

TMAC

Technical Mapping Advisory Council Meeting

Virtual Public Meeting

Jan. 19–20 2021

TMAC Members

Doug Bellomo, Vice Chair

Nancy Blyler

Scott Giberson

David Guignet

Suzanne Jiwani

Carey Johnson

Carolyn Kousky

David Love

Robert Mason

Salomon Miranda

James Nadeau (Day 1 only)

John Paoli

Luis Rodriguez

Jonathan Smith

Jeff Sparrow, Chair

Joshua Stuckey (Day 2 only)

Michael Tischler (Day 1 only)

Government Attendees

John Ebersole, FEMA, Legal Advisor

Brian Koper, FEMA ADFO

Michael Nakagaki, FEMA, DFO

Sarah Abdelrahim, FEMA, ADFO

Support Staff

Henry Cauley, Team Deloitte

Alexis Richmond, Team Deloitte

Jen Marcy, Atkins Global

Molly Tuttle, AECOM

Phetmano Phannavong, Atkins Global

Ryan O’Conner, AECOM

Subject Matter Expert

Will Lehman, USACE

Purpose

The purpose of the virtual Technical Mapping Advisory Council Public Meeting was to: (1) receive updates from Subcommittees 1 and 2 on their progress towards completion of the 2020 TMAC Annual Report, (2) identify and vote on recommendations to be included in the 2020 TMAC Annual Report, and (3) remind members to submit nominations for the next TMAC Chair.

Welcome, Roll Call, and Administrative Items

Ms. Abdelrahim welcomed everyone to the first day of the virtual January 19-20th TMAC Public Meeting. Ms. Abdelrahim informed the TMAC that the purpose of this meeting was for the TMAC to review the progress towards completing the 2020 TMAC Annual Report and to vote on the recommendations that would be included within this report. Ms. Abdelrahim introduced the PM and PTS support staff, as well as the other FEMA attendees. Ms. Abdelrahim shared the agenda for the meeting with the TMAC and noted that a public comment period would be included each day per FACA requirements. Ms. Abdelrahim provided an overview on the use of Zoom for this meeting, including a reminder to use the raise hand function for any TMAC members that wish to speak. TMAC members should also use the Zoom chat box to inform the TMAC and DFO if they need to step away from the meeting momentarily.

Opening Remarks

Mr. Sparrow, TMAC Chair, motioned to open the meeting and Mr. Bellomo, TMAC Vice Chair, provided a second. Mr. Sparrow welcomed everyone to the TMAC Public Meeting and reiterated the purpose of the meeting today was to finalize the 2020 TMAC Annual Report. Mr. Sparrow noted that the latest draft of the 2020 TMAC Annual Report was shared with the TMAC yesterday. Mr. Sparrow thanked all the TMAC members for their work. The report has been reorganized since the previous TMAC meeting and Mr. Sparrow felt that the report is in a much better place today. Mr. Sparrow concluded that the report will be made official at the upcoming February TMAC Public Meeting, though the dates for that meeting have not yet been set.

Chapter 1: Background

Mr. Bellomo began by providing an overview of Chapter 1 of the 2020 TMAC Annual Report, which includes background information on the TMAC and Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12). The chapter also provides information on the TMAC members, TMAC responsibilities, subcommittee information, and 2020 Tasking Memo.

Mr. Carey Johnson added that the intent of the chapter was to be “high level” and lay out the three key concepts found throughout the report: National Flood Mapping Program, Binary Versus Graduated Risk, and Probabilistic Approach Versus Deterministic Approach. Mr. Salomon Miranda agreed with the overview provided by Mr. Bellomo and Mr. Johnson and requested that the order of the subcommittees be switched within the report.

Mr. Ryan O’Conner noted that there had been discussion to ensure the naming of the program was correct, National Flood Mapping Program, and to differentiate from the Future Flood Mapping Program, also sometimes referred to as Future of Flood Risk Data (FFRD). Mr. Johnson felt that because the future of flood risk data may not actually be a program, it may not be necessary to include FFRD. Mr. Bellomo agreed with Mr. Johnson on the importance of understanding these distinctions and of not being explicit about creating a new program. Mr. Robert Mason suggested adding a footnote that would provide additional clarity on these distinctions, while Mr. Luis Rodriguez added that this may have already been addressed in previous TMAC reports and should be verified.

