

DAVIS CAMPUS

Physically the largest of the ten UC campuses with 5,300 acres, the Davis campus has 31,216 students, an annual research budget exceeding \$500 million, a comprehensive health sciences center, and 13 specialized research centers. The university offers more than 100 undergraduate majors in four colleges – Agricultural and Environmental Sciences, Biological Sciences, Engineering, and Letters and Science – and advanced degrees from five professional schools – Education, Law, Management, Medicine, and Veterinary Medicine. Graduate study and research opportunities are offered in nearly 90 programs along with a number of interdisciplinary graduate study programs. UC Davis has large populations of students and faculty engaged in laboratory-intensive science programs, a significant driver of facility and infrastructure needs in the capital program.

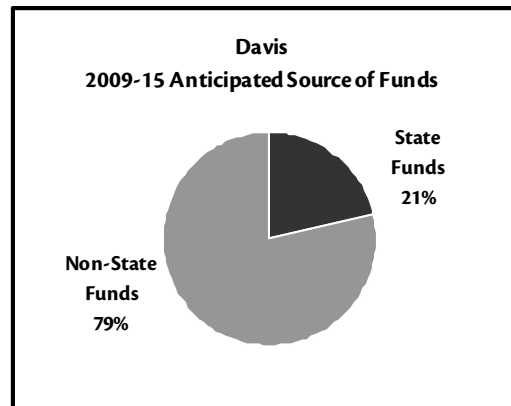
During the past decade, with rapid growth spurring the expansion of new facilities; the Davis campus has invested more than \$1.6 billion in capital construction. This level of investment, however, still has not kept pace with campus needs. There remains a need for additional facilities for departments that are not properly accommodated, and a substantial number of aging buildings require renovation or replacement. The campus’s unusually large complement of infrastructure systems requires substantial investment to provide increased capacity, system renewal, and deferred maintenance. High-priority initiatives focused on sustainability and reducing



Earth & Physical Sciences Building

the campus’s carbon footprint will also vie for scarce capital resources.

Complicating these needs is the uncertainty of current economic conditions. State funding for the University’s capital program has been substantially less than anticipated for the past two years. The campus has had to substitute scarce campus resources to address long-planned and time-critical infrastructure needs.



Because the prospects for continued State funding remain unclear in the near- to mid-term, the campus has initiated a new budget planning process, acknowledging that financial pressure on the campus’s operating and capital budgets will make absorbing further budget reductions impossible without systemic change. The outcome of this planning process will need to be aligned

DAVIS CAMPUS FACTS		
Established		1905
FTE Enrollment 2008-09		
Undergraduates		24,754
Graduate students		4,267
Health science students		2,195
Campus Land Area		5,993 acres
Campus Buildings		8.1 million ASF
Hospitals and Clinics		1.7 million ASF
Veterinary Hospital		211,611 ASF

with the updated academic plan currently being reviewed by the Davis division of the Academic Senate.

Capital Needs

The campus faces many challenges in this era of increasing uncertainty. Broadly, these challenges fall into four categories:

- Continued demand for new facilities.
- Need for major building renovations.
- Need for renewal of infrastructure systems.
- Necessary investments to achieve sustainability.

New Facilities

Despite the recent history of investment and the University's plan to reduce enrollments to align with funded levels, new academic facilities are still needed to accommodate growth that has already occurred. The Music Instruction and Recital Building has been deferred for two years because of reduced State funding, and Veterinary Medicine 3B has been similarly deferred for a year. In addition, health sciences programs need additional basic research facilities and facilities to support the new School of Nursing.

Additional non-State projects to accommodate past enrollment growth include expansion of the Memorial Union/Bookstore and the final phase of student housing which will complete the Tercero Residence Hall neighborhood program, part of a campus strategic plan to expand on-campus housing for second-year and transfer students.

The campus will also break ground next summer for a new Student Community Center to consolidate various student activities and services.

Building Renewal

The 2008-2009 academic year marked the Davis campus centennial. A source of immense pride for the campus, the event also highlighted one of the campus's significant challenges. The Davis campus (excluding satellite sites in Sacramento

and other outlying areas) supports more than 950 buildings, comprising nearly 10 million gross square feet with an estimated replacement value of \$5 billion. Forty percent of these buildings have been constructed within the past 25 years; the remaining 60% are older and many are in need of significant renewal and renovation to adequately serve campus needs.

Construction of new facilities in support of enrollment growth creates secondary effects when departments vacate older buildings. Re-use of older buildings raises many challenges including appropriateness of the space for different programs, deficiencies of aging building infrastructure, hazardous materials abatement, and mandatory upgrades to meet current building, seismic, and accessibility code standards.

