

## 3. Planning Context

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**a. Section Overview**

This section provides an overview of the UCSC campus, including its history, original vision, physical setting, and achievements. It summarizes UCSC's role as part of the larger University of California system; as a nationally prominent research institution; as part of the greater Santa Cruz community; and as a physical place.

As a public academic institution, the University of California must be responsive to changing demographics, societal needs, technological developments, economic conditions, and resource constraints. Since the UCSC campus was established in 1963, California has developed into the world's fifth largest economy, with the most culturally and ethnically diverse population in the U.S.<sup>7</sup> The state's population has doubled to approximately 35.5 million,<sup>8</sup> and the enrollment of the UC system has more than tripled (from approximately 65,000 to more than 208,000).<sup>9</sup> The City and County of Santa Cruz have also undergone significant growth, and that expansion has been closely intertwined with the development of UCSC.

With California's growing population and changing demographics have come many pressing problems related to housing, transportation, resource use, and environmental quality. The past 40 years have also seen advances that could not have been foreseen by the campus's original planners, including the widespread use of computers, the rise of the Internet, advances in the technology fields, increased attention to sustainable growth, and an increasingly diverse population.

In light of these many changes, UCSC's success in realizing the major elements of its original 1963 Long Range Development Plan is a testament to the founders' vision, and it also underscores the success of UCSC's ongoing academic and planning efforts. The challenge of the 2005 LRDP is to develop a cohesive physical plan, while retaining the flexibility to address unexpected opportunities and changes.

7. State of California Commerce and Economic Development Program, 2003.

8. U.S. Census Bureau, 2004

9. UC Office of the President, Fall 2003



Aerial view of the UC Santa Cruz campus looking toward the City of Santa Cruz and Monterey Bay

## b. UC Santa Cruz and The University of California



**UC CAMPUSES**

Since its founding in 1868, the University of California has become one of the world's premier public universities, establishing ten distinct campuses united by excellence and strengthened by diversity. Within that rich tradition, the UC Santa Cruz campus was established in 1963. At the time, the vision for UCSC was quite experimental and unique to the system—to combine the University of California's renowned strengths in scholarship and research with a strong commitment to undergraduate education. Integral to that vision was a campus structure that offered students the best of both worlds—the resources and academic rigor of a major research university, combined with small residential colleges that provided supportive living and learning communities. The goal, in the words of Clark Kerr (then President of the University of California), was to create a campus that would "seem smaller even as it grows larger."

The site selected for the new campus was a 2,000-acre portion of the historic Cowell Ranch overlooking Santa Cruz and the Monterey Bay. Expansive meadows at the campus's main entrance gradually transition to the rugged redwood forests of the Santa Cruz mountains, providing an incomparable natural setting. Often called the most spectacular university site in the world, the campus landscape has played a vital role in shaping UCSC's physical and academic development.

As part of the University of California system, the UC Santa Cruz campus shares the overarching UC mission to provide teaching, research, and public service for the people of California. Under the California Master Plan for Education, UC draws students from the top 12.5 percent of California high school graduates, making it the state's premier institution of higher learning. In the UC system, growth is being handled in various ways, including the establishment of a new campus at Merced, increasing the number of summer classes, and offering more off-campus opportunities through programs like Education Abroad. In addition, the campuses are seeking to expand their regular school-year enrollments. Each campus is planning for a reasonable share of the increase.



UCSC campus site, circa 1962.  
Contemporary images from original  
negatives by Ansel Adams,  
UCR/California Museum of  
Photography, Sweeney/Rubin Ansel  
Adams Fiat Lux Collection, UC  
Riverside.

### c. Academic and Research Programs



UC Santa Cruz recognizes that excellent undergraduate education, strong graduate and professional programs, and dynamic research activities are all essential and mutually supportive elements of a comprehensive modern university. Strong graduate and professional programs support research initiatives and invigorate undergraduate education. Quality research programs provide optimal training for graduate students and also offer early research opportunities for undergraduates. Research excellence provides the intellectual vigor and academic stature necessary to attract top faculty and students.

Though UC Santa Cruz is a relatively young campus, it has already established itself as a world-class institution that balances its commitments to undergraduate education, graduate training, and research. Undergraduates pursue 52 majors in the humanities, physical and biological sciences, social sciences, arts, and engineering. Graduate students work toward certificates, master's degrees, or Ph.D. degrees in 33 academic fields. In 2003-04, the campus enrolled approximately 14,400 students (FTE)<sup>10</sup>, including 1,300 graduate students, with a total of 750 budgeted faculty FTE.

