



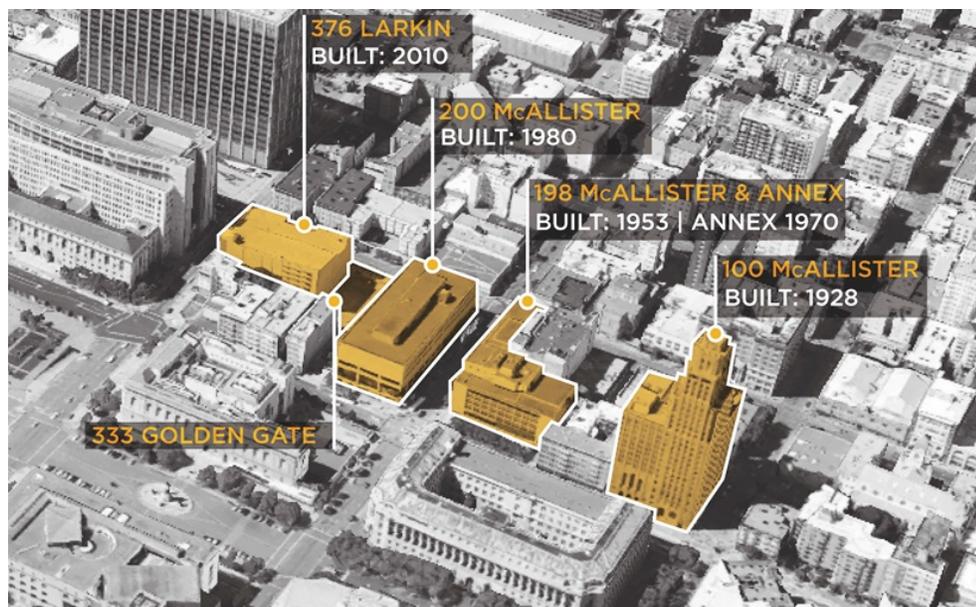
Agency Statement: Climate Adaptation in the 2016 California Five-Year Plan October 2015

Summary

UC Hastings will implement Executive Order B-30-15¹ through the consolidation and intensification of multiple environmental initiatives into a comprehensive adaptive management program that both reduces campus contributions to climate change and adapts to its effects.

This coordinated effort includes:

- Identification of mission-critical infrastructure points of vulnerability to climate change and opportunities for mitigation
- Ongoing assessment of campus contributions to climate change and strategies to mitigate adverse impacts
- Implementation of campus-wide infrastructure and capital upgrades, integrating life cycle maintenance and renewal planning as an element of all building projects
- Communication of campus-wide benchmarks, objectives and results through internal departments, neighborhood, regional and other networks including educational and professional forums
- Structured commitment to ongoing modeling, monitoring and iteration of a robust adaptive management system, entitled **Sustainable UC Hastings**





Adaptive Management of Climate Impacts at UC Hastings

UC Hastings College of the Law has been an anchor institution at various locations in the Civic Center – Tenderloin neighborhood since 1879. With close proximity to municipal, state and federal offices and court facilities, UC Hastings faculty, students and alumni have deeply influenced public policy and civic life for generations. This legacy includes hallmark scholarship on water rights and usage, land use and environmental programs and innovations in law related to intellectual property and information technology. These areas complement the College's core commitment to public interest and public service.

Today the College's groundbreaking clinical programs represent a major intellectual and institutional investment in experiential learning. Clinics that serve the legal needs of immigrants, non-profit organizations, the elderly and tenants attract an intensely public service-oriented student population who go on to practice law in public interest and public service fields at a higher rate than any other law school.

However, the campus' physical infrastructure does not adequately reflect its vanguard pedagogy and talent. As the only stand-alone college of law within the UC system, the College has been nimble and frugal in conserving building budgets and maintenance resources. The College has conducted a comprehensive research and planning process, which finds that within the next ten years three-fifths of campus properties, must be replaced or upgraded.² As the building program commences conditions in and around the College render it ripe for institutionalizing a deeper culture of sustainability in response to climate change.³

UC Hastings campus is situated on the densely urban San Francisco peninsula in a maritime Mediterranean climate zone which is characteristically adapted for summer-drought / winter-rain cycles, temperatures with a low seasonal but high daily variability, both mitigated by fog which is deeply dependent upon robust ocean currents. Access to plentiful, high-quality drinking water and availability of hydroelectric power is dependent upon the montane climate of the southern Sierra Mountains surrounding Hetch Hetchy Reservoir. Macroclimate factors and extreme weather place both regions at high risk for extreme desertification, droughts, fires and floods. On the 30–year scale the built environment and dependent populations may suffer interruptions in public transit, access to fresh water, food from the Ocean currents and from the Central Valley. Longer term, on the 50 to 100-year scale, intensifications of these as well as compromised housing stock due to sea level rise are predicted. The current four-year drought substantiates the view that these changes are already in effect.