Currently, Briggs Hall and the Chemistry Building remain the highest priorities for renewal projects. The campus is continuing its analyses of several aging campus buildings (e.g., Wickson Hall, Physics, Haring Hall) to determine feasibility, cost, and priority for renewal as part of a phased renewal strategy.

The campus also is undertaking an assessment of older facilities to re-evaluate their seismic condition. This process may result in additional needs for capital investment to correct identified hazards.

Another key element of building renewal is improvement in energy efficiency and a reduction of energy cost. Every prospective building renovation will be carefully evaluated to achieve this goal to the greatest extent possible. The campus is aggressively pursuing energy efficiency projects as part of the Strategic Energy Partnership program.

Infrastructure Renewal

Because the Davis campus evolved within a rural setting where basic urban infrastructure was not available, the campus owns and operates virtually all infrastructure support systems. These have a

cumulative estimated replacement value in excess of \$650 million. In addition to systems for steam and chilled water like those common to most other campuses, the Davis campus also operates its own water supply and distribution system, providing water for domestic use and for irrigation of landscaping and agricultural research lands. The campus also operates its own landfill, wastewater treatment plant, and electrical substation and distribution system, independent of the neighboring community. Although the existence of these systems frees the campus from many of the town-gown issues facing other UC campuses, they create additional demands for campus capital and operating resources. Lack of adequate funding has created a backlog of capital renewal and deferred-maintenance costs in excess of \$160 million, or nearly 25% of the estimated \$650 million current replacement value.



Installation of High-Efficiency Chiller

A substantial portion of the campus capital plan is aimed at renewing and upgrading the campus infrastructure systems. The plan includes major projects to improve campus chilled water and steam distribution, improve domestic water

quality and reliability, upgrade the wastewater collection and disposal system, and improve electrical system reliability. The interruption of State funding has resulted in postponement of plans for new construction and a redirection of campus funds to critical infrastructure needs.

Sustainability

Consistent with State law and Regents' policy, the campus attempts to address sustainability on many levels. Because consumption of electricity and natural gas is a major factor in the campus's



Dairy and Stadium

carbon footprint, new facilities will be designed and constructed with a particular focus on energy efficiency and use of the best available cost-effective technologies. Similarly, renovation of existing facilities will focus on strategies to reduce energy consumption. The campus also will seek to use energy from renewable sources to reduce environmental impacts.

The campus is in the process of preparing its *Climate Action Plan* to identify the various initiatives needed to comply with State law and Regents' policy. The plan should be complete by the end of 2009. The *Climate Action Plan* will likely require capital expenditures, although the plan currently includes only "place-holder" projects for carbon reduction and green-energy procurement until detailed projects and funding strategies can be developed.

DAVIS CAMPUS
(\$ in 000s)

SUMMARY

BUDGET YEAR	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
STATE FUNDING	500	42,151	45,939	67,046	39,411	63,086
NON-STATE FUNDING	296,535	300,457	94,250	49,000	40,000	172,750
TOTAL	297,035	342,608	140,189	116,046	79,411	235,836

STATE FUNDED PROJECTS

PROJECT NAME	PRIMARY OBJECTIVE				BUDGET YEAR						TOTAL PROJECT BUDGET	
	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14		2014-15
E & G - GENERAL CAMPUS												
Music Instruction and Recital Building			•	P	893 X		W 959 C 14,658 E 517 X					17,027
Electrical Improvements Phase 5			•				P 281 W 316 C 6,235					6,832
Campus Wastewater System Improvement Phase 1			•				P 223 W 212 C 4,272					4,707
Chilled Water System Improvements Phase 7A			•				P 276 W 262 C 5,216					5,754
Seismic Corrections, Thurman Laboratory		•					P 47 GF W 51 GF C 640 GF					738
Briggs Hall Safety Improvements & Building Renewal Phase 1		•					P 1,166 W 1,166	C 20,994				23,326
Chemistry Building Renovations Phase 1		•					P 650 W 550	C 9,799				10,999
Capital Renewal		•					4,971	4,971	4,971	4,971	4,971	24,855
Solano Water Treatment Plant		•						P 400 W 400 C 7,200				8,000
Infrastructure Renewal Phase 1		•						P 925	W 925 C 18,500			20,350
Building Renewal Phase 1		•						P 1,250	W 1,250 C 22,500			25,000
Chemistry Building Renovations Phases 2/3/4		•							P 475 W 500 C 9,025	P 475 W 500 C 9,025	P 375 W 425 C 7,650	28,450
Chilled Water System Improvements Phase 7A TES		•							P 375 W 375 C 7,500			8,250
Building Renewal Phase 2		•							P 650	W 650 C 13,500		14,800
Briggs Hall Safety Improvements & Building Renewal Phase 2		•								P 365 W 365 C 6,560		7,290
Building Priority 1		•								P 3,000 C 46,665	W 3,000	52,665
E & G - HEALTH SCIENCES												
Veterinary Medicine 3B		•		P	3,100		W 4,751 C 64,737 LRB C 19,643 G	E 1,540 G				93,771
Telemedicine Facilities Phase 2		•			E	500 PT						500