Mr. Rodriguez asked for clarity on what TMAC is saying about transitioning to a new program. Mr. Johnson responded that it would be a stretch to recommend a new program but that the report does outline a new framework and new tools that can enable a transition to this new framework. The TMAC then reviewed the other two sections, Binary Versus Graduated Risk and Probabilistic Approach Versus Deterministic Approach and agreed that both sections were well written. Mr. Miranda suggested including language that mentions the full range of natural vulnerabilities to the probabilistic versus deterministic section and Mr. Mason and Mr. Bellomo agreed. Mr. Dave Guignet specifically congratulated Mr. Bellomo on the paragraph pertaining to best practices at the end of the section, noting it was very well done. Mr. Sparrow ended the discussion by thanking the authors for their work on Chapter 1.

Chapter 2: Stakeholder Engagement/Focus Groups

Mr. David Love began the discussion by providing an overview of the chapter and noting that the results from the stakeholder engagement work are included as an appendix within the report. The TMAC agreed that there would be value in finding a way to make the data more readily available, possibly including it on the TMAC website. Ms. Jen Marcy reiterated the overview provided by Mr. Love and described the various graphics that were developed that will be used to link other portions of the report to the stakeholder engagement findings. The themes for the three graphics are *insight*, *key findings*, and *quote*. Ms. Marcy then continued to provide additional information on the chapter, including on the key findings and stakeholder insights. Mr. Love ended the overview of the chapter by noting the last section reiterates the TMAC’s commitment to continue stakeholder engagement moving forward.

Mr. Bellomo encouraged the TMAC to review all four key findings contained within Chapter 2. Mr. Bellomo also recommended quantifying terms such as “most” and “a lot” with numbers to provide additional context. Mr. Miranda noted the need for an additional statement in the last section that mentions the need to further strengthen the relationship between the stakeholder groups and FEMA. Ms. Suzanne Jiwani commented that this was the strongest part of the report and thanked the author for all their work. Mr. Sparrow suggests adding additional details to key findings, noting that the success of the NFIP is built on the four elements found within the four-legged stool graphic. However, Mr. Sparrow did not recommend mentioning or sharing the four-legged stool specifically. Mr. Bellomo agreed with the suggestion of Mr. Sparrow.

Ms. Marcy then provided an overview of the stakeholder engagement appendix which included all the data and details that went into this effort. Though the appendix is over 50 pages long the TMAC agreed it was important to include this information for the sake of transparency. Mr. Jim Nadeau commented that current separation, but inclusion of this appendix is a good idea. Mr. Love noted the lack of private sector stakeholders and recommend focusing more on this group in the future. Ms. Marcy clarified that there were a small number of private sector stakeholders that were part of this effort but agreed on the need to add additional emphasis on the future.

Mr. Sparrow then requested clarification as to which website this information would be posted. Mr. Nakagaki noted that there has been additional development to the new TMAC website, and this information could likely be shared via this platform. Ms. Marcy then provided additional explanation on the development and use of the key findings and stakeholder insight graphics throughout the report. Mr. Sparrow closed the discussion by stating that he supports the use of the graphics to tie back into the stakeholder engagement process.

Chapter 3: Applied Practices for Future Flood Hazard and Flood Risk Identification Program

Mr. Bellomo began by thanking Mr. Johnson for his recommendation to pull stakeholder engagement into a separate chapter, as well as for his suggestions for how to restructure Chapter 3. Mr. Bellomo noted that Chapter 3 is organized into four sections: the vision statement developed by TMAC, a deeper dive into understanding flood hazards and risks, increasing value and risk over the long term, and conclusion. Mr. Guignet thanked Mr. Mason and Mr. William Lehman for their help in rewriting section 3.2, Understanding Flood Hazards and Risks in a Graduated Manner. The TMAC then paused the discussion to conduct the Public Comment Period.

Public Comment Period

Ms. Abdelrahim opened the Public Comment Period. Per the FACA, the TMAC holds a public comment period, written or spoken, about any of the topics the TMAC discusses. If commenters have not registered, Ms. Abdelrahim asked commenters to write in the Zoom chat. The public comment period should not exceed 30 minutes. One request for public comment was submitted by Ms. Shana Udvardy from the Union of Concerned Scientists. A written version of her comment has been attached to the end of the meeting minutes. No other public comments were received.

