FHFA Response

1. We assume the intent behind this question is to define climate and natural disaster risk not generally and holistically, but specifically as it relates to the activities of The Enterprises. As such, we would define the primary risk to The Enterprises as the potential negative impact that climate change and natural disasters pose to the value of their investments/portfolio. While this does not adequately acknowledge the broad range of risk that should be always kept in view when considering these issues (for example - human health and well-being), this is the primary area of business interest for The Enterprises.

2. Climate and natural disaster risks to The Enterprises' investments vary in type and/or intensity by geographic region. Certain areas of the country are threatened by earthquakes and wildfires, while in other areas prominent risks include sea level rise and/or precipitation-based flooding. Understanding the nature and intensity of the risks in each geographic region is critical for proper stewardship by the Enterprises. Climate change related risks are expected to intensify over time (even within the context of optimistic predictions related to the positive impact of ongoing and future mitigation efforts, due to climate-altering greenhouse gas emissions to-date) and this will reduce the value of properties in the most at-risk, impacted areas. The financial impact born by homeowners to recover from disasters will also result in increased foreclosure risk.

3. In our experience, there is significant variation across the country in the quantity and quality of data available to evaluate current and future risk. While some cities and states have invested significantly in research/modeling that will allow for a more granular understanding of the level and extent of different risks in their communities over time, others have very little granular and/or forward-looking information available upon which to base decision making.

4. From a property-specific perspective, we see strategies that include early-stage evaluation of the climate/natural disaster risk being a valuable tool from a financial risk mitigation perspective. It allows current and future climate/disaster risk to be evaluated (to the extent the data allows) and, in circumstances of high risk, property-based mitigation efforts to be deployed. Sufficient requirements in the underwriting process for this analysis and access to additional capital to integrate mitigation measures are critical components to this property-based approach. In certain circumstances, there may be risks so significant that reasonable cost mitigation efforts will not sufficiently reduce potential negative financial impact. We are already seeing this scenario play out in communities around the country as it relates to sea level rise/flooding and wildfires. As such, The Enterprises' must carefully consider if they are able to bear the significant economic risk related to future investments in these communities. This evaluation must be done mindful of the impact it will have on potential "non-investment communities".

Many of these communities will be disproportionally low-income and/or minority. Strategies must be developed to sufficiently address the negative impacts of this decision-making process on these low income/minority communities.

This type of strategy could help The Enterprises' mitigate risk as it relates to future lending activity, but do not address the issues of risk in the current portfolios. As it relates to the existing portfolio, there is a general inadequacy of insurance options and a general lack of private players in that markets that need coverage the most. We have seen this play out in different regions of the country as it relates to flooding as well as wildfire. Absent regulation, the private market for this type of insurance dissolves in areas with widespread risk. In the absence of private market players, we see government entities having to step in in a variety of ways. In Florida, the flood insurance program is backed by state guarantees, and is often inadequate to address the damage that is experienced. In California after the wildfires, regulators needed to step in to force private insurers to stay in the market for a limited period of time, after which additional regulation or government backed-programs will be necessary to ensure insurance availability given the ongoing and growing risk. Insurance is an annual product, and insurers are given the option of leaving the market yearly if the risks are too great. The Enterprises' are in the 30-year mortgage business and need a solution that will protect their investments over the life of that mortgage.

5. The FHFA could apply a "stress test" to the regulated entities existing portfolios to evaluate potential risk given modeled information about generalized risks in different geographic regions.

6. The US Global Change Research Program Fourth National Climate Assessment, and upcoming Fifth Assessment, provides an excellent summary of risks by region: https://nca2018.globalchange.gov/ https://www.enterprisecommunity.org/solutions-and-innovation/emergency-management/keep-safe-miami - This is a link to the Keep Safe Miami program developed and run by Enterprise Community Partners. There are a variety of resources and links on this page relevant to portfolio as well as property level resilience assessments. We also highly recommend that the FHFA participate in consortiums for federal agencies that share data, resources, and best practices as it relates to mitigating climate risk.

7. Properties that are brought into the regulated entities' portfolios should be assessed for their climate and natural disaster risk and vulnerability using best available data and information, and measures should be integrated into project design/renovation that provide mitigation where significant risk and/or vulnerability is identified.

