

Built to Succeed: Sustainable Learning Environment at UC Merced Library

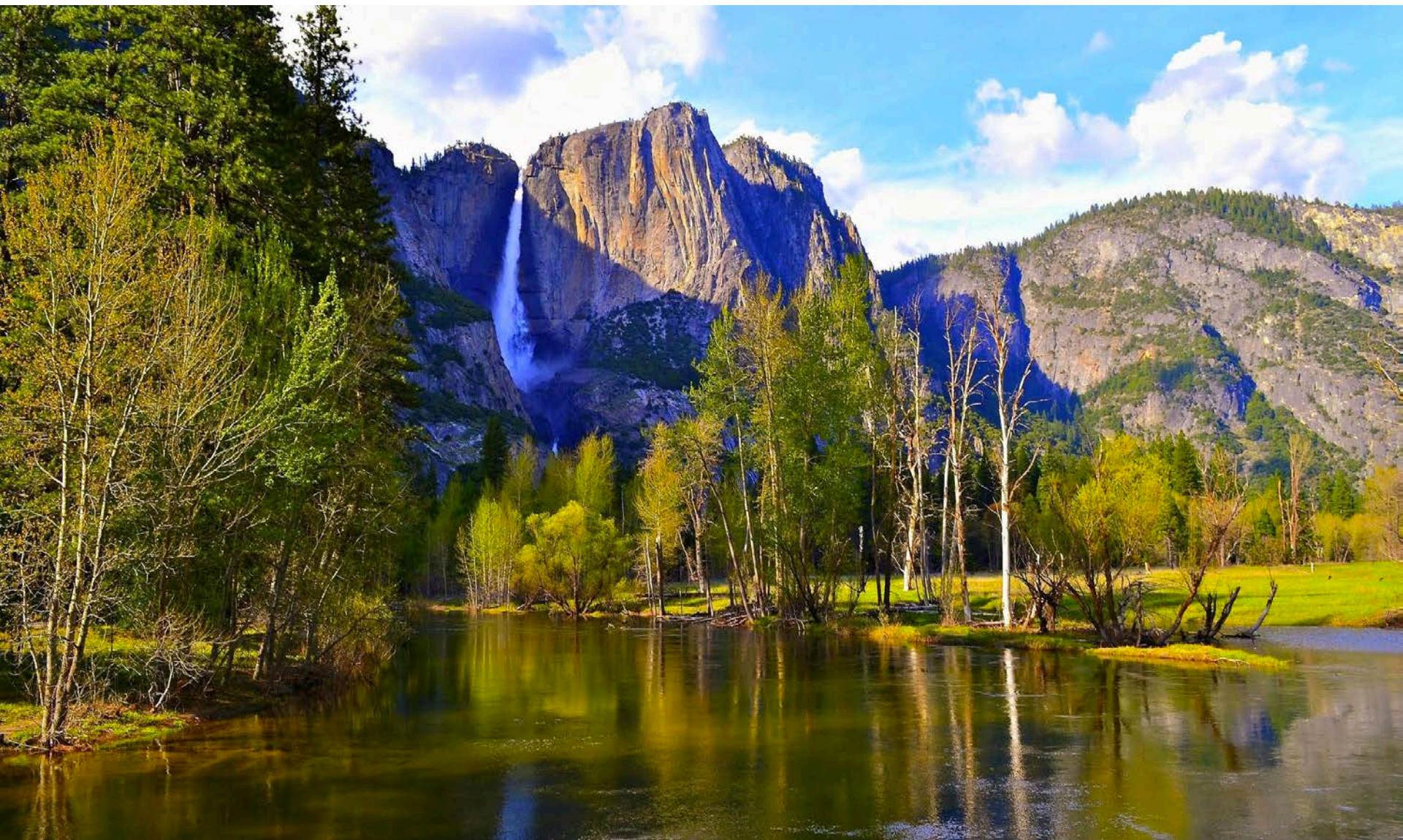
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Merced, California

- Located in Central valley, CA
- Merced - town with a population of about 90,000
- 110 miles southeast of San Francisco and 310 miles northwest of Los Angeles
- 70 miles west of Yosemite National Park



Yosemite National Park



University of California, Merced





University of California System

- 10 campuses
- 5 medical centers
- 3 national laboratories
- 150 academic disciplines
- 600 graduate degree programs
- 238,700 students
- 198,300 employees
- 1.7 million living alumni
- 61 Nobel laureates
- 20,000 UC extension courses

About UC Merced

- Hallmarks:
 - Interdisciplinary innovation
 - Diversity
 - Sustainability
 - Personal interaction
- Milestones:
 - 1988 Authorized by California Legislature
 - 2004 Open for graduate students
 - 2005 Opened for undergraduate students
- Three Schools
 - Engineering
 - Natural Sciences
 - Social Sciences, Humanities, Art