The TMAC then went on break for lunch.

Chapter 3: Applied Practices for Future Flood Hazard and Flood Risk Identification Program (cont.)

Mr. Sparrow welcomed everyone back from lunch and the TMAC continued its discussion on Chapter 3. Mr. Mason provided several word change suggestions for the section immediately following the vision statement. Mr. Sparrow and Mr. Bellomo noted they were working to address language in section 3.1 that some on the TMAC found to be confusing. Mr. Lehman provided a more thorough overview of section 3.2. Ms. Jiwani addressed a comment on California using a 200-year standard in their language and how this is an example of a change that could be implemented right now. Mr. Rodriguez added that this example could cause confusion as to what the report is communicating. Ms. Jiwani responded that this is an example which shows it is sometimes easier for places to use a percent confidence level of flooding when making decisions. Ms. Jiwani added that a Federal product that provides information beyond the 1% annual chance line will allow communities to tailor their ordinances to address their specific community needs.

Mr. Bellomo stated it is important to recognize that there is administrative simplicity with certain floodplain management requirements. Ms. Jiwani added that people are more comfortable looking at uncertainty in hydrology versus hydraulics. Mr. Lehman continued presenting on the uncertainty section. Mr. Mason noted that the map in Figure 6 does not do a good job communicating uncertainty and questioned whether that was the intent of the graphic. Mr. Lehman replied that the purpose was not to communicate uncertainty but to describe natural variability. Mr. Lehman agreed to work with Mr. Bellomo and Mr. Mason to develop an uncertainty graphic.

Mr. Bellomo shared a vision for a future tool that would allow stakeholders to manipulate different flood year risks and the percentages associated with those risks. Mr. Bellomo also responded to an earlier comment by Ms. Jiwani, adding that tolerance for being flooded needs to include both probability and uncertainty. Ms. Jiwani questioned whether First Street should be included in section 3.2.5, adding that what is written elsewhere in the report does not fit well in this section as currently written. Mr. Guignet agreed that the First Street information should be reviewed further to see if it fits. Ms. Carolyn Kousky added that if the purpose of this section is to discuss the range of applied practices then First Street should be mentioned. Alternatively, if the purpose of this section is only to highlight government approaches then an explanation needs to be provided to provide this understanding as well. Mr. Sparrow stressed that if it is included it is important that the language does not make it sound as though the TMAC is endorsing First Street.

No other comments were provided for section 3.2. Mr. Sparrow asked the TMAC whether they would prefer to finish Chapter 3 or address the potential recommendation that was provided earlier in the chapter. The TMAC preferred to address the recommendation now. Mr. Bellomo explained that FEMA should look at different risk frameworks and that what States and local governments can achieve with land use adoptions is difficult. Mr. Bellomo also believed that recommendation one featured later in the report fulfills this same recommendation in Chapter 3. Mr. Mason thought that the TMAC had already recommended that FEMA look at graduated risk but added that risk framework could have a broader meaning than just what is shown on a map.

Mr. Lehman clarified that the intent of this statement was to identify a future where there is a risk management framework for decision making and not just a risk analysis framework. Ms. Jiwani added that if this is made into a new recommendation then the current recommendation one needs to be broader in scope. Mr. Bellomo provided two suggestions, to make this a new recommendation or to rework the language in recommendation one, however Mr. Sparrow emphasized the need to finish the discussion on Chapter 3 first.

Mr. Bellomo noted that section 3.3 was restructured and some of the previous sections were combined. The subcommittee authors for this section were not present on the call at this time and Mr. Bellomo provided additional context for this section. Mr. Giberson also noted that many comments previously within this section have been incorporated. Mr. Guignet stated that section 3.3 is complete, with the exception being the language around risk outside of the floodplain as regulations only pertain to risk inside the floodplain. Mr. Johnson added that this section contains a lot of statements that include the word “should”. No other comments were made regarding Chapter 3.

Mr. Sparrow recommended moving to Chapter 5 and the proposed recommendation changes so that TMAC members would have an opportunity to review any changes prior to Day 2 of the meeting. Mr. Rodriguez noted the recommendation implies looking at the entire NFIP and questioned whether that was the intent. Mr. Sparrow replied that the intention was to show how the different elements work together and to identify the prototype products that need to be developed to ensure all parts of the program are supported. Mr. Bellomo noted that emergency response stakeholders would find these types of data and tools to be very useful provided the recommendation did not expand too greatly in scope.