In order to increase the depth and breadth of disciplinary and interdisciplinary education and research, and hence advance in stature as public research university, the campus will need to expand existing graduate and research programs as well as develop new programs, schools and research institutes. This will enable advances in basic and applied research, increase opportunities for graduate training, and provide research experiences for undergraduates. Through the direct benefits of research and scholarship at UCSC and by training new generations of leaders, the campus will continue to serve the people of California.

10. Includes approximately 300 students enrolled in off-campus programs.



#### **d. UC Santa Cruz Physical Planning History**

In the 1950s, the University of California initiated an extensive search for new campus sites. The historic Cowell Ranch near Santa Cruz was chosen in 1961, and a distinguished team of designers and planners set to work on the new campus. The first UCSC LRDP was completed in 1963, and construction of the campus began in 1964.

##### **1963 LONG-RANGE DEVELOPMENT PLAN**

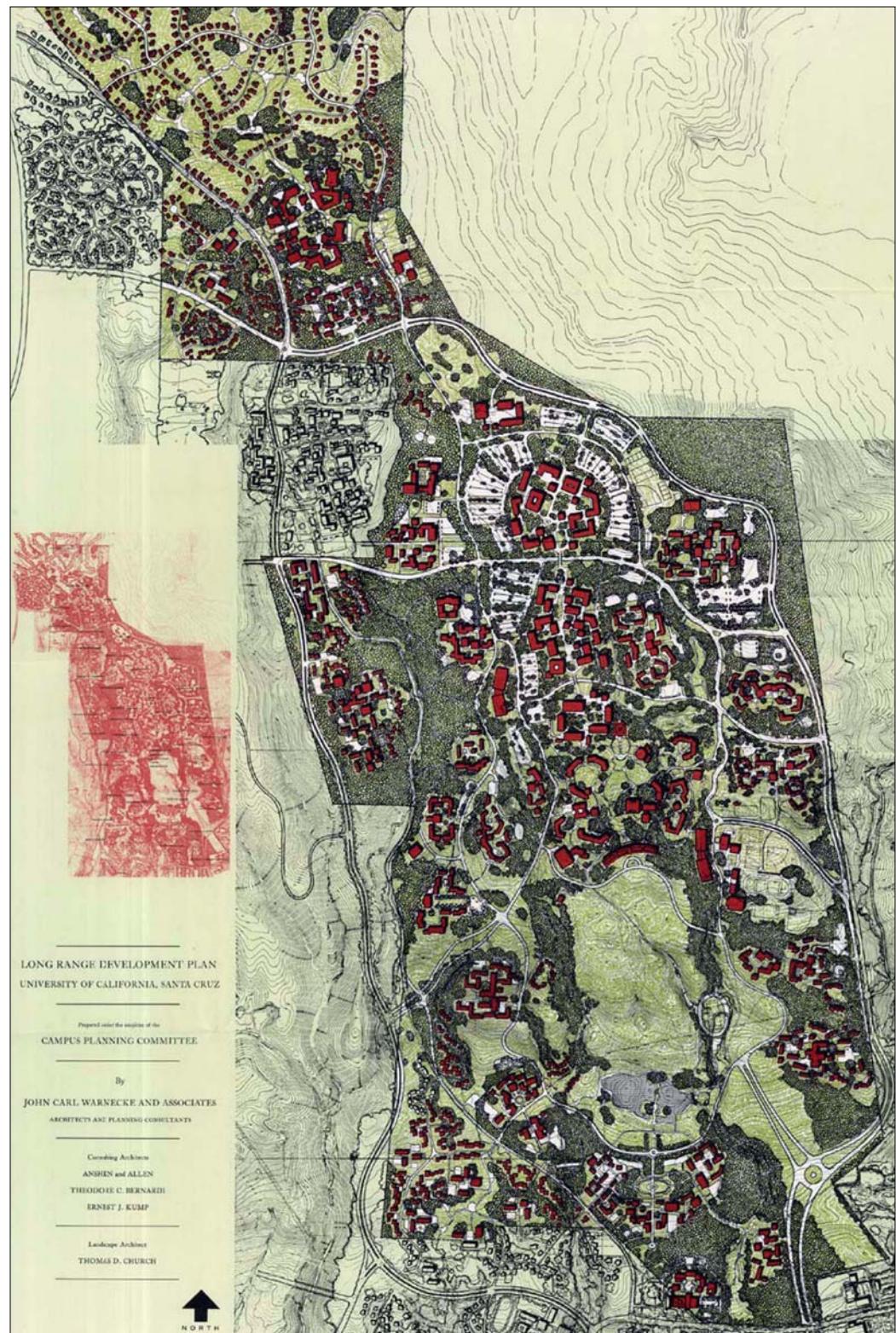
UCSC's 1963 *Long Range Development Plan* responded to the opportunities and challenges presented by both the new campus's innovative collegiate structure and the large and geographically diverse Cowell Ranch site. In their thoughtful approach to this task, the early planners established the basic values and stewardship guidelines that continue to guide campus development.

