effective FIRM until the newer map is put in place.

FEMA's always working on updating their maps, especially in areas where there's been a major flood event or where maps are older. So it's important that we keep up with that most current data and always remember to check for that. So we always need to consult both the current FIRM and look for any newer information that FEMA has provided.

Information on defining the best available information for purposes of floodplain maps is found in 55.2(b)(1), which is the definition of coastal high hazard area. It's not exactly intuitive, but it's helpful to have that citation in mind because it a very important piece of information that's kind of hidden in that coastal high hazard area definition.

As we kind of covered earlier, there are some areas that don't have FEMA maps at all. Where there are no FEMA maps available, HUD has to draw its own conclusions about whether the project site is in a floodplain map using whatever information we have.

So in this situation there are a variety of other data sources that can help us determine the flood risk, including local, state, tribal, and other federal resources. If this does come up, HUD will require information from any and all of these data sources to determine whether the site is acceptably safe.

In some cases, if you want a very clear picture of the flood risk, if that becomes necessary, it might be necessary and appropriate to hire a licensed engineer to conduct a study of that area. If the only FEMA resource is a preliminary map, we'll rely on that.

So just a quick review of the various categories of floodplain and how they appear on maps before we start getting into the maps. Keep in mind that for a variety of reasons there can be significant flood risk even in the unshaded Zone X, C, and D. So HUD will still closely evaluate any of these sites -- any of these flood designations if they're in close proximity to a floodplain or there's other reason to take a careful look.

So we've got the 100-year floodplain and coastal high hazard area, Zones A and V, which will generally appear on newer maps in this aqua and older maps in gray. Floodway, Zone AE and hatched. 500-year are orange or Zone X shaded. And then anything else, you're not in a floodplain or undetermined will be designated as zone C, X unshaded, or D, and they will not be colored in.

Okay. This is FEMA's map service center. If you enter in a street address or a location in the search function, it now goes directly to that site with a preview of the flood risk that looks like this right from that main page. You might have to have a little patience. Sometimes this preview can take a little time to load, but it is huge improvement over the old system. Pretty neat if you're into maps.

When you have the site found on this preview, you'll mark your site with this little red flag and press this button up here, print map FIRMette, and now, FEMA just generates a map that you can print or save for you. And that looks like this.

So the map service center makes this for you now based on just marking the site. It's way easier than the old way of doing things, but you'll still need to mark the project site yourself like this. Make sure you're outlining the entire property limits so that we can see the full site and how it relates to the floodplain.

So in this example we're looking at a bloc of houses on the Rockaway Peninsula. In the current effective map, which is dated September 5th, 2007, the entire bloc is outside of the floodplain. But we can see that it's right on the border of a coastal A zone and that V Zone so that there's the coastal AE right here and a V Zone down here. The delineation is right there. So it's very, very close to our site.

We can also see the 100-year and 500-year floodplains sneaking around from the other side of the peninsula coming from the north as well. So based on this map, a project located entirely in this bloc would not technically trigger Part 55 compliance, but because of the close proximity of the 100-year and coastal high hazard are, HUD would really want to carefully evaluate the risks at this site and make sure that there is an ingress or egress that's outside of the floodplain.

We can't tell from looking at this. We'd need to zoom out a little bit, but that's definitely raising a red flag for me just based on this little map. But this map is back from 2007. So going to check for some newer maps.

To do that you'll go back to this main page where we searched for the site and this time press show all products up in the upper right here. And we have one pending project when we go to the show all projects. This is -- this could just be a LOMA that affects a specific site. Should definitely take a look in case it's important, but the likelihood that it will affect our site is relatively low. But here are 122 preliminary FIRM panels.

So if we look at this, this is all of New York City. It's more panels to dig through than you might normally see in a smaller city or smaller area when they're remapped. But we've got quite a lot to dig through here. We'll start by looking at the index to find the preliminary map panel with our project site. That's generally going to be our first product. It will have IND in the project ID name.

So you'll download that with this button, and you'll get a map of the entire area. Use that to find the ID number for a preliminary panel that contains your site. So if we zoom in on our project site, which is down here, we can see the map panel and the map panel number. And we can see that this preliminary map is from -- or the index is from 2013.

So now, we'll go back here and find the panel with that ID number, which is over here. And when we download that, we'll get our preliminary map panel. It's not quite as easy to read, but we can see on the preliminary map almost the entire peninsula is now in that aqua colored 100-year floodplain, including our entire project site, which is located over here. It's now entirely in the 100-year floodplain, and it borders directly on the LiMWA. We can see that LiMWA line with the triangles pointing towards the coast.

So because the preliminary map is more protective than the current effective map, this project site has to comply with Part 55, including completing the eight-step process, even though the current effective map says it's outside the floodplain.

So for our purposes in Part 55, that current map is not the best available information, and we've got to rely on this preliminary map. It's not quite as easy as getting the current effective map, but it's manageable and required where these preliminary maps exist.

So of course here we would be very, very nervous about approving this site, since it's obviously in the 100-year, surrounded by the 100-year. There's no way there's an ingress and egress outside the floodplain, and the LiMWA is very, very close. So presumably, we're getting waves of just about one and a half feet in our project site.