Mr. Lehman noted the value of management frameworks as a tool for managing risk and that the purpose of recommending a management framework was more about the management of metrics and risks and less about the development of data and products. Mr. Rodriguez commented that the development of prototypes and different products is easier to accomplish currently but that the bigger question is what other products are needed to help support the other parts of the NFIP. Mr. Rodriguez added that just because this is a challenge does not mean it should not be attempted.

Mr. Sparrow questioned the TMAC as to whether a new recommendation was needed or if the current proposal fits within one of the three existing recommendations. Mr. Bellomo felt a new recommendation was needed as they were related but not identical. Mr. Lehman provided additional context for the new recommendation, stating that it would support moving beyond the program as it stands today and would be risk based as opposed to hazard based. The TMAC workshopped the new recommendation language and developed the following: *TMAC recommends FEMA investigate risk management frameworks that meet or exceed existing minimum Federal floodplain management requirements for participating communities whose objectives are to lower their flood risk over time.* Mr. Sparrow noted that it was almost time to

adjourn the meeting for the day and asked the TMAC to review and consider this new recommendation in preparation for the discussion tomorrow.

Closing Remarks

Mr. Sparrow thanked the TMAC for their hard work today. Mr. Sparrow reviewed the agenda for Day 2 of the virtual TMAC Public Meeting and reminded members of the TMAC to submit names for the TMAC Chair nomination. The TMAC then adjourned the meeting for the day.

Day 2

Welcome, Roll Call, and Administrative Items

Mr. Michael Nakagaki welcomed everyone back to Day 2 of the virtual TMAC public meeting. Mr. Nakagaki introduced Mr. Brian Koper, TMAC Designated Federal Officer, and noted that Ms. Abdelrahim would not be attending the meeting today. Mr. Nakagaki also introduced Mr. John Ebersole, TMAC Legal Counsel. Mr. Nakagaki noted that some TMAC members who work for Federal agencies would not be attending the meeting today.

Mr. Nakagaki introduced the PM and PTS support staff and conducted the roll call for the TMAC members. Mr. Nakagaki shared the agenda for the meeting with the TMAC and noted that a public comment period would be included today per FACA requirements. Mr. Nakagaki provided an overview on the use of Zoom for this meeting, including a reminder to use the raise hand function for any TMAC members that wish to speak. TMAC members should also use the Zoom chat box to inform the TMAC and DFO if they need to step away from the meeting momentarily.

Opening Remarks

Mr. Sparrow welcomed everyone back to Day 2 of the virtual TMAC Public Meeting. Mr. Sparrow thanked the TMAC for all their work yesterday and noted that there were several big items on the agenda today.

Chapter 4: Framework for FEMA to Transition to the Envisioned Flood Hazard and Flood Risk Identification Program

Mr. Johnson opened the discussion and thanked everyone for their efforts. Mr. Johnson explained that the opening of the chapter speaks about the future of flood risk data but that some of the language will need to be cleaned up based on the discussion yesterday. Mr. Johnson then continued through the rest of the chapter, providing an overview of each of the sections. Mr. Johnson added that section 4.1 highlights the transition to a future state and potential tools that may help with this transition. This section also ties back to the ideas of economics and nature based solutions. Mr. Miranda added that the introduction highlights the importance of closing the gap between FFRD and Risk Rating 2.0 (RR 2.0). Mr. Giberson provided his thanks to the authors and agreed that the opening and transition framework sections were well done. Mr.

Giberson also noted that the extra month to link Chapters 3 and 4 will be helpful. Mr. Johnson thanked Mr. Miranda and agreed on the need to link the two chapters together. Mr. Bellomo added that some adjustments may need to be made to Chapter 3 to better align with how the program will move to “point b.”

Mr. Johnson continued that section 4.2 worked to reference information from previous TMAC reports and recommendations, as well as studies referenced in previous TMAC reports. Mr. Johnson added that section 4.2.2 stresses the importance of holistic change to statutory and regulatory requirements, while also noting that change to specific strategic areas will allow for better collaboration and communication. Mr. Johnson continued with section 4.2.3, which he believed is the most important section within the chapter. The focus of this section is on effectively communicating change. Mr. Bellomo asked if all the statutory requirements previously listed in this section had been moved to an appendix or were deleted. Mr. Johnson replied that the list had been deleted due to space consideration.

