

Q&A: Nonstructural Policy Clarification (PB 2016-01)

Planning Community of Practice Webinar

March 17, 2016

This March 17, 2016 webinar is part of a series of information-sharing webinars hosted by the U.S. Army Corps of Engineers Planning Community of Practice. In this webinar, Mr. Jeremy LaDart provides an overview of Planning Bulletin 2016-01 and discusses the changes in nonstructural policy and implementation at USACE with the help of Senior Policy Advisor, Maria Wegner. For more information on Planning training opportunities and options, visit the [Community of Planning Toolbox](#).

For more nonstructural floodproofing resources, please visit the [National Nonstructural Flood Proofing Committee's webpage](#), <http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/nfpc.aspx>

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Definitions

Please define "berm." Previously, "berms" have been defined as non-engineered levees.

In the past, that was the case, because we were looking at the definition as if we weren't going to significantly alter the water and where it wanted to go.

The planning bulletin clearly states that no permanent berms, flood walls, or other similar structures are going to be considered nonstructural. That's not about whether it's considered an engineered levee or not. It's not about whether it's actually impacts where the water is going to go.

I will highlight that there are a few potential measures that can be looked at as nonstructural. I looked at one yesterday from Shrewsbury. It was called a deployable flood wall. It was not permanent. It was basically the equivalent of sandbags, but it had a better use and it was much quicker to be implemented by the locals. Those are measures, on any given day can be taken down or put up.

Is a ringwall around one commercial structure considered nonstructural?

No. A ringwall, even around one structure is structural. It's not about size. It's not about how much water is moved. It's not about how many people it actually impacts. It's about a clear agency position that these structures are not going to be considered nonstructural anymore.

Policy Guidance

When do we expect to see implementation guidance for EO 13690?

The implementation guidance for EO 13690 ("Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input"), signed in 2015 to establish a Federal Flood Risk Management Standard and a process for stakeholder engagement, has to go through a public process. We are preparing a Federal Register Notice right now that will ask for public comment on the general structure of the guidance, its implementation and applicability to the Corps of Engineers.

After the Federal Register comment closes, we still need to write the implementation guidance in consideration of those comments, respond to the comments, and then put out the draft version internally and externally for comment.

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I think we had a very aggressive goal originally to have it done this fiscal year. I'm guessing it'll take a little bit longer than that. So until that new guidance is issued, we need to keep using the guidance for EO 11988 (Floodplain Management), and the existing regulation, [ER 1165-2-26](#).

Is there policy guidance about raising structures or building in the regulated floodway, or is only acquisition permitted? How does building structures like levees and floodwalls relate to “no building” restrictions in the regulated floodway?

Jeremy LaDart: I don't believe that there is a specific policy I can point you to right now, but as a matter of practice the Corps of Engineers is not going to recommend or fund elevating structures in the regulatory floodway.

I will say that, in the [Mill Creek study](#), there may have been some structures recommended for elevation that were really on the fringe of the floodway. So, again, that's a complicated question about what is defined at the regulatory floodway and to what extent.

It's FEMA's policy that if a sponsor or an area or an entity is going to continue to maintain being in the FEMA defined program, NFIP, you can't build in the floodway. NFIP guidance says “zero change to the hundred-year water surface elevation in the floodway.” One of the reasons we're not going to do it is it could force the sponsor and the non-compliance with NFIP.

If there is engineering documentation for raising a home and you clearly show that it meets NFIP requirements and we have done zero change to the flood plain, I believe that it would still be considered. But I can't say definitely whether we're going to build in the flood plain or not. It's very complex with the NFIP requirements and the locals have their own requirements on top of that.

Maria Wegner: You really put people at risk and first responders at risk by continuing to have people in that location. If you're going to make that case, it's going to be a heavy lift, not just from the compliance standpoint with the NFIP but just from thinking about a holistic flood risk management project.

Is there still potential to use flood insurance premiums in benefit calculations?

An economic guidance memorandum from six or seven years ago, it might even be longer, does allow for the inclusion of NFIP administrative cost savings. But it actually says - in the (Economic Guidance Memorandum) it gives you a number per policy that you say and it's very small. The short answer is yes, we do have an ability to use administrative costs as a benefit for the NFIP still as a legitimate NED benefit, but the long answer is that it's complicated and it's probably not going to give you a lot of benefits that you might expect. Also it's not actually the premiums that we can claim as benefits. It's administrative costs for implementing those.

