

Student Research Team Helps UCLA Establish a Framework for Institutional Resilience

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In 2013, the Rockefeller Foundation selected Los Angeles as one of the inaugural members in the 100 Resilient Cities Network. This global network full of resources and case studies has proven invaluable to the City of Los Angeles as it attempts to adapt to the physical, social and economic challenges of the 21st century. In 2015, UCLA became one of the first campuses to sign onto a Resilience commitment through Second Nature. Through UCLA's offices of Sustainability and Emergency Management, as well as the Center for Public Health and Disasters, the university engaged with the City and other partners in supporting the development of resilience tools and planning for the region. In 2018, Los Angeles took the first step by publishing [Resilient Los Angeles](#), its first comprehensive resilience plan.

Los Angeles' Chief Resilience Officer, Marissa Aho, defines resilience as an effort to “strengthen our community fabric today so that we can survive, adapt, and thrive no matter what kind of crisis or catastrophe is in our future. It means thoughtfully examining how all of our systems, communities, and vulnerabilities intersect and affect one another.” Resilience planning works to prevent and adapt to both acute shocks (earthquakes, floods, terrorist attacks) and chronic stresses (high unemployment rates, food insecurity, and inefficient public transportation). *Resilient Los Angeles* includes 4 chapters, 15 goals, and 96 actions for the City, neighborhoods, and Angelenos to implement. This complex model of resilience is organized into areas of leadership and engagement, disaster preparedness and recovery, economic security, climate adaptation, and infrastructure modernization.

To further this effort, the 2019 Sustainability Action Research (SAR) Resilience team has spent two quarters researching UCLA's current strategies and offering recommendations to address challenges. Identifying the campus' strengths and challenges highlights areas that the university needs to devote more resources to and procedures to link together networks of already existing resources. Furthermore, we utilized our expertise to offer recommendations with the objective of laying the groundwork for UCLA's own comprehensive resilience plan. Our team's work built on the work of two prior SAR teams, as well as Urban Planning Masters student projects.

Our team found numerous resilience outlets in which our campus has excelled, such as offering a multitude of transportation services. However, the campus has room for growth in other realms, including confronting food insecurity. A statistic from the 2018 undergraduate experience survey states that 37% of undergraduates have reported experiencing food insecurity at UCLA. First, our team identified the departments/programs responsible for each resilience category. Then, we conducted an assessment of their effectiveness. From there, our team researched how other universities addressed similar issues and evaluated if their approach can

be applied at UCLA. For more information on our methods and results, please read our Final Report posted on the Institute of Environment and Sustainability (IOES) website.

	Existing applicable programs at UCLA	Contacts (name, position, email/number)	Links/Resources
Seismic			
Increase participation in city and state programs that promote safer housing by reducing earthquake risk	Natural Hazards Risk and Resiliency Research Center (NHR3) & Campus Emergency Response Team (CERT) training	Jenny Jay, Professor of Environmental Eng: jjay@seas.ucla.edu	https://www.risksciences.ucla.edu/nhr3 & https://www.oem.ucla.edu/training-programs/cert-ucla
Advance seismic safety, prioritizing the most vulnerable buildings, infrastructure, and systems	Natural Hazards Risk and Resiliency Research Center (NHR3)	Jenny Jay, Professor of Environmental Eng: jjay@seas.ucla.edu & Amy Shadkayman, Emergency Management Specialist: 3107946001	https://www.risksciences.ucla.edu/nhr3
Collaborate with California cities to advance regional seismic safety	Natural Hazards Risk and Resiliency Research Center (NHR3)	Jenny Jay, Professor of Environmental Eng: jjay@seas.ucla.edu	https://www.risksciences.ucla.edu/nhr3
Launch an Earthquake Early Warning System	UCLA BruinAlert, Bruin Safe App	Amy Shadkayman, Emergency Management Specialist: 3107946001	https://www.bso.ucla.edu/
Energy/Transportation/Climate Change			
Develop a clean energy and smart grid infrastructure that is reliable in the face of future climate impacts and hazards	Renewable Energy Association, UCLA Smart Grid Energy Research Center	Rajit Gadh, PhD Director: SMREC Email: rgadh@seas.ucla.edu Phone: (310) 267-4892	http://smartgrid.ucla.edu/index.htm
Transition to Fossil-Fuel-Free Streets to fight air pollution and help tackle the global threat of climate change	Bruin Commuter Club, BruinTAP, Bruin Bus, UCLA Bike Share, Carpool/Vanpool	David Karwaski, Transportation's Senior Associate Director for Mobility, Planning & Traffic Systems dkarwaski@ts.ucla.edu or 310-206-8315	https://transportation.ucla.edu
Coordinate among transit agencies to advance regional transportation and transit resilience	BruinTAP, BruinBus, metro expansion	David Karwaski, Transportation's Senior Associate Director for Mobility, Planning & Traffic Systems dkarwaski@ts.ucla.edu or 310-206-8315	https://transportation.ucla.edu
Health			
Fortify public health and healthcare critical infrastructure and leverage partnerships with public health organizations to improve community health and wellness.	-ASHE Center -CalFresh Initiative -Lavender Health Alliance -Mobile Health Clinic	-CalFresh at UCLA team uclacalfresh@gmail.com -Lavender Health Alliance team lavenderhealthalliance@gmail.com -Mobile Health Clinic team liaison.mobileclinic@gmail.com	https://www.facebook.com/LavenderHealthAlliance/ https://www.mobileclinicproject.org/
Housing			
Coordinate a homeless housing service provider preparedness program to fortify systems and services to withstand future challenges	Bruin Shelter(Student for Students) UCLA Economic Crisis Response Team	Louis Tse Executive Director Bruin Shelter	http://www.bruinshelter.org/professional-partners/ https://www.s4sla.org https://www.studentincrisis.ucla.edu/Economic-Crisis-Response