Mr. Bellomo asked whether there was space in section 4.2 to include the stakeholder feedback icons developed by Ms. Marcy. Ms. Marcy replied that she would add the icons once the repetition between this and other sections were addressed. Mr. Rodriguez questioned whether this section only gives voice to concerns down the road and whether it should also include ideas for how to mitigate some of these challenges. The authors replied that the intent of the section was to outline potential pitfalls but agreed that mitigating factors should also be included.

Mr. Johnson moved the discussion to section 4.3 and stressed that the word program is currently included, the section is not making a recommendation about any type of future program. Mr. Rodriguez suggested removing the word program from the title for section 4.3. Mr. Mason congratulated Mr. Lehman for providing good information to section 4.3.5. Mr. Bellomo noted that the gap in converting flood hazard to damage estimates for lifeline facilities is a potential risk that may be worth including. Mr. Johnson noted that a small portion of section 4.3.1 does discuss critical infrastructure but agreed with Mr. Bellomo that this should be included. Mr. Lehman added that the U.S. Army Corps of Engineers (USACE) has been investigating the lifelines issue but has not yet developed a consensus for moving forward.

Mr. Rodriguez noted that the recent release of the National Risk Index has gotten a lot of attention. Ms. Blyer commented in the Zoom chat that identifying gaps in national infrastructure data sets is a challenge and there is a need for mapping stakeholders to be more involved. Mr. Lehman agreed with Ms. Blyer and added that these data sets need to be able to identify structure type. Mr. Mason requested the material that had been removed from section 4.3.3 due to length considerations be put back into the report. Mr. Johnson, Mr. Rodriguez, and Mr. Sparrow all agreed with Mr. Mason.

Mr. Jonathan Smith provided an overview of section 4.4. Mr. Miranda thanked Mr. Smith for his work on this section and noted that the word program will need to be removed from the section title. Mr. Miranda also recommended removing the four main elements of the mapping

program that were listed as that had already been included in an earlier section. Mr. Miranda also thanked Mr. O’Conner and Ms. Tuttle for their work on this section. The TMAC discussed the need for this section to speak to specific tools that should be included as part of FFRD and came to agreement that additional information should be included.

The TMAC then paused for the scheduled public comment period.

Public Comment Period

Mr. Brian Koper, TMAC Designated Federal Officer, opened the Public Comment Period. Per the FACA, the TMAC holds a public comment period, written or spoken, about any of the topics the TMAC discusses. If commenters have not registered, Mr. Koper asked commenters to write in the Zoom chat. The public comment period should not exceed 30 minutes. One request for public comment was submitted by Ms. Shana Udvardy from the Union of Concerned Scientists. A written version of her comment has been attached to the end of the meeting minutes. No other public comments were received.

The TMAC then returned to their discussion on Chapter 4.

Chapter 4: Framework for FEMA to Transition to the Envisioned Flood Hazard and Flood Risk Identification Program (cont.)

Ms. Jiwani and Ms. Kousky were the authors for section 4.5; however, Ms. Jiwani provided the overview of this section. This section identifies potential roles that could be fulfilled by non-FEMA stakeholders in the future. Mr. Mason noted that the edits that have occurred to this section of the report all appear to be good but that some of the information on storm typing and storm extension should go under the earlier section written by Mr. Tischler. Mr. Johnson asked whether information about First Street Foundation was included. Ms. Jiwani confirmed that two paragraphs are included, and that Ms. Kousky did a good job with the language without making it sound as though TMAC was endorsing First Street Foundation.

Mr. Love stated that Table 4 should include local and regional partners. Mr. Johnson added that a statement is needed to explain Table 4 and Ms. Jiwani agreed. Mr. Bellomo recommended the table be organized in a way that would show the different categories or tools each of the partners provide. Mr. Guignet returned to the earlier conversation on First Street Foundation and noted that the four subcommittee leads can work together to decide what information to include in the report. Mr. Miranda asked that the word data be clarified in the last row of the table, next to private organizations. Mr. Sparrow recommended the TMAC discuss the First Street Foundation statement now. Mr. Bellomo noted there are other stakeholders who also provide specific resources, such as Core Logic. Ms. Kousky agreed that the information on First Street Foundation should only include language on what the organization is currently doing.

