Champaign County Climate Resilience Task Force: Initial Efforts

As a 2016 signatory of the Second Nature Climate Resilience Commitment, the University of Illinois through the Institute for Sustainability, Energy, and Environment created a new committee of community members and campus experts to address what must be done to prepare Champaign County for vulnerabilities to extreme weather and other results of climate change.

Members of the Champaign County Climate Resilience Task Force (CCCRTF) included professors and subject matter experts at the University of Illinois, representatives from local organizations such as Carle Hospital, Champaign County Emergency Management Association, the cities of Champaign and Urbana, and other relevant groups.

The purpose of the group is to lead a campus and community climate resilience assessment, and to integrate the framework into planning for future Climate Action Plans that will identify thresholds of resilience and outline milestones for increasing resilience in Champaign County.

To date, the committee has met 5 times from April 2017 to April 2018. Specific activities included establishing the formal scope and vision for the committee, reviewing climate projections for the immediate region to establish which climate hazards are most relevant to the Champaign County area, and joint exercises that provided feedback into the current areas of greatest strength and need for the campus and community to prepare for climate change impacts.

As a result of these meetings, a resilience framework was established identifying key climate hazards and key resilience indicators for future planning. While climate change will undoubtedly impact Champaign County in a number of ways, the key hazards identified by the CCCRTF that require immediate, priority attention are extreme weather variability, rainfall flooding, and severe storms.

Assessing our community's resilience to climate change is in many ways more challenging than assessing something like its progress toward carbon neutrality. Toward this end, the CCCRTF identified 15 Resilience Indicators for immediate consideration and evaluation. These may be revised throughout the planning process as is appropriate. While a full list of all 15 indicators is available at the end of this document, general themes emerged around joint community planning for climate change impacts, ensuring adequate health care services are available in case of emergencies, and maintaining and improving key infrastructure and ecosystem efforts.

With a rough, malleable framework established for future resilience planning, the CCCRTF has identified three goals for the coming year. The first is to draft a joint proclamation between the University and the cities of Champaign and Urbana declaring shared recognition of the importance of creating a more resilient community.

The second goal is to begin to take resilience indicators and conduct formal assessment on our current baseline. This may be an opportunity for students enrolled in independent study courses to aggregate existing data from sources such as the US Census Bureau, US Geological Survey, FEMA, among others, to flesh out the status of individual resilience indicators.

The final goal is to begin identifying short to mid-term goals for the University of Illinois to enhance its resilience to climate change impacts through integration with the next edition of the Illinois Climate Action Plan. Current members of the CCCRTF will join a larger team of faculty, staff, students, and community members in the drafting of the University's road map for the 2020-2025 portion of its journey toward a carbon-neutral and truly resilient future.

Champaign County Climate Resilience Task Force: Planning Participants

- Jim Angel, State Climatologist
- Tina-Marie Ansong, City of Champaign Associate Planner
- Rita Black, Champaign County Regional Planning Commission
- John Dwyer, Champaign County Emergency Management Agency
- Paolo Gardoni, Professor of Civil & Environmental Engineering
- Nancy Holm, Assistant Director of Illinois Sustainable Technology Center
- Micah Kenfield, Sustainability Programs Coordinator
- Madhu Khanna, Associate Director of Education & Outreach at iSEE
- Warren Lavey, Adjunct Assistant Professor of Natural Resources and Environmental Sciences
- Sally McConkey, Senior Professional Scientist at Illinois State Water Survey
- Timothy Meneely, Carle Hospital
- Susan Monte, City of Champaign
- Marilyn O'Hara Ruiz, Clinical Associate Professor of Pathobiology
- Lacey Rains, City of Champaign Sustainability Planner
- Holly Rosencranz, Assistant Professor of Clinical Medicine
- Scott Tess, City of Urbana Environmental Sustainability Manager
- Morgan White, Director of Sustainability at Facilities & Services
- Gillen D'Arcy Wood, Associate Director of Education & Outreach at iSEE
- Bev Wilson, Associate Professor of Urban and Regional Planning
- Don Wuebbles, Professor of Atmospheric Sciences