The 1963 LRDP assumed that the campus would grow to an enrollment of 27,500 by 1990 to accommodate the anticipated "baby boom" and accelerated migration into California. It described a campus that would eventually consist of up to 20 residential colleges and ten professional schools extending the full length and breadth of the campus. It called for housing at least 50 percent of the student body and faculty on or near the campus.

The 1963 plan defined the following planning premises:

- A moderately dense central academic and research core encircled by lower density development consisting of self-contained colleges and professional schools
- A commitment to environmental stewardship, including the protection of significant natural features (such as the expansive meadow at the base of the campus) and establishment of natural reserve areas
- Ongoing cooperation with the surrounding communities with the goal of "mutually advantageous growth"

**FIGURE 1**  
1963 LRDP LAND-USE PLAN



UCSC campus site, circa 1962.  
Contemporary image from original  
negative by Ansel Adams,  
UCR/California Museum of  
Photography, Sweeney/Rubin Ansel  
Adams Fiat Lux Collection, UC  
Riverside.



#### **1971 LONG-RANGE DEVELOPMENT PLAN**

The first revision of the original LRDP was adopted in 1971. Like the earlier document, it assumed an eventual enrollment of 27,500, but suggested a longer time frame for achieving that target (2000 or beyond). The 1971 plan also called for a denser central core to increase community cohesion, pedestrian convenience, and environmental protection.

The 1971 LRDP identified significant natural resource areas. It also designated three large Inclusion Areas to accommodate activities that, while not directly related to academic activities of the campus, would provide facilities or services advantageous to the functioning of the campus community.

**1978 LONG-RANGE DEVELOPMENT PLAN**

In the late 1970s, state budget cutbacks and reduced enrollment forecasts resulted in a scaling back of UCSC's expansion plans. The *1978 Long Range Development Plan* was set in a framework of more limited projected growth than either of the previous plans. It called for intensification of development in the campus core to enable UCSC to accommodate an enrollment of 7,500.

Following the lead of its 1971 predecessor, the 1978 plan identified three large Inclusion Areas and added a fourth. Proposed building sites were tightly circumscribed, and much of the remainder of the campus was identified as Reserve Areas. Energy conservation, preservation of the natural environment, and close community relationships were cited as key campus planning objectives.