So one more tool I'd like to show before we move on. This is the preliminary map comparison tool. It's another mapping resource provided by FEMA. If you're lucky enough that it's available in your project area, it makes this whole process much, much easier. Using this tool you'll mark your project site and press this execute button.

You have to be quite patient. It does take a few minutes, but eventually you get a really nice, clear report like this which shows the effective map on the left and the preliminary map on the right. So it did all that work we just went through for us in one quick minute. The report also includes some other useful information, including the panel numbers, dates, and base flood elevation. So you can see how that's changed.

Now, if your project is in a floodplain or if you find any part of the site or integral offsite development either on the effective FIRM or a preliminary pending or advisory flood map, you've got three options.

First, we could simply reject the project and move on. There are going to be cases where this will be required, like if the site is in a floodway or a coastal high hazard area. Otherwise, HUD strongly -- HUD will strongly encourage rejection of projects in a floodplain, but it might not be possible in some cases.

So, second, if you think that the map is incorrect, you could apply to FEMA for a map amendment. You've got -- whether it's a map amendment or LOMA -- that's where FEMA officially updates its maps. If you think the map has an error, you can submit an application, including any mapping and survey information, to FEMA. And if they agree, they will officially remove the site from the floodplain.

If the property is elevated out of the floodplain on fill or if you're proposing to do that, you can apply for a LOMR-F, a Letter of Map Revision based on fill. This is a process that's somewhat more involved, and a community floodplain official has to agree that the structures are reasonably safe from flooding. As we said, we kind of discourage this since adding fill to the floodplain can have major repercussions for the larger area.

And, third, you can continue on to complete the eight-step process. In some cases all of these three options are not going to be mutually exclusive. You can get a LOMA or a LOMR and still need to complete the eight-step process as well. So there might be a combination of factors here, but these are your basic options.

Okay. So not quite an hour in, but we're going to take our intermission here. So we'll give you five minutes to step away and do what you need to do, but we will be starting promptly in five minutes. So thank you.

Sara Jensen: Okay. Welcome back, everyone. Hope everyone had a nice break. One of the reasons we wanted to take a break is this is a very long webinar, and the second thing is we wanted to get a chance to look at questions and see if we lost anybody and if we needed to make any clarifications.

So one thing that we do need to clarify back on this case study example, I wanted to clarify that this example was for a multifamily FHA project. And the multifamily program has programmatically limited 223(a)(7) deals to projects that don't have any repairs above maintenance. So for multifamily my statement is correct that a 223(a)(7) is categorically excluded, not subject to the laws and authority.

However, that same programmatic determination was -- has not been made in the 232 program. So in the 232 program, if you are -- have a site like this and want to come in for a 223(a)(7), HUD would look at each project and see whether it was categorically excluded, not subject to, or if there are repairs above the maintenance threshold, this would require compliance with Part 55.

So I just wanted to make sure that that was clear.

Another question that we got, a few people asked about how to consider alternatives for FHA applications. We will be talking about that in the second half of our presentation.

And, Liz, was there anything you wanted to clarify?

Liz Zepeda: I just wanted to mention on maps, I know I went through that quickly and it was technical and there was a lot. We do have a quick I think three-, four-page document that provides all the links and step-by-step instructions on how to find these preliminary maps, how to get that comparison tool.

That is linked to on our floodplain management page on the HUD Exchange. I'll make sure that we include it when we post the webinar materials so that you all have access to that because I think it will be helpful.

So now, I'm going to jump through a bunch of slides. There's probably an easier way of doing this. And now, we'll get started on flood insurance.

Okay. So flood insurance kind of comes from the Flood Disaster Protection Act of 1973. Part 55 and flood insurance, these are two completely different authorities. They're interrelated but separate. So unlike Part 55, the Flood Disaster Protection Act and flood insurance requirements apply to all levels of review. So 223(a)(7)s that are CENST still have to get flood insurance when they're in a floodplain.

The Disaster Act requires, among other things, that all federal insurance and -- all federal insurance and refinance for buildings in the floodplain have to obtain and maintain flood insurance.

The National Flood Insurance Program, it's a partnership between FEMA, the state, and local governments. FEMA makes flood insurance available to a community if the local government adopts and enforces floodplain management rules. These rules have to meet certain standards -- minimum standards set by FEMA, but state and local governments can impose higher standards as well.

If the community does not participate in the program or doesn't conform to FEMA minimums, flood insurance is not available in that community. So sites within the floodplain are not eligible for federal assistance or insurance. So we can't approve any project site in the floodplain if the community is not participating in the National Flood Insurance Program.

So if a project is located in a special flood hazard area, which is Zones A and B, and involves any construction, rehabilitation, refinance, or acquisition of any kind of mobile home, building, or insurable personal property, as well as purchase of machinery and equipment that are insurable under the NFIP, then insurance is required on the building, any structures, as well as machinery, equipment, fixtures, and furnishings.

Flood insurance is not required on the land. So if your site is partially within a floodplain but the -- all the structures are -- and other insurable property is outside of the floodplain, then there's no flood insurance requirement.