Specific mission-critical vulnerabilities to current College infrastructure based upon predicted climate changes are identified as:

- Old wooden windows in the 29-story, 252-unit high-rise student housing facility known as McAllister Tower could fail due to wind conditions associated with extreme storms potentially displacing all resident students into the highly impacted Bay Area housing market
- HVAC & electricity failure in the academic building at 198 McAllister could displace 83% of all teaching functions
- Green space required for health may not be viable with extended drought
- Food and fresh water insecurity may exponentially increase all costs of health-required amenities and campus operations overall
- Commutes to campus could be impacted if public transit is compromised due to drought or floods
- Poor air quality from higher temperatures and increased congestion would impact health of campus community and surrounding neighborhoods
- Sea-level rise of 1 -2 meters by 2050 would put pressure on scarce housing stock as shoreline development would be abandoned

Additionally, due to synergies in climate-related impacts the uncertainty is exacerbated and compounds complexity in managing all campus infrastructure. Therefore responsive risk management is predicated upon a holistic, adaptive management approach. **Sustainable UC Hastings** consolidates and builds upon existing efforts both within UC Hastings and in the wider community.

Ongoing efforts include:

- **Environmental Law Concentration and Clinic:** through rigorous academics and real-world work experience, students address the legal and public policy issues affecting the future of our planet
- **West-Northwest Journal of Environmental Law and Policy:** the first regional environmental law journal covering California and the Pacific Northwest; semi-annual issues and annual symposium⁴
- **The Demonstration Gardens:** community-based education in environmental stewardship & green job training, since 2009⁵
- **UC Hastings Facilities efficiencies, water conservation and waste reduction:** trending 5 – 15% each year since 2002, expected to more than double with new construction
- **The McAllister Streetscape Improvement Project** (completed 2015) greening and pedestrian safety improvements conducted in partnership with the SF County Transportation Authority at a cost of \$2.4 million⁶



To address the risks outlined above and meet the challenges inherent in Governor Brown's executive orders Sustainable UC Hastings will convene an internal community-of-practice for knowledge sharing. This team will help inform systems development and decision-making which will serve over the next decade with a significant role in the campus renewal, leveraging technological advances and lower-trending operating costs.

The Sustainable UC Hastings community-of-practice will work together to determine strategies, scope and methods. Systemic tools will include a GIS (geographic information system or geodatabase) to process and communicate information.

Practical outcomes and deliverables of this adaptive management approach will include:

- Ongoing mapping, assessment, monitoring and iteration
- Continued "right-sizing" of campus facilities for changing population
- Enhanced "cool-island" effects from carbon capture, respect for resources and living canopy densification
- Modular approach to technology for more rapid adjustments
- Elevation of understanding and investment in sustainable development with higher returns on investment over the life cycles of buildings and the community

Sustainable UC Hastings will participate in or coordinate additional regional efforts on the 2015-16 horizon:

- Civic Center Sustainable Utilities District Plan 2015, SFPUC⁷
- Civic Center Public Realm Plan 2015 – 2019, SF Planning Department
- San Francisco Green Festival, Nov 2015
- Community forums & workshops in partnership with SF Public Library, Department of Recreation & Parks, San Francisco Public Utilities Commission, Tenderloin Neighborhood Development Corporation, Twitter and others to promote adaptive climate management

UC Hastings College of the Law is poised to leverage its legacy, intellectual capital and trajectory as an institution of social justice to meet the challenges of a changing climate. The College's commitment will be evidenced in meeting or exceeding the emissions reduction and efficiency targets mandated by Governor Brown's executive orders through a community-based adaptive management system that restructures our campus culture upon principles of sustainability and our built campus as an emblem of environmental justice.



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- ¹ Governor Brown's Executive Order available from:
<https://www.gov.ca.gov/news.php?id=18938#targets#targets#targets%20for%20climate%20change%20adaptation>
- ² Long Range Campus Plan 3.0 available from:
<http://www.uchastings.edu/about/leadership/strategic-plan/lrcp/master-planning-archive/index.php>
- ³ Downtown/Civic Center Climate & Health Resiliency Assessment available from:
<http://www.sfclimatehealth.org/neighborhoods/downtowncivic-center/>
- ⁴ West-Northwest Journals available from:
<http://journals.uchastings.edu/journals/websites/west-northwest/index.php>
- ⁵ Demonstration Gardens @UC Hastings available from:
<http://demonstration-gardens.org>
- ⁶ McAllister Streetscape Greening 2015 available from:
http://www.uchastings.edu/about/leadership/strategic-plan/lrcp/resources/McAllisterStreet_Hastings-Streetscape_PropAA_proposal.pdf#McAllister%20Streetscape%20Greening%202015
- ⁷ Civic Center Sustainable Utilities District Plan 2015 available from:
<http://www.sfwater.org/index.aspx?page=739#Civic%20Center%20Sustainable%20Utilities%20District%20Plan>