

Center for Urban Resilience and Environmental Sustainability

The Center for Urban Resilience and Environmental Sustainability (CURES) in association with the University of Illinois combines the unique research capabilities of the UI system with applied learning, education, and a land-grant tradition of public engagement to help cities of all sizes to be more livable, prosperous, resilient, and sustainable. CURES will become the “go-to” place for cities of all sizes to improve their resilience and sustainability by:

- Performing interdisciplinary analyses that are integrated across systems.
- Fostering strong collaborations with cities to help them with the issues that matter most.
- Developing effective partnerships with universities, research institutions, and public and private entities.
- Leveraging emerging technologies to improve urban resiliency and sustainability.
- Engaging in fundamental and applied research for sustainable practices and innovations.
- Establishing and strengthening educational programs and community training programs.

Mission

CURES works with cities on developing integrated sustainable solutions to improve community-wide health and prosperity now and in the future.

Challenges

CURES will address the following:



Global Change

The world is undergoing massive alterations such as climate change and human migration. Preparing for and responding to such threats may include understanding severe weather trends, planning emergency routes and shelters, and developing resilient infrastructure.



Resource Provisioning

Sustainable cities must effectively deliver critical provisions such as nutritious food, clean and safe water, and efficient and clean energy. CURES will provide a forum for cutting across the silos that have traditionally impeded the effectiveness of a nexus approach to provisioning solutions.



Health

Residents of successful sustainable cities are healthy. Health can be improved through medical care, food security and quality, environmental conditions, physical activity, access to nature, and reduced stress.



Equity and Justice

All citizens of urban areas do not have equal access to economic prosperity, a clean environment, provisioned resources, transportation, educational opportunities and health services.



Economic Prosperity

Sustainable cities attract and develop talent with opportunities for employment and wealth creation in an environment that offers a high quality of life.

For more information on CURES, please contact Dr. Don Wuebbles at wuebbles@illinois.edu



A Holistic Approach to Urban Sustainability and Resiliency

Key Systems and Approach

The work of CURES will be driven by challenges and focused on developing solutions that use a diverse set of tools to shape a critical set of interconnected urban systems to help cities meet sustainability challenges. CURES will harness existing expertise and catalyze new research on several interconnected elements of the urban system that are critical to questions of urban resilience and sustainability.

- Energy Management & Access
- Transportation & Mobility
- Water & Sanitation
- Waste & Recycling
- Housing & Neighborhoods
- Land Use
- Natural Systems
- Health



Tools

CURES will develop sustainability strategies that deploy combinations of the following tools:

- Technology
- Entrepreneurship
- Finance
- Policy
- Planning
- Infrastructure
- Public-Private Partnerships

Team

The University of Illinois has a longstanding tradition of excellence in science, engineering, technology, humanities, social sciences, business, and design and it is also home to many excellent interdisciplinary programs that are important to urban resilience and sustainability. It is uniquely positioned to address many of the most pressing problems faced by cities. Leadership at the University of Illinois (the President of the University, Chancellors of the three campuses, and the Provost at Urbana-Champaign) are supporting this endeavor. The following disciplines will be engaged:

- Atmospheric Science
- Biology
- Crop Sciences
- Geology
- Geographic Information Science
- Economics
- Engineering
- Environmental Sciences
- Hydrology
- Physics
- Sociology
- Urban Planning
- Public Policy

The CURES team includes researchers from across the three campuses and people from Illinois Extension and the Prairie Research Institute. External collaborators include the Metropolitan Mayors Caucus, and private companies Greenleaf Advisors and Green Diamond Solutions. Partnerships will be established with several other universities as well as national laboratories, NGOs, and private entities that are aligned with the mission of CURES.