The TMAC finished their discussion on Chapter 4 and took a break for lunch.

Discussion: Recommendations

The TMAC began the discussion period for the recommendations in Chapter 5. Mr. Sparrow began by noting that an additional recommendation was developed during Day 1 of the virtual TMAC Public Meeting. Mr. Sparrow also recommended that the TMAC review each recommendation individually to make language adjustments and then vote on all the recommendations at once. The new recommendation will now be recommendation 3 and Ms. Jiwani also shared an additional recommendation yesterday that Mr. Sparrow will share with the TMAC.

The TMAC began discussing recommendation one. Mr. Bellomo noted this recommendation is focused on the programmatic scale versus the state or local scale. Mr. Bellomo added that recommendation 3 is narrower in focus and so the TMAC should determine the scale for each of the recommendations. Mr. Lehman provided an alternative version of recommendation one that included language on risk management. Mr. Lehman also provided an overview of the benefits of enterprise risk management (ERM). Mr. Miranda noted that some local communities may already be doing some of the actions included in recommendation one and asked for more clarification. Mr. Bellomo responded that the goal would be to identify a handful of forward looking communities that are managing their risk versus managing their floodplain.

Mr. Sparrow recommended the language include a statement on resilience. Mr. Bellomo agreed with Mr. Sparrow's suggestion. Mr. Rodriguez felt the proposed language for recommendation one is very general and may need to be made more specific. Mr. Josh Stuckey questioned the use of the term "investigate" and what the term was meant to convey. Mr. Lehman replied that Mr. Stuckey's suggestion to specify the outcomes or purpose of an investigation is a good idea and that recommending an ERM framework provides communities a path forward that is less driven by ordinances.

Mr. Bellomo complimented everyone on the proposed ideas and noted his appreciation for the dynamic nature of the proposed recommendation. However, he also raised concern that the reality of government and governing may make it difficult to enact these recommendations. Mr. Stucky replied that local ordinances are not static if they are written properly. Mr. Guignet added that local officials are often hesitant to implement changes that go beyond an established standard and that this is a challenge for floodplain managers working to educate their elected officials.

Mr. Sparrow commented on the value of this discussion and shared the updated version of the recommendation. Mr. Bellomo agreed with adding the term enterprise to risk management. Mr. Miranda questioned the end goal of this recommendation. Ms. Kousky replied that it seems to suggest FEMA develop a dashboard of tools and model organizations that communities would be able to use to develop an integrated flood risk management culture. Mr. Sparrow noted that once the language of the recommendation is complete, additional text will be needed to explain the

recommendation. The TMAC finished wordsmithing recommendation one and moved on to recommendation two.

Mr. Mason noted that this recommendation came from a conversation within subcommittee 2. Mr. Mason continued that there are many new ideas related to graduated flood risk and that it is important for FEMA to establish standards that help permit the integration and adoption of these products. Mr. Love noted that the current language seems to emphasize existing products but what is being proposed will require the development of new tools where there are no standards yet. Mr. Mason agreed that it makes sense to focus on prototype products and facilitating their use. Mr. Giberson questioned whether there is a phrase that can pivot to other stakeholders and whether this is the recommendation where other stakeholders are introduced. Mr. Bellomo noted that a prior TMAC report went to some length identifying various stakeholders and recommended the TMAC review this previous language first.

Mr. Sparrow then moved the conversation to recommendation three, which recommends the TMAC continue to conduct stakeholder engagement. Mr. Bellomo questioned whether this needs to be a recommendation or whether it can be a preamble to the prior recommendation. Mr. Sparrow agreed with this idea of Mr. Bellomo to make this a preamble to the previous recommendation instead. Mr. Johnson added the importance of including a narrative that states TMAC and FEMA are on the same page regarding stakeholder engagement. Recommendation three was removed by the TMAC per the suggestion of Mr. Bellomo.

Mr. Mason noted that the next recommendation was included earlier in the report development process but now does not seem as necessary to be called out as an individual recommendation. Mr. Miranda suggested calling out the U.S. Fish and Wildlife Service specifically in this language. Mr. Mason reiterated that previously this text seemed appropriate but now does not feel as strongly about retaining it. Mr. Bellomo agreed that the TMAC does not need to continue to tell FEMA to continue to do what is already doing.

