



Humans, Disasters, and the Built Environment (HDBE)

Important information for proposers

All proposals must be submitted in accordance with the requirements specified in this funding opportunity and in the NSF [Proposal & Award Policies & Procedures Guide \(PAPPG\)](#) that is in effect for the relevant due date to which the proposal is being submitted. It is the responsibility of the proposer to ensure that the proposal meets these requirements. Submitting a proposal prior to a specified deadline does not negate this requirement.

Supports fundamental research on the interactions between humans and the built environment within and among communities exposed to natural, technological and other types of hazards and disasters.

Synopsis

The Humans, Disasters, and the Built Environment (HDBE) program supports fundamental, convergent research on how human activities and behaviors interact with the built environment to reduce or exacerbate the effects of natural hazards and disasters. The program foci are ongoing and emerging hazards to populations (individuals, households, businesses, organizations, and agencies) and built environments (critical infrastructures, physical and cyber spaces, and buildings). Successful proposals shall address all three elements (i.e., humans, disasters, and the built environment) and have the potential to contribute to theories or insights that hold over a broad range of scales, conditions, and sectors. Research funded through this program is expected to build a deeper understanding of human behaviors at the interface of engineering and society and inform how communities manage their risk and adapt to changing patterns in climate, extreme weather, and other hazards.

Given the richness of the phenomena under study, the HDBE program seeks research that advances foundational theories, methods, and data within and across diverse disciplines such as engineering, social sciences, natural sciences, computing, or other relevant fields.

Interdisciplinary proposals are common.

Proposals aimed to make methodological contributions to advance disaster-relevant research are also of interest to the program. Examples include methods and tools for the translation of engineering solutions (mitigation and adaptation) for the built environment to community or national scale investments, practices, and policies; techniques to examine the interactions of humans and the built environment resulting from simultaneous or compounding risk of natural

disasters and pandemics; and protocols, methodologies, and tools tailored for handling sensitive, protected, and proprietary data relevant to disasters.

Investigators are encouraged to take advantage of NSF's investments in the Natural Hazards Engineering Research Infrastructure (NHERI) on experimental testing, computational modeling and simulation, interdisciplinary training and networks, and data sharing, integration, and analysis. Research that addresses multiple dimensions of social equity, vulnerability, and environmental justice is particularly encouraged.

Proposers are actively encouraged to email a one-page project summary to the HDBE Program Officer before submitting a full proposal for guidance on whether the proposed research topic falls within the scope of the HDBE program and/or co-review might be appropriate.

Program contacts

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Upcoming due dates

Full proposal accepted anytime

For additional information regarding the removal of deadlines for this program, please refer to the [Dear Colleague Letter](#) and [Frequently Asked Questions](#).

Proposals submitted to other program announcements and solicitations, including the Faculty Early Career Development Program (CAREER), must meet their respective deadlines; please refer to the deadline dates specified in the appropriate announcement or solicitation. Proposals for EARLY-concept Grants for Exploratory Research (EAGER) or Rapid Response Research (RAPID) can be submitted at any time but Principal Investigators must contact the cognizant program director prior to submission. Proposals for supplements or workshops can be submitted at any time, and PIs are encouraged to contact the cognizant PD prior to submission.

Program guidelines

Apply to **PD 19-1638** as follows:

Full proposals submitted via Research.gov: [NSF Proposal & Award Policies & Procedures Guide](#) proposal preparation guidelines apply.

Full proposals submitted via Grants.gov: [NSF Grants.gov Application Guide](#) guidelines apply. See [Grants.gov Proposal Processing in Research.gov](#) for more information.

Organization(s)

- [Directorate for Engineering \(ENG\)](#)
- [Division of Civil, Mechanical and Manufacturing Innovation \(ENG/CMMI\)](#)