

Opportunity Title: Climate Change Risk and Vulnerability Fellowship-HUD
Opportunity Reference Code: HUD-OER-2016-0002



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Organization U.S. Department of Housing and Urban Development (HUD)

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How to Apply A complete application consists of:

- An application
- Transcripts – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional references

All documents must be in English or include an official English translation.

Application Deadline 10/28/2016 11:59:00 PM Eastern Time Zone

Description The Department invests billions of dollars every year in housing, infrastructure, and services in communities across America. As the National Climate Assessment documented, climate-related risk is rapidly increasing. These risks are compounded where there is aging infrastructure and as our population becomes more urbanized and further concentrated along the nation's coastlines. Essential local and regional infrastructure systems (e.g., water, energy, and transportation) are interdependent and increasingly disrupted by the effects of climate change. These impacts are exacerbated by existing social inequities which disproportionately affect already vulnerable populations — the same populations that HUD serves each and every day.

In 2014, the Department issued a Climate Change Adaptation Plan, which outlined 35 actions that HUD could take to prepare for the impact of climate change on the Department's mission, programs, and operations. The Plan included an interim Risk and Vulnerabilities Assessment across the Department's programs. In addition, the Plan identified several actions it could take that would result in a deeper understanding of the Department's climate-related risk.

HUD invites an ORISE research fellow to participate on a project to examine and articulate answers to the following questions, which will support HUD in developing a better understanding of climate-related risk and prioritize limited resources.

- What is the best approach for HUD to assess climate-related risks as they affect HUD assets, including but not limited to HUD-funded housing units (project-based, voucher housing, FHA insured, etc.,)?
- How would that approach expand/change if HUD sought to

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also examine risk posed to infrastructure?

- What are the most appropriate data resources for HUD researchers to utilize to examine those risks?
- What are the most critical decision-making support systems (e.g. CPD Maps, others?) which must be expanded in order for HUD to effectively assess the vulnerability of HUD assets and, by extension, the households HUD serves?

The fellow will be located in the Office of Economic Resilience, which leads HUD's efforts to fulfill the requirements of the Climate Change Adaptation Plan. The fellow will interact closely with the Office of Policy Development and Research, which has existing in-house capacity and expertise on the geospatial properties of HUD assets (see GIS storefront at egis.hud.gov) and deep familiarity with other pertinent data-sets that track socioeconomic and housing conditions of the communities HUD serves.

The fellow will develop skills to identify appropriate modeling and developing vulnerability and risk scenarios for the climate risks of interest (i.e., sea level rise/flooding, earthquake, wildfire, extreme heat, and thawing permafrost). The fellow will also be exposed to other federal agencies (i.e., NOAA, USGS, and FEMA) and colleges and universities with meteorological and climate-related science programs, as appropriate, to identify and integrate applicable best practices and available data/mapping resources.

It is expected that the results of this research project will inform near- and medium-term action by HUD to revise appropriate decision-support systems (both internal and external-facing) to better reflect the vulnerability and risk facing HUD assets and the communities HUD serves.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and HUD. The initial appointment is for one year, but may be renewed upon recommendation of HUD contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at HUD in the Washington, DC, area. Participants do not become employees of HUD, DOE or the program administrator, and there are no employment-related benefits.

Qualifications The ideal candidate would have a graduate degree in a related field (physical science, geography, spatial planning and analysis, environmental science, etc.) within the last five years of the






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desired start date, or completion of all requirements for the degree should be expected prior to the start date. A strong interest and demonstrated experience in climate change risk, climate change adaptation, climate change vulnerability, and emergency preparedness in urban and institutional contexts; graphic design skill set and ability to convey data and findings visually; ability to interact across disciplines and sectors; familiarity with a wide range of climates, natural hazards, and socio-economic datasets is also ideal. Experienced candidates with undergraduate degrees will also be considered.

Travel is optional, but encouraged. Travel will serve the purpose of deepening the fellow's understanding of vulnerability mapping, meeting with key stakeholders, and/or presenting the findings associated with this research at a professional conference or other educational venue.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Communications and Graphics Design** (1 )
 - **Computer, Information, and Data Sciences** (1 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (3 )
 - **Environmental and Marine Sciences** (14 )