For floodplain -- for flood insurance purposes, a structure is a walled and roofed building. There need to be at least a couple walls and a roof. So this does include a gas or liquid storage tank if it's principally above ground and has both walls and roof, as well as manufactured homes. We use the term structure and building interchangeably within the National Flood Insurance Program, but they're always going to have to kind of meet that standard.

And now, turn it over to Sara to talk about program-specific requirements.

Sara Jensen: Thanks. So this first slide covers existing flood insurance requirements for multifamily FHA loans. Note that the flood insurance requirement applies during construction and must last for the life of the loan. The amount of insurance is tied to the Flood Disaster Protection Act requirements.

The next slide is -- discusses two -- well, there are two proposed changes to the flood insurance requirements in the upcoming MAP Guide. The first, which is on this slide, is a change in Chapter 3 and has to do with the amount of coverage required. The proposed requirement may go beyond the FEMA statutory minimum and must be either the maximum amount of coverage available or the replacement cost of the bottom two stories above grade, whichever is greater.

The second change on the next slide is a proposed change in Chapter 9 and has to do with when flood insurance is required. So the proposed language adds a flood insurance requirement when a project is in the special flood hazard area on a preliminary form -- FIRM or advisory base flood elevation map.

The MAP then also adds discretion to multifamily regional production directors to require flood insurance in the following situations, as you see here. This change was requested from the multifamily field based on experiences with flooding on sites outside of special flood hazard areas. Liz discussed that earlier today.

So moving on to the next slide, now we're back to existing requirements and this time for ORCF projects. You can see the bullets here, and I'd like you to note that the current policy for ORCF

already allows HUD or the lender to require flood insurance outside of the special flood hazard area if an area is subject to flooding or within close proximity to a special flood hazard area.

Okay. Next slide, Liz.

ORCF -- again, this is existing requirements -- requires insurance to cover 100 percent replacement cost of improvements plus business income. And the details are discussed here and of course in the guidance. This can be achieved by either a standalone policy or a National Flood Insurance policy plus an Excess Flood or Difference in Condition Insurance policy. Okay.

Liz Zepeda: You're done, Sara; right? Sorry.

Sara Jensen: Yeah.

Liz Zepeda: Okay. Great. So this slide gets into, just to clarify, recap the differences between Part 55 and flood insurance requirements.

Part 55 implements Executive Order 11988 and 990. This is a HUD-specific framework to avoid impacts and risks associated with having our projects in a floodplain, and it does not apply to CENST projects like 223(a)(7)s generally, whereas the National Flood Insurance Program implements the Flood Disaster Protection Act and HUD does not set the rules here.

FEMA, the state, and the local government set these flood insurance standards, and we just comply with them. And these apply to all levels of review, including 223(a)(7)s and CENST 223(f)s. I should say the program does set some additional flood insurance requirements as well, but the basics come from outside from -- of HUD and then within these program guidance that Sara went through. Sorry.

Okay. So before we get into how to conduct the eight-step, and I promise we will get there eventually, our last thing is to go over how to determine if the eight-step process is required or whether only some or none of the steps are required.

So there are four types of exceptions from the eight-step process. In this webinar we're only going to discuss the exceptions that could apply to FHA multifamily and ORCF projects. So that's not quite all of them.

The first is Section 55.12(a) which lists activities that are only required to complete five of the eight steps. This is the modified five-step process. There are two situations where FHA multifamily and ORCF projects would only be required to complete the five-step process, and Sara is going to go over those in a few minutes.

Section 55.12(b) lists activities that are not required to complete the eight-step, but they do have to comply with all the other requirements in Part 55. There are no FHA multifamily or ORCF projects that would fall under any of the exceptions in 55.12(b). So we're not going to cover that subsection in this webinar. For our purposes of today, we can just ignore this one, as you should when you're evaluating projects for these programs.

55.12(c) lists activities that are exempt from Part 55 altogether. That means these activities are permitted in the floodway and in the coastal high hazard area. In many cases you don't even have to map. So these are -- you can ignore Part 55 as a whole.

So when you're applying these exceptions, the best way to check for your project is to work backwards. If all the exception -- or all the activities in your proposed project are listed in 55.12(c), then no compliance is required at all, and you can move on without any -- anything else floodplain-wise.

Normally, we'd check 55.12(b) next, but we know that that one does not apply. So we'll move on to 55.12(a), and if all of your activities are listed there, then you'll only need to do the five-step process.

There are three exceptions within 55.12(c) that could potentially apply to FHA projects. The first is projects that are CENST. So those projects that all physical activity is limited to maintenance and the project is already in HUD's portfolio, those do not have to do any further compliance with Part 55, as Sara was discussing.

The other two are certain projects with a LOMA, LOMR CLOMA, CLOMR, and projects where floodplains and wetlands are incidental. We'll discuss all of that over the next few slides. So if you didn't understand anything I just said, don't worry. We'll cover it.

And then, lastly, Section 55.28 has a modified three-step process for certain projects that impact wetlands but not floodplains. We're not going to dwell on that one today since it doesn't affect projects in the floodplain.

So the incidental floodplain exception, this applies where only a small portion of the site contains a floodplain or wetland and that small portion does not contain any structures or improvements, the project will not have an adverse effect on any wetland, and a permanent covenant is placed on the site to permanently protect the floodplain or wetland from any future development.

