Contaminated Sites, Natural Disasters, Changing Environmental Conditions and Vulnerable Communities: Research to Build Resilience

Informational Webinar for Applicants

EPA STAR RFA

August 8, 2019

Webinar Objectives

- Go over application Information in the EPA STAR RFA, "Contaminated Sites, Natural Disasters, Changing Environmental Conditions and Vulnerable Communities: Research to Build Resilience" (Eligibility, Submission, Technical)
- No new information, other than what has already been provided in the RFA
- Check the Authority and Regulations (RFA Section I.C) Safe Drinking Water Act, 42 U.S.C. 300j-1, Section 1442; the Toxic Substances Control Act, 15 U.S.C. 2609, Section 10; the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 136r, Section 20; the Clean Air Act, 42 U.S.C. 7403, Section 103(b)(3); the Clean Water Act, 33 U.S.C. 1254, Section 104(b)(3); and the Solid Waste Disposal Act, 42 U.S.C. 6981, Section 8001.
- **No Superfund (CERCLA) Research**
- **Read the RFA very carefully!**

Webinar Ground Rules

- Please hold your questions till all EPA presentations have been made.
- No specific research project or idea can be discussed, but clarifying questions regarding what is written in the RFA announcement may be answered.

Agency Contacts

- **Technical Contact: Intaek Hahn, Project Officer (hahn.intaek@epa.gov); phone: 202-564-4377**
- **Eligibility Contact: Ron Josephson, Eligibility & Peer Review Officer (josephson.ron@epa.gov); phone: 202-564-7823**
- **Electronic Submissions: Debra M. Jones, Administrative Officer (jones.debram@epa.gov); phone: 202-564-7839**

RFA & Award Information

- **RFA will close on September 17, 11:59:59 pm Eastern Time**
- **Estimated Number of Awards: 5**
- **Anticipated Funding Amount: Approximately $4 million total for all awards**
- **Potential Funding per Award: Up to a total of $800,000**
- **3 year project period**
- **No-cost sharing**

Eligibility Information

- **Public and private nonprofit institutions/organizations, public and private institutions of higher education, and hospitals located in the U.S., state and local governments, Federally Recognized Indian Tribal Governments, and U.S. territories or possessions are eligible to apply.**
- **Domestic Research Project**

Application Materials

- **To apply under this solicitation, use the application package available at Grants.gov (for further submission information see Section IV.F. "Submission Instructions and other Submission Requirements"). Note: With the exception of the current and pending support form (available at Research Funding Opportunities: How to Apply and Required Forms), all necessary forms are included in the electronic application package. Make sure to include the current and pending support form in your Grants.gov submission.**

Goal of the RFA (Research Areas)

The U.S. Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is asking the scientific community to propose transdisciplinary research with an approach that integrates the following research questions:

(1) How may certain natural disasters (e.g., wildfires, severe storms, flooding, hurricanes, tornadoes, volcanic eruptions, earthquakes or tsunamis) or changing environmental conditions (e.g., rising sea levels, higher average temperature or heat index) cause specific chemical contaminants to migrate from certain contaminated or containment sites (e.g., hazardous waste sites, landfills, solid waste or wastewater storage or treatment facilities, industrial sites such as mines or refineries) to nearby communities and pose elevated exposure risks to vulnerable groups, especially the elderly and/or children under the age of five years?

(2) What are the major contributing factors or effect modifiers, in addition to the contaminants and natural disasters or changing environmental conditions, that may exacerbate the impacts to these vulnerable groups in impacted communities?

(3) How can scientific research results specifically help communities build better resilience against the problems and issues identified above?

All 3 questions should be addressed in an integrated research project!

Research Questions

(1) How may certain natural disasters (e.g., wildfires, severe storms, flooding, hurricanes, tornadoes, volcanic eruptions, earthquakes or tsunamis) or changing environmental conditions (e.g., rising sea levels, higher average temperature or heat index) cause specific chemical contaminants to migrate from certain contaminated or containment sites (e.g., hazardous waste sites, landfills, solid waste or wastewater storage or treatment facilities, industrial sites such as mines or refineries) to nearby communities and pose elevated exposure risks to vulnerable groups, especially the elderly and/or children under the age of five years?