The TMAC moved on to the last recommendation which was submitted by Ms. Jiwani following the conversation on Day 1. Ms. Jiwani was unable to join the beginning of this conversation. Mr. Sparrow noted the purpose of this recommendation was for FEMA to continue to leverage CTP partnerships as they move to a new framework. Mr. Bellomo agreed with the idea of the recommendation but suggested that the preamble to the reworked recommendation one could include an emphasis on utilizing CTPs. Mr. Rodriguez suggested the language should reference all partnerships and not just CTPs. Ms. Jiwani was able to rejoin the conversation and agreed with the points made during the discussion.

Mr. Bellomo asked if the TMAC would revisit Mr. Lehman's earlier recommendation for the use of ERM. Mr. Lehman noted that any entity that receives OMB funding is required to participate in enterprise risk management. Mr. Lehman recommended setting this conversation aside for now. The TMAC concluded the discussion period having identified three proposed recommendations.

Public Comment: Recommendations

Mr. Nakagaki reintroduced Mr. Koper, who opened the public comment period. No comments were submitted prior to the public comment period and no public comments were provided by those in attendance. Mr. Koper then concluded the public comment period.

Deliberation: Recommendations

Mr. O’Conner shared the updated language for all three recommendations with the TMAC. Mr. Sparrow asked whether there were any additional comments from the TMAC, which there were not. Mr. Sparrow then moved the conversation to a vote.

Vote: Recommendations

Mr. Nakagaki put forth a motion to vote on the three recommendations. Mr. Stuckey affirmed the motion and Mr. Johnson provided a second. The TMAC voted via the Zoom raise hand function to approve all three recommendations. The motion passed unanimously.

Executive summary and Appendices

Mr. Sparrow thanked everyone for their work on the report and noted that the executive summary still needed to be written. Ms. Marcy commented that there was no content in any of the appendices, other than the stakeholder engagement appendix. Mr. Sparrow provided an overview of the list of appendices for the report. Mr. Miranda requested to revisit the removal of the list of statutory requirements from section 4.2 to ensure all the TMAC was in support of this removal. All the TMAC agreed with the removal of this list.

Next Steps and Closing Remarks

Mr. Bellomo thanked everyone for their support with the report and specifically thanked the PTS and PM support teams. Mr. Sparrow also shared his thanks with everyone. Mr. Sparrow noted a more formal timeline of next steps would be shared in the coming days, but the goal will be to hold another public meeting in February to vote to submit the report to FEMA. Mr. Sparrow thanked Mr. Lehman for all his work as SME. Mr. Nakagaki reminded the TMAC to submit nominations for the position of TMAC Chair. Mr. Sparrow requested a motion to close the meeting. Mr. Miranda provided the motion and Mr. Johnson provided the second. The TMAC meeting was officially closed.

[Insert Written Public Comment]

Michael M. Grimm
Assistant Administrator for Risk Management

Michael Nakagaki
Designated Federal Officer for the TMAC
FEMA, 400 C Street SW
Washington, DC 20024

January 19, 2021

RE: FR Doc. [2020-27374](#)

My name is Shana Udvardy, I am the climate resilience analyst with the Union of Concerned Scientists. Thank you for the opportunity to provide comments today.

My comments focus on the need for FEMA to task the TMAC with closing five information gaps related to: 1) standards and regulations, 2) future conditions; 3) Risk Rating 2.0; 4) flood insurance affordability; and 5) equity.

1) Standards and regulations:

In the upcoming year, FEMA should task the TMAC with exploring new and updated standards and regulations to improve the National Flood Insurance Program (NFIP). In support of this effort, FEMA should ensure that the TMAC addresses future conditions, including the impacts of climate change, in flood mapping, mitigation and floodplain management. On January 5, 2021, [NRDC and ASFPM](#) submitted a legal petition to FEMA requesting that FEMA update the agency's rules under the National Flood Insurance Program (NFIP) to ensure better standards on building and land-use in the nation's floodplains and the development of flood maps that project future flood risks. According to the petition: "*Per the National Flood Insurance Act, as amended, 42 U.S.C. §4001 et seq., FEMA is required to establish the building, land use, and floodplain management criteria that to the "maximum extent feasible" will limit risk development and reduce flood damages.*" FEMA can address the petition by swiftly tasking TMAC with exploring new and updated standards and regulations.