13. Risk could be assessed according to a "catch basin" type approach, where the value of mortgages in each region with particular risks and/or vulnerability is evaluated. The majority of the properties in the regulated entities portfolios' are single family housing. Any new regulations related to better assessing a properties risk and

vulnerability will lead to results that will likely increase or decrease the value of said properties. Given the regulated entities mission to focus on affordable housing and low-income ownership, many of the properties in high-risk areas are likely to be owned by low- and moderate-income families. It will be important the assessment of climate risk does not become the modern-day version of red-lining. Additionally, if requirements related to mitigation of risk are imposed for properties in particular high-risk areas, will people historically living in those communities be able to afford those risk-adaption measures/homes anymore? Will there be debt service available to address these issues in areas where the cost of housing is already high? Conversely, in locations where property values are currently inflated, devaluation related to climate risk could make them more affordable/accessible to low- and moderate-income people, which could also potentially increase the number of these types of properties being considered for underwriting. Design of programs will need to be done with full consideration of these issues.

14. Addressing climate change should be the primary risk mitigation strategy. For the impacts of climate change that cannot be mitigated, adaptation of a bulk of the at-risk housing stock will be necessary if the entities intend to continue to successfully fulfill their missions. In locations or for properties for which adaptation is not viable or would not adequately mitigate risk, opportunities for equitable managed retreat should be explored. A recent managed retreat model proposed in California for government entities to purchase at-risk properties, convert to rental housing for current occupants, and then dismantle and remove the properties when risks become too great or current residents move away is one interesting option. Community-wide buyouts and relocation have also been tested in New Jersey and the Gulf Coast and should also be further explored.

15. It is important to consider how success is defined here. Profit is one definition, but how will demographics and community indicators be considered as it relates to the regulated entities missions? If risk mitigation results in smaller portfolios that are better protected, would this be defined as success? Evaluation of climate risk will likely result in a decrease in the pool of potential mortgages. It will be important to be proactive around this conversation and the real challenges that climate change and natural disasters pose to the regulated entities missions. The regulated entities need good information to make good decisions about risk in each of their underwriting transactions. They should be prioritizing lending in less risky locations. In general, programs that include preferred terms for resilient and green housing could help mitigate overall risk long term as the entities fulfill their missions. In the short term, programs that allow households to have enough working capital to purchase properties and make resilience improvements in areas with higher climate and natural disaster risk would mitigate the risk of value loss and default in those investments. Entities could develop mortgage processing terms that encourage or “push” households to invest in safer places. Additionally, investment into better data and information will allow for

more confidence in targeting requirements/restrictions for investment in truly high-risk areas.

16. More and better climate and natural disaster risk information needs to be available to the full real estate market. This is not an issue unique to the regulated entities. There should be full disclosure around underwriting activities related to risk. As part of this process, it is important to identify what type of risk the entities are considering/evaluating. Is it only risk to the physical structure and value of the property? How will risk to related to human life be evaluated?

18. Products that allow for additional financing and resources for risk-mitigation measures in high-risk areas will be necessary to ensure that lower income households are still able to access affordable housing.

19. Delinquency issues for minority borrowers following natural disasters are directly related to income inequality. Strategies that are focused on resolving income inequality will directly and positively impact this issue.

20. Responsibility for mitigation needs to be integrated throughout the organization. It needs to be a systemic part of how the organization operates and a responsibility that all staff bear, not only a designated few.

21. We recommend focusing future research around uniform high-quality data across the country related to climate and natural disaster risk. As mentioned previously, the amount and quality of data varies widely across the country, and is specifically related to particular locality-specific (ie city/state) investment in developing that resource. More uniform, high quality data is needed across the country to evaluate risk across a national portfolio.

22. Regulated entities are currently not allowed to share information about previous losses when a property changes ownership. A review should be conducted to identify what type of information is currently and should continue to be private, and what information it is important to disclose to properly assess and address climate and natural disaster risks.

23. We highly recommend that the FHFA take a seat at the table at the federal climate working groups.

25. We recommend that the FHFA consider providing financing incentives and resources for proactive mitigation of climate and natural disaster risk, and require active disclosure of risk information.