We get a lot of questions about this one. So we're going to go into some detail over the next few slides about when this does and does not apply.

So, first, talk about that first requirement, that the portion of the site in a floodplain or wetland does not contain any structures or improvements. That includes structures, which as we said, walls and roof, as well as roads, sidewalks, parking lots, permanent recreational areas with impervious surfaces, any manmade structures, or impervious surfaces other than minimal landscaping, as well as fill.

So if there are any plans to bring fill into the site to elevate a portion above the floodplain, the incidental floodplain exception does not apply. That means you can't get around the floodway prohibition by elevating your site outside of the floodplain. It might make your site a little safer, but it could be really detrimental to the community at large and the surrounding area. So that's something that we would definitely avoid.

Essentially, the short version is, if there's anything manmade, whether new or existing, in the floodplain or wetland beyond limited vegetative landscaping, this exception cannot apply.

So our next requirement is that the incidental -- is that a covenant be placed on the portion of the site in a floodplain or wetland that permanently preserves the entire floodplain or wetland from any future development. Permanent is literal here. It has to run with the land. It can't end at the end of the mortgage or in 99 years. Permanent.

It also has to be in place before HUD approves the project. We have a model covenant on the HUD Exchange that we recommend using to make sure the restriction meets our standards. So that would be the easiest way to go.

It can be really hard to describe in words when this exception does not apply. I find illustrations are very helpful. So we're going to go through a few examples to illustrate it.

This is an illustration of a project where the incidental floodplain exception might apply. We've got our project boundaries. This is the insured property, a property applying for HUD insurance. We've got a structure over here. The structure here is outside of the floodplain in that minimal flood hazard area, but we have floodway, 100-year floodplain, and 500-year floodplain here on the other side of the site.

We don't have a wetland map. We'd also have to confirm that there is no wetland on the site. If there is anything -- if there is a wetland on the site, that would complicate matters, but we'll assume there's no wetlands here. But it looks like this might apply.

We would need to make sure that there aren't any improvements down here. There can't be any roads or parking lots or impervious surfaces. You'd need to get that permanent covenant to protect this from any future development and need to make sure and document that there's adequate drainage in place, if there are any wetlands. But this might be a contender for the incidental floodplain exception.

Now, this is a case where the incidental floodplain exception does not apply. Even though the floodway is only on a portion of the site, the exception only applies if the entire floodplain is incidental. So here the floodplain is clearly not incidental. Our structure is within the 100-year floodplain. So we have to reject this site. There's really nothing HUD can do to approve this project.

Here's another one where the incidental floodplain exception might apply here because there is no floodway on site. We actually have two options. First, we could apply the incidental floodplain exception. We can confirm that all the criteria apply, including getting a permanent covenant to protect it from any future development.

Alternatively, you could just do the eight-step process. Remember we can only approve projects with onsite floodways if an exception in 55.12(c) excepts the entire project from Part 55. But if there isn't a floodway -- in this example there's only 100-year and 500-year floodplain onsite -- then 55.12(c) just saves you the trouble of actually doing the eight-step process. So that would be

an option to avoid -- say if you wanted to avoid getting a covenant, you could do the eight-step as well.

Here we're going back to that first example where it looked like the incidental exception may have applied, but now there's a parking lot in the floodplain. Because that parking lot is an improvement in the floodplain, the incidental floodplain exception cannot apply because it's taking up floodplain.

There may potentially be some alternatives that could allow HUD to approve the project, but we would only do so under very limited circumstances. At a minimum, HUD wouldn't consider any alternative options here while the property line includes the floodway.

But if the project is already in HUD's portfolio and we find a possibility that the site is sufficiently safe, we may try and find a workaround. HUD would still have to conduct an eight-step, evaluate the risks, including a close look at the topography, base flood elevation, history of flooding, and other risk factors before we'd consider any kind of alternative arrangements. But in general, this would be a project we'd have to reject.

We get a lot of questions about whether infrastructure is allowed in the floodplain when determining if the incidental floodplain exception applies. We understand that infrastructure does tend to wind up in the floodplain. That's the way gravity works. So we rely entirely on FEMA's maps for determining the limits of the floodplain horizontally, but vertically we define the floodplain as the space between ground or riverbed level and base flood elevation.

So for our purposes, anything underground or above base flood elevation up here is not within the floodplain for our purposes. So that means that any infrastructure that's entirely below ground isn't in the floodplain, for our definition. The incidental floodplain exception can still apply if there is an underground water or sewer line that passes under the floodplain.

Keep in mind we do not define wetlands the same way. So if there's also a wetland involved, that might complicate matters. The incidental exception may not apply. We'd have to discuss that separately, but yeah.

In this example of a project where maybe the incidental floodplain exception applies, the only thing in there is this -- is some underground infrastructure connecting your site to pipelines and sewer lines, then that is not going to be something that prevents the incidental floodplain exception from applying to the project.

And I will kick it back to Sara.

Sara Jensen: Thanks, Liz. That was a great overview of the incidental exceptions, which we get a lot of questions about. And I just want to reiterate then, in all the examples that Liz presented, even if those sites do meet the incidental exception, HUD would be looking closely at the hazard from those offsite flood risks. So that would be part of the analysis too.