Initial Indicators of Resilience

Social Equity & Governance	
Emergency Preparedness Planning and Intergovernmental Agreements	To some extent there is shared planning and existing agreements between the University and the community for emergency preparedness planning, though most of the existing partnerships only address acute emergencies, not longer-term recovery or preparation for ongoing climate change impacts. Immediate areas of growth included expanding joint planning and conducting vulnerability mapping exercises for the area.
Food Security	A number of food banks exist to serve campus and the Champaign County community at large. A formal assessment needs to be conducted to measure how many individuals / families can be served by area food banks and how much additional support is needed from campus and the community moving forward.
Inclusive Access to Diversified Modes of Transportation	Much of the campus and community currently have multiple options for transit to campus, even in the immediate aftermath of extreme weather events. Low or no cost use of local buses is available to residents in the area, and buses can operate in conditions where single-occupancy cars may not be able to. A continual area of growth is in expanding access to outlying areas where many faculty and staff commute from.
Community Resilience and Emergency Messaging	Many emergency communications are only available in English despite a large portion of the community having other primary languages. Preparedness messaging tends to be available in multiple languages, but there is always opportunity to grow in this area.

Health & Wellness	
Healthcare Coverage and Access	As part of the planning process for future resilience efforts, data on the current percentage of local population that is uninsured and the current ability of local hospitals to provide indigent care will be collected.
Emergency Shelter for Extreme Climate and Weather Events	Campus and the surrounding area have a number of facilities that can serve as shelter during extreme weather / climate events, ranging from tornado shelters during extreme storms to cooling / heating centers during extreme heat or cold. As part of the upcoming vulnerability mapping efforts, assessment will be conducted on the current locations of shelters relative to the needs of at-risk groups, and whether these spaces are appropriately stocked to support those present during extreme weather events.
Emergency Healthcare Preparedness	Local hospitals, long-term care facilities, and dialysis centers are required by state law to have emergency plans in place and on file. An assessment of the current number of emergency beds available in the immediate community relative to the total population will be conducted in the coming year.

Ecosystem Services	
Stormwater Management	Campus and community both have strong stormwater abatement strategies with plans for areas of improvement. For example, campus has been considering expansion of bioswales and permeable pavement to reduce impervious surfaces around campus. As part of vulnerability mapping and planning exercises, data will be collected on the number of local residences and businesses that have flood insurance and, as available, the number of reports of flooding (especially basement flooding) of local areas.
Tree Health and Tree Canopy	Both campus and the local cities have been recognized as Tree Cities USA / a Tree Campus USA, and have numerous healthy trees in the area. The main area of focus for this indicator is ensuring continued care of trees and appropriate replanting to protect and expand these efforts.
Grounds Management	Campus already has some level of sustainable grounds management policies; however, additional training and policies are needed to improve the native plant ecosystem, support pollinators, and reduce need for watering and external inputs.

Infrastructure	
Grid Capacity	Champaign County has one of the first microgrids in Illinois. Ameren Illinois, the local utility provider, has already equipped 83,000 local homes with smart meters, with plans to expand smart meter use to the entire service area by 2019. These efforts will assist in avoiding brownouts or power shortages, even in times of heavy demand.
Building Standards	Campus builds all new construction and renovation over a certain cost to international building standards for utility efficiency and ability to withstand extreme weather. All facilities are built to state energy efficiency standards by law.

Economic	
Financial Assistance for Residential Weatherproofing	Both Ameren Illinois and Champaign County Regional Planning Commission offer incentives and assistance to area residents, including UIUC faculty, staff, and students, to weatherproof their homes. While programs exist, data needs to be gathered on current utilization and opportunities for expansion.
Stormwater Utility Fee	Champaign and Urbana both charge a stormwater utility fee based off impervious area of commercial and residential properties that augments general fund monies to support expanded stormwater abatement efforts.
Emergency Funds for Disaster Relief	Campus has a small Faculty/Staff Assistance Program that provides funds to support faculty and staff through times of need in some cases. One area of possible support from campus for the community at large is providing assistance from expert faculty in drafting emergency preparedness grants for community organizations.