NON-STATE FUNDED PROJECTS

PROJECT NAME	PRIMARY OBJECTIVE				BUDGET YEAR						TOTAL PROJECT BUDGET	
	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14		2014-15
E & G - GENERAL CAMPUS												
Center for Neuroscience Renewal			•			5,000 X						5,000
Physics Building Renovation Project (NIST Grant Submission through ARRA), Davis			•			15,000 F 3,200 X						18,200
Chemical Biology Core Facility (G20 Grant Submission through ARRA), Davis			•			7,000 F						7,000
Campus Projects \$750K to \$5 M			•			14,000 X	14,000 X	14,000 X	14,000 X	14,000 X	14,000 X	84,000
Art Museum			•								15,000 LB 15,000 G	30,000
E & G - HEALTH SCIENCES												
Health Sciences Education Expansion			•			5,600 TBD	8,400 TBD 56,000 G					70,000
Center for Chronic Disease Research Project (C06 Grant Submission through ARRA), Sacramento			•			1,450 F	13,050 F					14,500
UC Davis Institute for Regenerative Cures Phase 3			•			14,800 F						14,800
Respiratory Disease Center (C06 Grant Submission through ARRA), Davis			•			15,000 F						15,000
Collaborative Neuroscience Imaging Center (C06 Grant Submission through ARRA), Davis			•			15,000 F 720 X						15,720
Vivarium Renovation & Improvement Project (G20 Grant Submission through ARRA), Sacramento			•			10,000 F						10,000
UC Davis Institute for Regenerative Cures Phase 4			•				9,400 TBD					9,400
Research IV			•				67,000 TBD					67,000
Institute (aka Governor's Hall Dry Lab) Research Institute			•				10,000 TBD					10,000
MIND Prevention and Treatment Research Building			•				20,000 TBD					20,000

NON-STATE FUNDED PROJECTS Continued

PROJECT NAME	PRIMARY OBJECTIVE				BUDGET YEAR						TOTAL PROJECT BUDGET	
	Enrollment Needs	Life Safety Deficiencies	Renewal/Modernization	New Program Initiatives	PREFUNDED	2009-10	2010-11	2011-12	2012-13	2013-14		2014-15
AUXILIARY AND FEE SUPPORTED FACILITIES												
MU/Bookstore Expansion			•			13,000 N 17,000 LB						30,000
Silo Renovation			•			3,000 N 6,000 LB						9,000
Segundo Life Safety Improvements		•				13,000 HSR						13,000
Student Affairs-Division Wide System Renewal			•			675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	675 N 1,325 UR	12,000
Student Housing Projects \$750K to \$5M			•			3,000 N	3,000 N	3,000 N	3,000 N	3,000 N	3,000 N	18,000
Castilian Hall Privatized Redevelopment Project			•				2,000	18,000				20,000
Tercero South Student Housing Phase III	•						7,800 HSR 30,200 LB					38,000
Student Affairs Recreation, MU, Unitrans Projects \$750K to \$5M			•			1,500 LB 1,500 N	2,000 F 300 LB 300 N					5,600
Rowing Facility			•					1,000 N 2,000 G 2,000 LB				5,000
Family & Graduate Housing Redevelopment			•						3,750 HSR	3,750 HSR	55,200 LB 12,300 HSR	75,000
Intercollegiate Athletics Projects \$750K to \$5M			•						P 4,000 G			4,000
Aggie Stadium Phase II			•								39,000 G	39,000
MEDICAL CENTER												
Parking Structure III			•		2,000 N	13,515 N 31,000 LB						46,515
North Addition			•			P 60,000 HR						60,000
2nd Floor Surgery Remodel			•			8,000 HR						8,000
Campus Approved Projects \$750K to \$5M			•			17,250 HR	22,250 HR	22,250 HR	22,250 HR	17,250 HR	17,250 HR	118,500
Emergency Power Upgrade Phase 2			•				10,000 HR					10,000
Acquisition			•				16,700 HR					16,700
Acquisition			•				4,000 HR					4,000
North / South Wing Demolition & Façade Reconstruction		•						30,000 HR				30,000