So one other type of project that can be -- that is listed at 55.12 for a full exemption from Part 55 are sites without a wetland for which there is a final or conditional Letter of Map Amendment or

Letter of Map Revision that removes the entire site from the floodplain. This exemption would not apply if only the buildings are elevated and the rest of the site is still in a floodplain.

I would like to stress that HUD does not encourage projects to remove the entire site from the floodplain. This is not a good use of resources, and it's not good floodplain management policy. So if your project does not meet these exceptions, perhaps the buildings are elevated but the parking lot is not or the grounds are not, HUD can conduct an eight-step analysis at most sites, unless there's a floodway.

So if you don't meet this exemption, HUD can still consider the project and see if there's no practicable alternative.

So I do also want to mention that when -- for this type of project or any other project, when you go through the eight-step, HUD may require a LOMA or a LOMR for buildings or improvements as part of that eight-step process. And Liz is going to talk about that a little bit more when she goes through the eight-step.

You'll notice that the regulation mentions final letters and also conditional letters. HUD can issue a firm commitment based on the conditional letter from FEMA. We must have the conditional letter in hand, and the firm approval will be subject to the requirements and conditions in that conditional letter. And HUD cannot issue a final endorsement without getting that final letter from FEMA.

Okay. That's the end of our discussion of 55.12, and now, I'm going to talk a little bit about 55 -- sorry -- 55.12(c), and now, I'm going to talk a little bit about 55.12(a), which, as Liz mentioned, allows a modified five-step analysis for certain types of projects.

The five-step skips the two public notices and the analysis of alternatives. So there are two types of FHA projects that can use the modified five-step. I'm going to talk about them in a little bit of detail but with the caveat that you must always check the reg to look for specific requirements when you're applying these exemptions.

So the first one, Liz, if you'll go to the next slide, is for purchase or refinance of existing projects, as long as the community is in good standing under the National Flood Insurance Program. So if that is the case, you can do the modified five-step for purchase or refinance.

The next type of FHA project is rehab of existing projects, as long as the community is in good standing and as long as the number of units is not increased more than 20 percent, the action does not involve a conversion from non-residential to residential, and the action does not meet the threshold for substantial improvements that Liz talked about earlier today under the floodplain regulation, and, finally, that the footprint of the structure and the paved areas is not significantly expanded.

So rehab of existing may fit here, or it may not. And you have to look case by case whether the five-step is appropriate or whether we would have to do the eight-step.

Oh, and here we are. So Liz is going to talk through the eight steps.

Liz Zepeda: Okay. We made it to our last section, how to actually conduct the eight-step process.

So the purpose of the eight-step is to be a thorough decision-making process in which we take a hard look at the site and possible alternatives. We want to identify options to minimize the risks and impacts and incorporate any and all practicable measures to preserve the natural and beneficial values of floodplains and wetlands.

There are some very clearly defined responsibilities that we need to keep in mind here. The eight-step process itself must be completed by HUD. HUD is the party that's ultimately responsible for complying with Part 55 and making all of these decisions, and this is a decision-making process. So HUD has to be doing the process.

We're also responsible for monitoring projects after they are approved to ensure that any mitigation measures are actually carried out. Any other party in the process, applicants, third parties, can and should supply HUD with any information we need to make those decisions and complete the eight-step process. But these parties cannot actually make the decisions in the process themselves. The applicant is also responsible for publication costs and implementing any required mitigation.

So before we get into the details, this is a quick overview of the eight steps. First, determine whether the proposed action is located in a floodplain or wetland. Then publish the early public notice for 15 days, evaluate practicable alternatives, identify potential impacts, minimize adverse impacts and preserve beneficial values, reevaluate whether the proposed action is practicable, publish your final public notice for seven days, and then implement the proposed action along with any mitigation measures.

So you want to expect this to take 30 days at the very, very least and potentially longer, depending on how long it takes to get each of these steps done.

We're not covering wetlands in any detail in this webinar, but I do want to spend just a couple minutes reviewing when the eight-step process is required for wetlands. The short version is that the eight-step is required for projects that propose any new construction in a wetland. I want to emphasize that that's actually a lot broader than it might sound.

New construction is defined in Part 55 as something broader than actually constructing a building. It also includes draining, dredging, channelizing, filling, diking, and pounding and as well as actual construction. So virtually any ground disturbance in a wetland is going to qualify as new construction.

We also have a broad definition of wetlands in Part 55. HUD defines wetlands as areas that are invaded with water frequently enough to support vegetative or aquatic life that requires saturated or seasonally saturated soil conditions. This can include swamps, marshes, bogs, as well as wet meadows, river overflows, mud flats, and natural ponds.

It's important to keep in mind that these include both jurisdictional wetlands that are subject to Section 404 of the Clean Water Act and isolated non-jurisdictional and constructed wetlands. So just because something does not meet the definition of a water of the United States and the Clean Water Act and that kind of ever-changing definition, if you follow the Clean Water Act, that does not mean it's not a wetland for purposes of Part 55. We rely on our definition in 55.2(b)(11).

However, our definition does not include any artificial retention or detention ponds unless they have the qualities of a wetland described here. So a manmade or artificial wetland might be protected, but it has to meet all of these standards within our definition of a wetland. Something that's just a detention pond that's otherwise not resembling a wetland would not fall under our definition.