You mentioned that for some mission areas, in justifying the process, the recreation benefit can be unlimited. For which mission areas does this apply?

It's for nonstructural, specifically. If you have a nonstructural project, recreation can be used for more than 50% of the justification of the overall project. If you have a shoreline project, for example, you can only use up to 50% of the benefits from recreation. It's a very special policy for nonstructural that has a lot of potential for projects including nonstructural elements.

I always like to highlight this one. It's a very little used policy, because we don't do a lot of alternative use of land anymore. But recreation for nonstructural is not limited for justification. Recreation can be used even over 50% of the benefits to get your project to a 1.0. So if you have a project that's like

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basically got a BCR of 0.4 or 0.45, you may be able to justify that whole project based on recreation. We can't do that in any other of our mission areas, even coastal shoreline is limited. So I would highly recommend if you haven't done so to look at the appendix E and the language on that, because it's a very powerful piece of policy.

Right now we're looking at it on a case-by-case basis. If you need some help with that, contact your chain through the economics branch and we can work through it on how much was appropriate for your area.

Eminent Domain

Are the requirements to use eminent domain or nonstructural plans voluntary?

For flood proofing and elevation, they are voluntary. And we'll have to address what we would consider participation rate to address the completeness and et cetera.

If you're going to do any kind of a buyout, the sponsor has to retain eminent domain. So for a buyout, we are not doing 100% voluntary buyouts anymore.

At what point in the planning process do we need to have assurances from the sponsor about property acquisition or screen out the alternative?

At the Tentatively Selected Plan (TSP) meeting, Mr. Brown is going to directly ask you and the sponsor if they're willing and able to use eminent domain if you have buyouts as part of the TSP.

With a draft report and then final report, you'll need a letter of intent from the sponsor saying they're willing and able.

If the federal plan includes eminent domain and the sponsor doesn't want to do eminent domain, would we be looking only at a locally preferred plan going forward from that?

Well, it depends. If the entire plan is a buyout and the sponsor is not going to be willing to do eminent domain, I don't think we would be going forward with a locally preferred plan. If a buyout is a piece of a much larger plan - for example, maybe the buyout's a quarter of the plan and the other three quarters are elevation in place or structural, then, yes, we may have a locally preferred plan. So that would be on a case-by-case basis.

Are eminent domain costs cost shared?

Yes, eminent domain costs can be cost shared because they are a Land Easements, Rights-Of-Way, Relocation, and Disposal areas (LERRD) cost. The cost share for nonstructural is fixed at 35%. So if eminent domain raises a non-Federal sponsor's total LERRD costs beyond the 35% threshold, it may not be directly cost shared, but it is attributable toward the cost share of the project.

Can you clarify if we can proceed if a sponsor wishes to make the eminent domain a federal action, perhaps to avoid bad publicity with their constituents?

I'm interpreting your question as the sponsor may not have the ability to do eminent domain and has asked us to do it on their behalf. I'm not 100% sure on this, but my understanding from talking to Counsel and Real Estate is that if we need to help execute eminent domain for a sponsor, I believe we can.

But if the sponsor is looking for us to be the "bad guy," it's not going to be very positively worked through the system. I think we would stand up *with* them to say eminent domain is right or is in the public good, et cetera., but we are unlikely to stand between them and the public. The sponsor is going

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to have to give us a letter of intent with the approved and appropriate language that's going to be required to go through Counsel and Real Estate in their letter of intent.

For buyouts, if WRDA language indicated voluntary participation, do we need eminent domain?

If you have a specifically authorized project that is specifically directed by Congress that voluntary would be okay, I would say we would have to consider that eminent domain might not be used. We would have to work with Counsel when writing the implementation guidance to determine whether or not it trumps the Uniform Relocation Act requirements of Public Law 91-646. That's a very specific question, if you have a specific example or if someone has asked you to do some legislative drafting service, I'd be happy to help.

Cost and Benefit Analysis

With respect to appropriate level of analysis it was mentioned that it could be done on a house-by-house (damage element) basis. Although incremental justification is incredibly important from an economics standpoint, is there any concern that this method may cause negative public perception due to the regressive nature of that type of federal spending?