In a parallel process, FEMA should continue to support the TMAC in its stakeholder engagement to obtain public input on revising its out-of-date regulations and support FEMA's [Future of Flood Risk Data \(FFRD\)](#) effort.

2) Future Conditions:

There are substantial information gaps when it comes to future conditions. First, FEMA and TMAC must provide the public with a status report on FEMA's implementation of the recommendations in

the 2015 TMAC future conditions report. Second, since 2015, a considerable amount of climate science has been released and the technology to assess and understand the future conditions of flood hazards and risks has been enhanced, including in the context of post-wildfire denuded and floodprone landscapes. Therefore, FEMA should task TMAC with revising and updating the future conditions report and provide updated and new recommendations on future conditions and flood risk mapping. Third, on this front, FEMA should task TMAC with developing guidance on updating regulatory and non-regulatory flood data and mapping regulations and standards to fully implement the intent of the Biggert-Waters Flood Insurance Reform Act of 2012.

3) Risk Rating 2.0 (RR 2.0):

Last year, there was public consternation over FEMA's release of the RR 2.0 and how the new methodology might increase flood insurance rates. Congressional members including Sen. Chuck Schumer (D-New York) and Sen. Robert Menendez (D-New Jersey) have expressed apprehensions over the potential for large increases in rates when FEMA implements Risk Rating 2.0. In September of 2020, Rep. Max Rose [D-NY-11] introduced [H.R.8311](#), the *National Flood Insurance Program Reporting on Impact to Seaboards and Counties Act of 2020* (NFIP RISC Act of 2020) that would require FEMA to provide a detailed report on the change in flood-risk assessment methodology prior to implementing RR 2.0. That bill would require FEMA to include detailed information in the report including data by county, methodology and sources of data used to calculate new rates and an analysis of the expected impacts, and seven additional analyses.

While TMAC's stakeholder engagement last year was helpful and a good start, as noted in [TMAC's October meeting notes](#), the public still has specific concerns regarding RR 2.0 including worries about unaffordable or abrupt rate increases, transparency, resource constraints, and quality control among other concerns. Therefore, to further this outreach campaign, FEMA should task TMAC to work with FEMA consultants to conduct a case study of the impact of new insurance rating under RR 2.0 on individual properties in a range of different communities. This study ought to include examples from both urban and rural communities located in inland and coastal communities and communities of different income levels. To do this case study most effectively, the team should anonymize the data so as not to target any specific community or individual household.

Given the public desire for more information on RR 2.0 as it relates to changes in flood insurance rates, FEMA should task TMAC with initiating a public communication and outreach program to help educate the public and Congress on Risk Rating 2.0. This public engagement process could then include the results of the RR 2.0 case study.

4) Flood Insurance Affordability Program:

FEMA should task the TMAC with establishing an expert working group to develop a flood insurance affordability program. After many studies and reports by the [U.S. Government Accountability Office](#) (GAO), the [National Academies of Sciences](#) (NAS), and [FEMA](#) itself, the time has come to develop and ultimately implement an affordability program. As FEMA is set to release RR 2.0 in October of this year, it is critical that FEMA and Congress include a robustly funded flood insurance affordability program in concert with that effort.

Such a program could, for example, provide more grants and low-interest loans for low and moderate-income households and communities to make investments in resilience that would allow them to protect themselves while lowering their insurance rates. These kinds of programs are vital

to ensure that frontline communities devastated by extreme weather do not face inequitable hurdles to accessing insurance because they cannot meet new insurance guidelines (e.g. requirements that homes must be raised a certain height—which can be prohibitively expensive for many low and moderate-income homeowners).

5) Equity:

Finally, FEMA should task the TMAC and consultants with establishing a focus group and task force to develop a strategy to address the twenty-five recommendations that the National Advisory Council (NAC) included in their recently released [2020 Equity report](#). This process should include meaningful participation and engagement with a diverse set of stakeholders, including representatives of historically disadvantaged communities, communities of color, and low-income communities, since these communities often bear a disproportionate burden of the harms from flooding and other climate-related impacts.

Before I end, I'd like to ask the TMAC how the committee will include written comments in the 2021 report. Thank you for the opportunity to speak with you today.

Sincerely,



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