ORCF also requires a statement to appear and a rider to the borrower lidilatory [ph] agreement whenever a wetland exists on a ORCF project site. This statement requires any -- that as long as the HUD mortgage is in place, the borrower cannot perform any construction on the property that will impact any area defined as a wetland under our definition or the Clean Water Act without first obtaining our consent and any applicable federal, state, or local permit. So that's a continuing obligation.

And I'm sorry. I misread this. They are applying either the Clean Water Act definition or the U.S. Fish and Wildlife Service definition, but that's very similar to ours.

Okay. So step one is mapping, which we already covered. But just to quickly review, for floodplains that means checking FEMA maps, including any preliminary, pending, or advisory maps.

For wetlands it's a little different. You'll start by referring to the National Wetlands Inventory, which is a mapping resource provided by Fish and Wildlife Service. But you may need to consult some other sources as well, including hiring a professional to conduct a wetlands delineation in some cases. In all cases you will need maps with the project site covers -- or marked.

What's next? If you don't have any floodplains or wetlands, obviously, you can stop here. If an exception applies, as discussed in that last section, you can apply that, either only do the sidestep or not do anything at all if 55.12(c) applies. Finally, if you have floodplains or wetlands anywhere on the site or in an integral offsite development or just nearby in a way that concerns us, continue on to step two.

Step two is to notify the public that HUD is considering a project with potential impacts to floodplains and/or wetlands and give them an opportunity to comment. This has to be published in a local printed news medium. I know we're really behind the times. Unfortunately, we need a reg change to allow online posting, and we're not there yet. So that does need to be published and also sent to known interested parties.

And this notice will include the project description and location, the size and value of the wetlands and floodplains affected, and contact information of the person ultimately responsible for approving the project so that the public can send them their comments.

So that's a lot of information. We have a template for these notices on the HUD Exchange. Please use that template so you don't forget anything because happens all the time that people have to republish because they left out a key piece of information from these notices.

If the affected community is largely non-English speaking, the notice must be available in any other key languages as well. The comment period is 15 days long. It can be combined with other HUD notices or any other notices, if you have any to publish at this point. And again, the roles are key here.

The applicant cannot publish either this notice or the final notice without HUD's review. HUD is responsible for the actual text and content of these notices. So if they're published without HUD's knowledge, they will need to be republished, and the notice has to be clear that HUD is doing the decision-making. It can't credit the consultant or applicant with doing any of the decision-making or any of the considering. That's up to HUD.

So three is to consider alternatives. We know that in most FHA projects there is not an option for an alternative site or an alternative project type within the site. So your options here are limited. For FHA HUD focuses on the no action alternative where the location is simply approved or rejected for HUD projects. So we're not looking at locating the project a mile away. We're only looking at whether we can approve the project or reject the project. So that's your alternative is rejection.

Step four is to identify all the potential direct and indirect impacts of locating your project in a floodplain or wetland. So going to look at this broadly in terms of the impacts to lives and property as well as the broader impacts on floodplains, wetlands, and the community.

You don't want to just limit your thinking to the concentrated short-term impacts but also the more disbursed and long-term impacts. So, for example, if your project will encourage more development within the area, within specifically floodplains and wetlands in the area, that's going to have a much larger impact than a project that probably won't have any cumulative impacts.

So if you're developing in a largely undeveloped area and you would anticipate more projects following suit and that area is heavily wetlands or floodplains, that's going to be a cumulative impact that we'll need to discuss. Whereas if it's urban infill, this is probably not going to have more disbursed or long-term impacts in most cases. It's possible.

Another aspect to consider is how the flood or wetlands risk is affected by other aspects of your environmental review. So, for example, if there's a superfund site in the same floodplain as your project, a flood is greatly going to increase the likelihood that your project site will be contaminated by floodwaters. So that amplifies your flood risk and your contamination risk and just can really feed off of each other if your site is located near a contaminated area and they're both within the floodplain.

All right. I'm not going to spend too much time on this slide. It outlines the instructions that are within the regulation Section 55.20(d). 55.20, which lists each step of the eight-step and how to

complete it, is another area where it's really valuable and critical to read the regulations. 55.20 has a lot of details and suggestions on each of the eight steps. So I urge you to take a look there.

And in step four, 55.20(d) breaks down the impacts to consider into flood impacts and wetlands impacts at this kind of granular level of what you should be looking at. When you conduct the eight-step, really make sure you're following along with 55.20 for guidance on your analysis at each step.

One more potential project risk I'd like to quickly discuss is sunny day flooding, also known as high tide flooding and nuisance flooding. This is flooding caused by regular events like high tide or regular rain that repeatedly inundates roads, parking lots, buildings, and infrastructure.

In many areas, especially cities, we're seeing this type of flooding event occurring regularly, and that can cause severe long-term impacts like deteriorating infrastructure, salt water damage to farmlands, and constant disruptions to everyday transportation. And these long-term effects and costs can be higher than extreme weather events that occur less often.

Much like the LiMWA, we don't have any formal requirements in Part 55 or in the programs to consider sunny day flooding, but it's something I'd like you to keep in mind when you're considering a project.