About UC Merced-continued

- Planned Schools
 - School of Management
 - School of Medicine
- Research Institutes
 - Health Sciences Research Institute
 - Sierra Nevada Research Institute
 - University of California Advanced Solar Technologies Institute
 - Center of Excellence for Unmanned Aircraft Systems Safety
 - Center for the Humanities
 - SpARC – Spatial Analysis & Research Center

Student Enrollment 2015

- 2015 Total: 6,685
 - Undergraduates: 6,237
 - Graduates: 448
- 2020 plan total: 10,000
 - Undergraduates: 9,000
 - Graduates: 1,000
- Majority from California

UC Merced in Design



Planning

Local Context

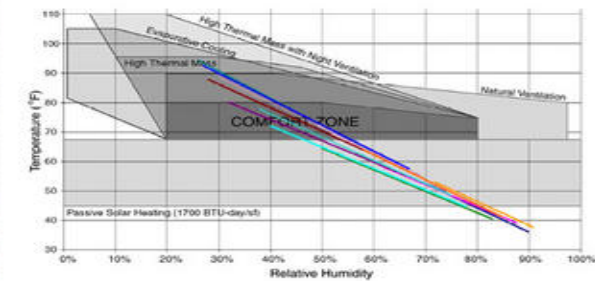
30,000 acres of permanently protected vernal pool grasslands surround the campus site as part of the plan's conservation effort



Site under construction and Sierra Nevada Mountains



Local Context



Bioclimatic Chart

UC Merced Opens in 2005



<http://www.sfgate.com/education/article/Finally-UC-opens-Merced-campus-1-000-students-2611081.php#photo-2097394>

UC Merced Campus Policy/Philosophy

- Connecting to nature
- All new construction for LEED Certification
- Triple Zero Commitment:
 - Zero net energy
 - Zero net waste
 - Zero net emissions

New Beginnings



www.highlandernews.org

Sustainability – a core value at UC Merced



<http://link.ucop.edu/2014/09/08/uc-to-make-large-purchase-of-solar-energy-partner-with-frontier-renewables/>

Solar Panels on Academic Building



UC Merced Library

- Name
 - Leo & Dottie Kolligian Library
- Architect
 - Executive Architect: SOM (Skidmore, Owings, & Merrill), San Francisco, California
 - Design Architect: Fernau and Hartman of Berkeley, California
 - Contractor: Swinerton Builders of San Francisco, California
- Sustainability
 - Save water by up to 30%
 - Solar energy and natural light

Sustainable features include:

- Installation of **water conserving** fixtures to save potable water by up to 30% beyond the required Energy Efficiency Standards in California (Title 24).
- An **HVAC (heating, cooling, fans & pumps) system** free of CFC-based refrigerants or HCFCs to reduce ozone depletion.
- Automatic regulation of **interior lighting** and HVAC systems to reduce energy costs by up to 47% beyond the required Energy Efficiency Standards in California (Title 24).
- Use of **buildings materials** containing recycled content e.g. structural steel, insulation and carpet (up to 13.61%) and recycling of construction waste (87%).
- Use of materials that minimize **indoor air** contaminants to be fully compliant with Volatile Organic Compounds (VOC) limits as required by the South Coast Air Quality Management District and Bay Area Air Quality Management District.
- **Daylit areas** maximized for comfortable work and study conditions and to further reduce energy costs.

UC Merced Library

- Built to meet LEED Silver standards
- Honorable mention for 2008 UC Berkeley Best Practices Award (Overall sustainable design)
- Winning LEED Gold 2007 in EBOM (Existing Buildings: Operations & Maintenance)
- Built to support sustainable learning environment