- **Identify and characterize an existing contaminated or containment site(s) that may be particularly vulnerable to certain type(s) of natural disasters or changing environmental conditions.**
- **The selected natural disaster or changing environmental condition should be scientifically corroborated to be a probable event/condition to the region or community being addressed.**
- **Explain what makes the site(s) vulnerable. Be specific in identifying and describing all major relevant environmental and other factors and conditions.**
- **Use relevant "big data" to support your vulnerability assessment (https://blog.epa.gov/2016/10/21/filling-the-gapsin-environmental-science-with-big-data/).**
- **Describe the specific contaminant(s) and the media and exposure routes that threaten the health and well-being of vulnerable groups as they relate to contaminant(s) migration. If focusing on children, describe how these threats may change at varying lifestages throughout the first five years of childhood.**
- **Identify and analyze any local or community public health or environmental health data available to establish the scientific link(s) between natural disasters or changing environmental conditions and elevated threats to vulnerable group's exposures to contaminants.**

Research Questions

(2) What are the major contributing factors or effect modifiers, in addition to the contaminants and natural disasters or changing environmental conditions, that may exacerbate the impacts to these vulnerable groups in impacted communities?

- **Identify and characterize major community-specific non-chemical stressors of importance in the selected community, other than the fact that the community is located near a containment or contaminated site(s).**
- **Explain how the identified community-specific non-chemical stressors or environmental variables would exacerbate or further elevate the threats to vulnerable groups in the event of contaminant migration under natural disasters or changing environmental conditions.**
- **Rank and explain the contributing factors or effect modifiers in order of significance to the health protection of the vulnerable group(s).**

Research Questions

(3) How can scientific research results specifically help communities build better resilience against the problems and issues identified above?

- System-based, community-level strategies or solutions to build resilience may include prevention, risk-reduction, intervention, health-promotion or best practices to protect the health and well-being of vulnerable groups.
- Identify and explain the roles of the important ecosystem goods and services, socialecological-cultural-institutional systems, resources, facilities, infrastructures, programs or policies in building community-level resilience for health protection. For example, researchers are encouraged to combine physical infrastructure-centered (built environment) approaches with natural-capital (ecological) and social-capital approaches (i.e., total environmental framework) in building community resilience against potential threats to its most vulnerable groups.
- Describe how vulnerability or resilience indicators, solutions or strategies for the community can be generalized to be applicable to broad scenarios or situations in different communities across the nation.
- Present scientific method(s) (quantitative or qualitative) to assess or verify the effectiveness of proposed solutions or anticipated health benefits.

Community Engagement Research (CEnR) Plan

- CEnR is characterized by substantial community input and involvement in the project.
- The applicant will need to justify the level of community involvement that is proposed in the application.
- CEnR framework to meet the requirement for community involvement in the project that may include relevant community leaders and/or a committee or an advisory group, such as Pediatric Environmental Health Specialty Units (PEHSU; https://www.pehsu.net/).
- **Community Engagement Research Plan is an Eligibility Criterion and a Peer Review Criterion!**

Community Engagement Research (CEnR) Plan

The CEnR Plan should:

- Focus on research issues of significance to a community that is interested in the proposed work.
- Identify the role of community members in the proposed research plan (i.e., the degree of community input or engagement in the conceptualization, design, methods, analyses and dissemination of research).
- Describe how this research will enhance the capacity of the community, pertaining to building resilience against natural disasters/changing environmental conditions, contaminant migration and protecting vulnerable groups.
- Allocate appropriate resources to the research partners to ensure success of the collaboration, e.g., delineating funds under the project's budget for community participation.
- If a host organization (any organization/institution other than the applicant) is used to facilitate community participation or partnerships, evaluate the organization's mission and practices concerning community partnerships (e.g., how the staff has or can develop skills to sustain community participation).
- Provide evidence of community support and an active partnership with a community engagement research committee, a community-based organization or advisory group members (e.g., letter(s) of intent or support from community leaders, state or local government agencies, non-government organizations, public health professionals, community emergency planners or responders, social workers, child serving organizations, assisted living and nursing homes, utility managers, site managers or operators, decision makers or policy planners).

Other Information

- Please refer to section IV. Application And Submission Information for the required application package materials, including EPA Human Subjects Research Statement (HSRS) and Scientific Data Management Plan (SDMP)
- Please refer to section V. Application Review Information for Peer Review and Relevancy Review Criteria

Agency Contacts

- **Technical Contact: Intaek Hahn, Project Officer (hahn.intaek@epa.gov); phone: 202-564-4377**
- **Eligibility Contact: Ron Josephson, Eligibility & Peer Review Officer (josephson.ron@epa.gov); phone: 202-564-7823**
- **Electronic Submissions: Debra M. Jones, Administrative Officer (jones.debram@epa.gov); phone: 202-564-7839**

Thank you.