DAVIS CAMPUS 2010-11 State Capital Funding Request¹

Briggs Hall Safety Improvements & Building Renewal Phase 1

PW: \$2,332,000

This project will be the first phase of a multi-phase project that will renovate the seven-tower Briggs Hall to modernize the building's fire and life-safety, electrical, mechanical, and roofing systems. This first project phase will focus on five of the seven towers that comprise the building and will replace the fire alarm system, upgrade exit corridors and elevators, replace electrical transformers and primary electrical distribution equipment, install an emergency power system, and replace primary air handling mechanical equipment and controls. The project will be implemented in an occupied research facility and is structured to minimize the impact on programs. Total project cost is \$23,326,000.

Campus Wastewater System Improvements Phase 1

PWC: \$4,707,000

This project will increase the reliability and capacity of the campus wastewater system. The project will renew or replace two 38-year-old sanitary sewer lift stations and one undersized sanitary sewer lift station that have mechanical, electrical, and control systems which have insufficient capacity and have reached the end of their useful lives. Inefficient pipe routing from the lift stations to the Campus Waste Treatment Plant will be corrected. A third solids storage basin, an emergency overflow pipe, and a septage receiving station will be constructed. An electrical switchboard, motor-control center and automatic transfer switch also will be replaced as part of this project. Total project cost is \$4,707,000.

Capital Renewal Program

\$4,971,000

The multi-year Capital Renewal Program will correct fire and life-safety issues, replace mechanical and HVAC control systems, repair roads and paths, and replace roofs. The facility projects will be implemented primarily in central campus buildings with renewal needs, including Physics, Geology, Wickson, Enology, Bainer, Food Science and Technology, Veihmeyer, Chemistry Annex, Hutchison Hall, Walker Hall, Academic Surge, Cowell, Hunt Hall 2nd Floor, and Everson and Young Halls, as well as animal facilities throughout the campus. Total program cost is \$24,855,000.

Chemistry Building Renovations Phase 1

P: \$1,200,000

This project is the first of four phases to modernize building systems, correct code compliance deficiencies, improve energy efficiency, and renew finishes for the 42-year old Chemistry Building. The systems for the building are at the end of their useful lives and need to be renewed to support contemporary chemistry teaching and research. Phase 1 will design the fire protection, mechanical, and electrical systems and the seismic corrections for the entire building; implement seismic corrections in the majority of the building; and renovate the third floor for Synthetic Chemistry. The project will include improvements to the elevator controller, stairs railings, and a new fire-sprinkler main serve to the building. The project will be implemented in an occupied research facility and will be structured to minimize the impact on programs. Total project cost is \$10,999,000.

Chilled Water System Improvements

Phase 7A

PWC: \$5,754,000

This project will add a 2,500-ton high-efficiency electric chiller and cooling tower at the Central Heating and Cooling Plant. It will complete the chilled water production infrastructure at the plant and provide the associated equipment and improvements needed to support the new chiller, including the cooling tower and the integration of the new chiller into the Central Heating and Cooling Plant and Thermal Energy Storage Chilled Water Plan control system. This project is part of a phased strategy to increase reliability and efficiency in the chilled water system and to meet the capacity needs of newly constructed facilities and building projects for which State funding has been approved. Total project cost is \$5,754,000.

Electrical Improvements Phase 5

PWC: \$6,832,000

The project will increase the reliability of the distribution system by unloading and rebalancing over-loaded circuits in the central campus. The project will extend and upsize duct banks and conductors, add sectionalizing switches and fault interrupters, and modify the capacitor bank at

Transformer E. Further, the project will add new control integration at the Health Sciences District Switch Station. The overhead electric conductor on the west campus will be enlarged in an undersized section. This project is part of a phased strategy to provide adequate electrical capacity, improve system distribution infrastructure, and increase the reliability and efficiency of the campus electrical system. Total project cost is \$6,832,000.

Music Instruction and Recital Building

WCE: \$15,617,000

This project will construct a 10,100 ASF facility adjacent to the current music building. The facility will include a 325-seat recital hall designed to accommodate large music lecture classes, as well as small- to medium-sized instrumental and choral performances. The project will provide instructional studios, practice rooms, faculty offices, and administrative offices and will consolidate the music program and address the program's need for space with appropriate acoustical qualities. Total project cost is \$17,027,000.

¹ Descriptions of all other projects included in the *Davis Campus 2009-15 State and Non-State Capital Improvement Program* can be found online at the following site:

<http://budget.ucop.edu/capital/200915/2009-15BudgetforSNSCapitalImprovements.pdf>