A snapshot of the SAR Resilience team’s research organized by areas of concern.

As the world’s urban population grows, cities face challenges that are becoming more urgent as they harbor large humanitarian and environmental impacts. Functioning as a small city within this large city, UCLA is at risk to the same shocks and stressors felt across the wider Los Angeles region. The campus of UCLA is home to over 40,000 students and accommodates over 80,000 people daily. To address this, our team has worked towards tailoring the City of Los Angeles’ framework to the unique circumstances presented at UCLA.

In recent years, the burgeoning field of resilience has made many forward strides at UCLA, such as the implementation of a new rainwater capture cistern in Parking Structure 9 by the [2017 SAR Resilience team](#). However, an integrated plan with specific goals has yet to be established. Many universities around the country are working to be among the first higher education institutions to develop a comprehensive resilience strategy, including California State University, Northridge. It is UCLA’s duty as a global leader to prepare and respond to the diverse range of shocks and stressors that occur in our everyday lives.

All of this work and research has led us to where we are today. One of our team’s goals was to assemble a task force that will author the official resilience plan. We pooled together members of the UCLA faculty and staff who vary in areas of expertise for a task force meeting spearheaded by Nurit Katz, the Chief Sustainability Officer, and Arpen Shadkayman, the Emergency Management Specialist. During this meeting, our team presented our research and recommended areas of improvement. Members of the task force then provided their feedback

and advice on what gaps they perceived in our current resilience system are and what should take precedent in terms of refinement.

So what now? Members of our team have continued to meet with individuals from the task force meeting. We hope that the authors of UCLA's first resilience plan will use our research to help tackle a number of topics ranging from natural disasters to cybersecurity. It will take patience to build a successful task force and patience to write and implement a successful plan. But if patience is the name of the game to fortify UCLA and become resilient—then let the game begin.



The 2019 SAR Resilience Team.

Dear Daily Bruin,

The UCLA Sustainability Action Research (SAR) Resilience team is wrapping up its work for the academic school year. Attached is our press release which explains and discusses “resilience” and how UCLA is working to develop its own resilience plan. The article highlights the following:

- Los Angeles’ and UCLA’s role as global leaders in the field of resilience
- A clear definition and examples of urban resilience planning
- A snapshot of our team’s research and recommendations provided to the stakeholders who will be drafting UCLA’s first comprehensive resilience plan

We think our story is of interest to Daily Bruin because resilience is a topic that affects all members of the UCLA campus community, yet it is a relatively new idea and therefore is not well understood. Please let us know if you have any questions.

Best,

UCLA SAR Resilience Team

Works Cited

<https://www.universityofcalifornia.edu/infocenter/ucues-data-tables-2018>