Jeremy LaDart: Yes. There is always concern about negative public perception. And we have to work through that with our sponsors, local resource agencies and our public involvement. The question really becomes: If we're a risk management agency, how do we look at it? And there are multiple different ways to look at it. On the North Atlantic coast, we're seeing very densely, heavily populated areas. So when you start getting down to an area that's going to have these types of plans, you're really looking at a lot of folks in a very small footprint. So there is a concern there where we've seen other plans in coastal areas where it looks like a checkerboard and you might have one house here and another house a couple of miles down the road kind of thing. It's really a case-by-case basis.

Maria Wegner: It also really depends on what your evaluating and why. We don't want to leave isolated structures, for example. Maybe thinking about what reasonable groupings of homes or increments would be, would really help to make the case for the right level or detail in that analysis. And there are a whole host of problems associated with doing structure by structure, starting with you're using a generic damage curve. So the point of using a precise cost number to decide on the structure basis just doesn't even always make sense. And it especially doesn't make sense from a flood risk management perspective. I think the formulator and the economist need to come together and say, okay, what makes sense and let's make that case instead of letting the economics fully drive that formulation aspect.

If flood proofing and raising are allowed to be voluntary, what estimated participation rate will the agency consider to be a complete plan?

We don't have a threshold. I will tell you that there have been several ways to look at this. And it gets back to the incremental analysis. If you incrementally analyze every structure and every structure is justified, you don't have to really answer that question. If you look at it as Maria said on a risk-informed area and a dense population, I think Fire Island and Montauk Point did this in New York or doing it. They did a sensitivity analysis to say "what if?" And so as a reviewer, I wouldn't say "it has to be 70% or 80%," I would say "what if?" We would need to be able to clearly communicate to decision makers that, if there is a neighborhood with 100 elevations, 20 structures are not carrying the entire neighborhood. I think that's what it's trying to get to, not just checking a box.

Do we have a list of possible cost ranges (knowing that there will be some differences between regions and types of structures) for some non-structural methods, such as raising structures?

I would start with Randy Behm and the Nonstructural Flood Proof Committee if you need some specific

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help on looking at how to estimate costs. The NFPC can give support not just specifically for cost but can help with that technical guidance if your local PDT is needed.

New York has commented and said they use about \$200,000; New Orleans; the Southwest Coastal team developed a cost model. I believe that those teams worked through the ATR with the Cost DX. So, yes, there are some costing methods out there for various types of flood proofing.

Learning from Existing Projects

Are there any good example case studies of a nonstructural alternative that doesn't only propose blanket buyouts?

Yes, there are: Southwest Coastal Louisiana is not just proposing blanket buyouts. Shrewsbury, New Jersey is very good, they are proposing a deployable flood wall and structure flood proofing. Fire Island to Montauk Point that the New York District is doing, has got, I don't know, 4 or 5000 structures in the New York area that they're looking to elevate in place. I know the Mississippi Coastal Improvements Program looked at a lot of that with high hazard areas.

Again, nonstructural doesn't just have to mean that we buyout or elevate or flood proof. I've also seen a number of very well written ones that have good flood warning systems where the sponsor is stepping up. Mill Creek in Nashville, Tennessee was one that we just got through and signed. Des Plaines (LRC) has a very good one that kicked off a lot of the discussions on this.

What examples are rolling out that contain good information on Other Social Effects (OSE) accounting, especially life and safety?

I would say the one that we did the most work on life safety recently would have been the Dallas floodway and their study. They did a quantitative risk assessment to estimate life loss and consider how we might add or not add features to the project in order to buy down the risk to public safety. I thought they did a pretty good job of writing about it.

Some of the California studies, also took this approach – Natomas has a risk assessment, but I'm not sure it got into their report and we did one more for the Sutter Basin project.

The life loss estimating techniques are slowly coming into planning, and the model is undergoing certification, I think, this year. So I would expect that we would hopefully see more quantitative information. Also, Jason Needham and Brian Harper did a [webinar on risk assessment](#) last year. And that information is also available. I believe there is a consequence in HEC-FIA class as well that's taught through the PROSPECT curriculum that can be taken as well.