A lot of these areas that flood regularly are mapped in the 100-year floodplain. So it's a good reminder that the risk of flooding on a site labeled as the 100-year floodplain, it might be 1 percent, or it might be an area that regularly floods multiple times each year. So don't underestimate those risks.

NOAA tracks these types of events, the National Oceanic and Atmospheric Administration. So you can check the data on your project area at this site linked to here. So here in Baltimore where I am located, NOAA reported 12 flood days in 2018. Sara only had two in Seattle that year. So maybe you're going to be less concerned about this kind of flooding in Seattle than in Baltimore where it's definitely something we're aware of as an everyday problem.

But NOAA also provides some projections as well that are really helpful to take a look at here. By 2050 NOAA expects Seattle to average 9 to 20 flood days a year and Baltimore to have between 50 and 155. So if HUD is considering a 30-year mortgage, that's something we'd want to take extremely seriously.

Step five is to design or modify your proposed action to minimize the potential adverse impacts you identified in step four. You want to focus on minimizing harm, restoring the natural and beneficial values of floodplains and wetlands, and preventing modifications -- preventing any modifications to the floodplain and wetland to keep them in their natural state.

Again, 55.20 provides a lot of options that you may want to consider when designing mitigation for a project. The options are going to depend on your type of project and your flexibility to make changes. Of course, redesigning your project to avoid any construction in a floodplain or wetland

will be ideal. Where that isn't possible, changing the plan to use permeable surfaces, green roofs, landscaping, minimizing fill are all options that can help mitigate the damage.

You should always be making sure that there are appropriate stormwater management infrastructure in place. And if you can, get permanent covenants or easements in place that will protect any onsite floodplains and wetlands from future development. That's great as well.

I'm going to spend a couple extra minutes on the last two options, elevation, floodproofing, and compensatory mitigation. I guess that's three.

Elevation. Where you can't avoid construction in a floodplain, elevation is an invaluable tool to mitigate the risk. As we discussed in the flood insurance section, all HUD projects must comply with the National Flood Insurance Program and state and local floodplain ordinances. Those rules will require any new construction and substantial improvement projects to elevate to at least the base flood elevation, which is the height we'd expect waters to rise during a 100-year flood event.

For bigger buildings you probably aren't going to raise the actual structure as part of the substantial improvement, but there are other options. For example, if your first floor has very high ceilings, you could just raise the floor in some cases. This is an easy solution.

For tall buildings you might be able to remove all the residential units from the first floor to keep that safer, but there are a lot of experts who can help with your elevation options. And of course with new construction it's going to be -- should be fairly easy to design it from the outset with elevation.

Now, freeboard. Even better than elevating just to base flood elevation is adding freeboard. It's kind of a weird term that has something to do with boats, but it indicates an additional margin of safety above the base flood elevation. So to translate, one foot of freeboard means that a building is elevated to the base flood elevation plus one foot.

So FHA multifamily requires all new construction projects to include one foot of freeboard, and the proposed MAP updates will increase that to two feet of freeboard for new residential construction. So with those proposed MAP updates, when they're in place, any new construction for multifamily FHA projects will have to be constructed to the base flood elevation plus two feet. So in our Rockaway example, I think that would be 12 feet, for example.

There are a lot of benefits to including freeboard in any project where elevation is an option. Freeboard prepares a structure for any errors or changes to the map without significantly increasing costs. If you're already elevating a building, adding another two feet is a real marginal additional cost.

The resulting savings can add up really fast just from flood insurance premiums alone, even if you get lucky and there isn't an actual flood where of course your elevation is going to be really helpful. It's also popular and well understood. As of 2015, which is pretty old at this point, 22 states and almost 600 localities require at least one foot of freeboard, and all 62 percent of the U.S. population lives in an area with freeboard requirements or did in 2015.

So you want to make sure that you're complying with those requirements. A lot of cities and counties actually require three feet of freeboard for new construction. So in those areas the projects will be required to elevate even higher than the MAP Guide proposed standards. So make sure you're keeping an awareness of those.

Floodproofing is an option for non-residential and mixed-use structures. For these kind of buildings, you might be able to improve the structure itself so that it can survive a flood without damage without elevating the structure. This is not available to critical actions. So this is a multifamily option only, but for FHA multifamily the MAP Guide allows floodproofing as an alternative to elevation where structures are floodproofed to base flood elevation plus one foot and no residential units are below base flood elevation.

So these pictures just show a project site [inaudible] to two [inaudible] very large multifamily residential building that was damaged. I think it was a substantial damage during Sandy, and they weren't of course able to floodproof a building like this -- elevate it. So they floodproofed it.

You can see a lot of the measures they did. They're moving these -- their air conditioning units up so the windows aren't open. They actually boarded the lower parts of the windows up so these lowest windows are smaller. And then during a flood they put in these blocs to prevent floodwaters from getting into the building.

There's a lot of other things you can't see here. They no longer have any residential units on the first floor. There's an elevated generator outside the site, but this is a possibility that is available to keep a site safer.

This is a repeat of an earlier slide. So just a quick review that four critical actions we do have some specific mitigation measures that are required. So make sure you're complying with those ORCF standards and the rules in Part 55. One of those requirements is that all new construction be elevated to at least the base flood elevation.

