

# 2023 NIEHS EHSCC MEETING: Disaster Research Response & Climate Change & Health

We are inviting members of the NIEHS P30 Centers to present their disaster research response-themed or climate change-themed work at the October 2023 NIEHS EHSCC MEETING in Houston, Texas.

The leadership of each P30 Center is encouraged to nominate a member of their center to present at the October meeting. To participate, the nominated member should send an abstract of their work to the 2023 NIEHS EHSCC MEETING planning committee by completing this online questionnaire.

Up to four abstract authors will be invited as plenary speakers. Others will be invited to share their work during poster sessions.

Please submit your abstract by July 24, 2023. Plenary speakers will be notified by August 7, 2023.

Thank you - 2023 NIEHS EHSCC MEETING planning committee.

Response was added on 07/24/2023 8:57pm.

## ABSTRACT AUTHOR'S CONTACT INFORMATION

Author's name (first name last name):	Kathleen M. Vandiver (The abstract author is the prospective presenter)
Author's contact email address	kathymv@mit.edu
Author's title	Director, Community Outreach Education and Engagement
Author's primary department & institution	Center for Environmental Health Sciences, MIT
P30 Center where the author is a member:	Massachusetts Institute of Technology
The project PI/Lead	<input checked="" type="checkbox"/> Same as abstract author <input type="checkbox"/> Different from abstract author, if so, specify

## PROJECT FOCUS

The primary focus of the project (you may select more than one option, if applicable)

- Disaster Research Response (DR2)  
 Climate Change and Health (CCH)  
 Other, please specify

The climate change and health issues (being) studied

- Exposure pathways (extreme heat, air quality, water quality/quantity, vector ecology, etc.)  
 Vulnerability factors (demographic, biological, social determinants, geographic, etc.)  
 Health system capacity & resilience - (governance, EHS workforce, health information systems, etc.)  
 Stress response (pathways, psychosocial stress, eco-anxiety)  
 Climate and geospatial modeling  
 Other, please specify

## PROJECT DETAILS - DR2/CCH AND HEALTH GAPS, PROJECT OBJECTIVES, FINDINGS, & LESSONS LEARNED

### Study Title

Malden River Works: This Project achieves a Riverfront Park with an Inclusive Planning Process for Climate Change Preparedness and Health

### DR2- or CCH-specific research gaps that the project addressed/is addressing

A critical gap exists in how to work effectively with EJ communities on municipal projects to address pressing health-related needs and achieve sustainable solutions considering climate change. The Malden River Works project is a new model in building strong and durable alliances between an EJ community, environmental health, urban planning and social justice experts, with strong local government buy-in, and successful diversified fundraising to deliver community-aligned solutions. A crucial facet has been establishing strategies to ensure community partnership throughout identifying critical community needs to address, ideating solutions, advocacy, fundraising and implementation. The Malden River Works project will provide EJ residents with public access to restored green spaces that provide enhanced opportunities for affordable fitness, recreation, relaxation, and learning about environmental sciences. Overall, this project addresses the need to restore physical and mental health-promoting opportunities to communities that have long borne the ill-effects and stress of living in chemically-polluted environments.

### Project goals and objectives

1. Use various engagement tools (e.g., inclusive public meetings, community workshops) to understand EJ community concerns impacting how they experience and benefit from their natural and built environments.
2. Engage a new coalition of community leaders of color, youth, environmental advocates, and government stakeholders to bring a new climate resilient public park to promote mental and physical health for all on the Malden River in an EJ community.
3. Integrate diverse community input to collaboratively converge on a community-informed project meeting their environmental health needs today and into a climate change-impacted future. This process identified development of a riverfront public park to promote resident access to recreational green spaces and natural environment to promote physical and mental health.
4. Incorporate climate change resiliency through: a) using urban planning and engineering-inspired approaches, such as mitigating heat island effects by strategically positioning tree shade and use of river water for evaporative cooling; b) including natural features to educate visitors (especially children) about the environmental sciences; and c) providing residents with affordable access to health-promoting outdoor recreational, fitness and relaxation opportunities.

### Research methods/approaches used

- Community-engaged research methods
- Communications research methods
- Field epidemiological methods
- Fundamental/basic science methods
- Other, please specify

### Project stage/status:

- Project is ongoing - process findings available to present; no primary outcomes findings available yet
- Project is ongoing - process findings and/or primary outcomes findings available to present
- Project completed - process findings and/or primary outcomes findings available to present
- No stage/status to report
- Other, please specify

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Describe the process/primary outcomes findings from the project.

The Malden River had become heavily contaminated with industrial waste generated by factories situated along its banks. Despite remediation efforts, City of Malden government officials remained concerned about health risks to residents coming in contact with river water through recreational activities. Therefore, public access had been discouraged for years.

The Malden River Works project envisioned that a restored public access to the riverfront for recreational activities could promote physical and mental health of community residents. Furthermore, such a development project could improve both public health and climate change resiliency.

A key gatekeeper step in this plan was conducting a human health risk assessment of the Malden River to establish safety of the Malden River for recreational use. This study, organized by Vandiver/ MIT Center for Environmental Health Sciences and community partners, demonstrated water safety. These results were presented during a live televised broadcast to local city councilors and were critical for onboarding city officials with the project.

The Malden River Works Project team was established to encompass the interdisciplinary expertise (environmental health, urban planning and development and community representation) required for successful implementation. A Community Steering Committee was also formally established at the beginning of the project to ensure representation of community inputs throughout the project.

The Malden River Works Project has successfully applied for grants from multiple sources, including private (e.g., Leventhal Prize to lay the foundational work), state (e.g., competitive municipal vulnerability preparedness (MVP) grants) and federal (FEMA) programs, to secure the necessary financial resources for each project phase.

The Project Team formulated community needs and preferred solutions into a full, construction-ready development plan, which has now been approved by the City of Malden. All required permits are in place, and the construction project could be opened for bids as early as October 2023.

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Describe key challenges or lessons learned.

1. Many town residents were unaware there is a river in Malden, as there is no public access and the river is hidden behind factories with large, unsightly parking lots.
2. Maintaining community attention over extended periods requires substantial effort. We achieved this through various outdoor activities (e.g., cultural festivals, canoe rides), allowing residents to envision the benefits of a future public park.
3. Establishing a Project Team and Community Steering Committee has been vital for setting goals, assessing progress, and maintaining momentum. The Project Team includes Community Steering Committee members (including the chairperson) to ensure community representation at every level of project leadership. Community Steering Committee members receive honoraria as their time and inputs were highly valued. This has helped ensure stable participation.
4. Youth engagement was identified as an important need. We include youth members on the Community Steering committee, and engage the future park.

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## **PROJECT SPONSORSHIP/SUPPORT**

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Project sponsorship (choose all that apply)?

- P30 inter-center collaborative pilot funding (via NIEHS)
- Other NIEHS - (NOT inter-center collaborative funding)
- NIH - other institutes (NOT NIEHS)
- Any other federal agency (NOT NIH)
- Non-federal government agency (state, local, etc.)
- Non-government, non-profit entity
- For-profit entity
- Insitutional (intramural) funding
- Project not sponsored
- Other, please specify