UC Merced Library



Sustainable strategies – long overhangs to provide shade



Lantern Café – social gathering



Natural lighting



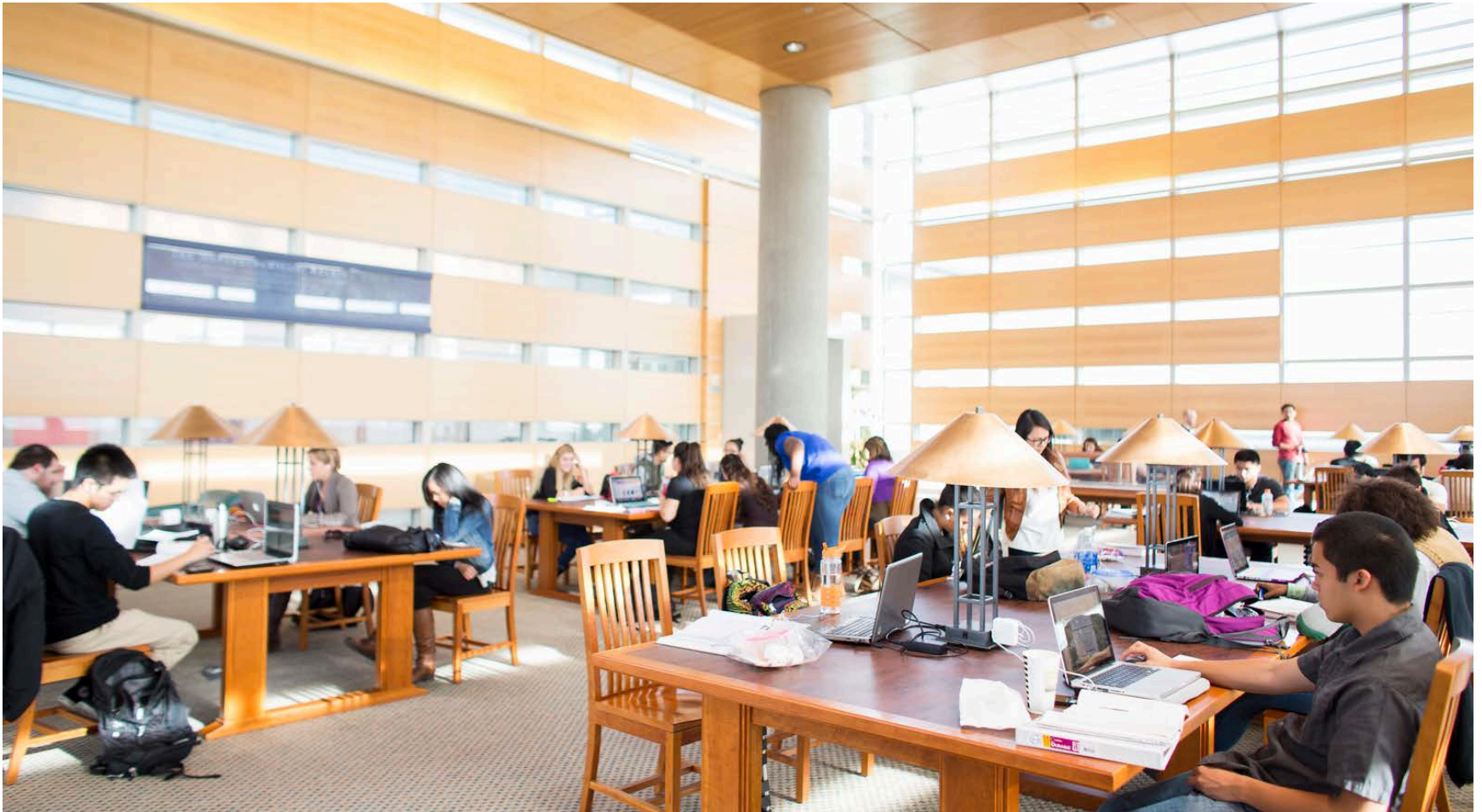
Open Space



Collaborative Workroom



MacFadden-Willis Reading Room – quiet space



Design Philosophy

- Aim – provide a welcoming learning space
- Open space, flexible furniture and novel policy
- Encourage students to personalize spaces
- Breaking traditions; focusing on innovation
- Vigorous demarcation between interior & exterior environments
- Policy to welcome food, drink and mobile phones throughout the building
- Open atmosphere and use of solar energy

Leadership in Energy and Environmental Design (LEED)

- Recognized green building rating system
- 4 certification levels
 - Certified
 - Silver
 - Gold
 - Platinum
- 9 areas to rate
 - Integrative process; location & transportation; sustainable sites; water efficiency; energy & atmosphere; materials & resources; indoor environmental quality; innovation; regional priority

Impact/Benefits

- LEED
 - Voluntary
 - Positive image
 - Energy & cost savings
 - Better health environment – air quality, daylight...
 - Benefits:
 - Better work/study environments
 - Students with higher test scores & lower absenteeism

“A Customer Story”

- “First LEED-certified Campus Naturally Puts Users First”
 - Sustainability – key design principles
 - Built-in Flexibility
 - Everyone is an Owner
 - “Sit down, talk, eat, learn.”
 - Two rules:
 - “If you spill something, let us know”
 - “Don’t use pizza for a bookmark!”

“A Customer Story.” Steelcase Newsletter, 12/2014.

<http://www.steelcase.com/content/uploads/2014/12/UniversityofCaliMerced.pdf>

First Lady Michelle Obama delivers first graduation address at UC Merced in 2009



<http://senate.universityofcalifornia.edu/news/source/ucmerced.june2009.html>

Continues to grow...



<http://www.mercedsunstar.com/news/local/education/uc-merced/article3291639.html>

Thank you!