Quickly, back on wetlands I think for the last time, where there are no practicable alternatives to modifying or destroying more than one acre of wetlands, Part 55 recommends compensatory mitigation. That's establishing, restoring, or preserving another wetland to offset the impacts from your project. The best outcome is always going to be avoid adversely impacting a wetland at all, but this can be a good option when damage is unavoidable.

Okay. I am aware of the time. So I'll keep moving.

Moving on to step six, this is when you'll look back at the risks and impacts identified in step four, the mitigation measures identified in step five, and the alternatives listed in step three, and then based on the totality of that information, evaluate whether there are practicable alternatives to occupying, modifying, or destroying floodplains and wetlands.

If the risk is unacceptable, then HUD is going to go with that no action alternative and reject the project. At this step HUD will consider all the factors that could impact our decision, including

financial costs and benefits. Floodplains do tend to be cheap lands because they're not desirable, but the long-term cost of flood insurance, mitigation, and future losses are going to add up and can easily count out those savings in the long term. So it's critical that we keep in mind all the costs and benefits, not just those short-term savings.

If HUD determines that there are no practicable alternatives to proceeding with the project, step seven is to publish our final public notice with a seven-day comment period. In that notice we'll inform the public about all the alternatives considered, which in this case I guess is just the no action alternative, but any mitigation options considered, as well as the planned mitigation measures, and justify why the project must be located where it is. And again, you can combine this notice with other notices.

Finally, step eight is to carry out the project. In addition to completing the eight-step process, HUD and the applicant have a continuing responsibility to ensure that mitigation measures are actually carried out. And it's important that the environmental review record include documentation of this entire process.

This is not an exercise that's completed in your head. It's something that you need to put in writing. The documentation of your eight-step should not just be copies of the notices. There should be documentation of each step. We have a sample eight-step on the HUD Exchange that you can use for inspiration.

And then remember that these decisions must be made by HUD. The eight-step analysis isn't valid if it says, "This consultant has determined that there are no practicable alternatives." It needs to be HUD that's making that kind of determination.

Okay. And turn it back to Sara. Sorry about the time.

Sara Jensen: All right. Thanks. So we're just going to wrap up. We're at the end. Thanks, everyone, for sticking with us. And we just want to reiterate a couple of key ideas when -- for multifamily and ORCF FHA projects.

So the first is that the programs prohibit nearly all HUD assistance in floodways and coastal high hazard areas. The next is that the eight-step decision-making process is required for most projects that are in the 100-year floodplain. It's required for critical actions in the 100- and 500-year floodplain, and it's required for new construction in a wetland.

There are some provisions to modify or skip the eight-step in certain cases that meet one of the exceptions at 55.12, which we've talked about today.

On the next slide, some more FHA-specific highlights. These requirements apply to the site and integral offsite development. HUD must consider risks from offsite floodways and other flood hazards. We've given you some examples. And HUD will consider history or evidence of flooding, even if a project is not in a FEMA-designated floodplain. Again, all 232 and 242 projects are considered critical actions.

So on the next slide, the policy for the two programs is to strongly discourage new construction and substantial rehab in the 100-year floodplain and also in the 500-year floodplain for ORCF and of course in a wetland.

The programs also discourage existing projects when the lowest floor, life support facilities, egress, or ingress are below the 100-year flood elevation. And as Liz just discussed, new construction projects that successfully pass an eight- or five-step analysis have elevation requirements.

So we'll end today with some resources. Here are some links for more information about floodplain management and flood insurance. These are on HUD's exchange environmental website, which has a ton of information. There's also a link here for the Office of Housing page, which has program-specific environmental guidance and also HEROS Guides for housing programs. So you can check out that.

For more on wetlands, the next slide, here's resources on wetlands. So we've linked here to the webinar that Liz just did in March, and HUD also has a series of online training modules known as WISER and the Water Elements module covers wetlands. And there's a link right here.

So when -- as you're working on your current and upcoming projects, please reach out to your program area contacts. For multifamily that will be the office processing your application. For ORCF that will be reaching out to Lean Thinking. And those housing contacts will loop in field and regional environmental offices -- officers for guidance, but your first step is your housing contact.

And one last thing before we go. So here's a list of upcoming national environmental webinars. You can see that three of them are designed specifically for this audience, for an FHA audience. In July we'll be conducting Section 106 training for FHA partners. The first bullet there is Section 106 training on programmatic agreements, which is not so much for this audience, but the second bullet is specifically for this audience. So please join us then.

In August we'll be conducting noise training for FHA partners, and then in the fall we'll be conducting HEROS training for FHA partners. That will be for multifamily and ORCF.

So thank you so much, everyone. Please submit your questions in the Q&A box, and we hope to see you at future webinars.

Michelle Grainger: Thank you, Sara. We will be holding for five minutes before we actually sign off just to ensure that we allow everyone a chance to submit questions. At the five-minute mark we'll be closing the webinar. Thank you so much.

Okay. I see we're still receiving some questions. We have about two minutes left before we end our webinar. So if you haven't yet sent your question, please feel free to do so now.

Okay. Well, thank you all for attending our webinar, and we will end our webinar right now. Thanks. Bye. (END)