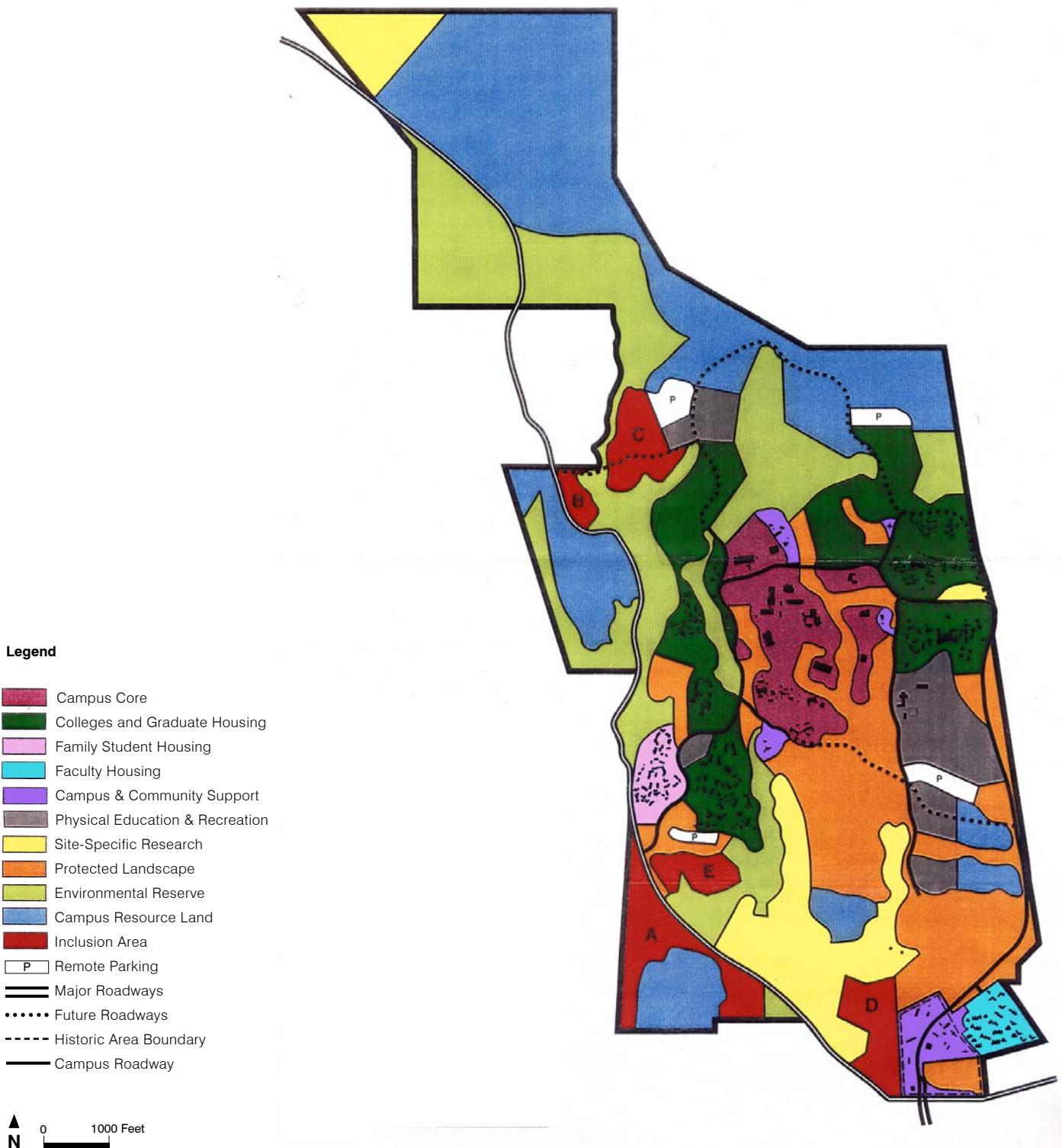
**1988 LONG-RANGE DEVELOPMENT PLAN**

UC Santa Cruz's most recent LRDP, prepared in 1988, was predicated on the campus's 1985 *Twenty-Year Academic Plan*, which established objectives through 2004-05. The academic plan projected an enrollment of 15,000 (including 15 to 20 percent graduate students) by 2004-05. The 1988 LRDP reaffirmed UCSC's commitment to:

- A concentrated, pedestrian-friendly academic/research campus core, surrounded by distinctive residential colleges
- The role of the colleges as important centers of intellectual and residential life
- Preservation of the natural setting

The 1988 LRDP assumed 7.5 million gross square feet of building area; 12 residential colleges; and up to 8,400 parking spaces. It also set out general guidelines that limited development in certain natural areas from development, including establishment of the Campus Environmental Reserve, designed to protect natural features of particular teaching and research value to the campus. Protected Landscapes were established to protect certain environmental resources, including wildlife corridors and vegetation with ecological or aesthetic importance (see Figure 2, 1988 LRDP Land-Use Plan). Campus Resource Land, located primarily in the northern portion of the campus, was designated for possible future development, but was to be maintained almost entirely in its natural state under the terms of the 1988 LRDP.

**FIGURE 2**  
**1988 LRDPLAND-USE PLAN**



### e. UC Santa Cruz as Part of the Regional Community



Regional Context

The UC Santa Cruz campus is located within Santa Cruz County at the northern end of the Monterey Bay, approximately 70 miles south of San Francisco, 30 miles southwest of San Jose, and 30 miles north of Monterey. The campus is surrounded on three sides by open space which is protected in its natural state and administered by California State Parks and the City of Santa Cruz. Of UCSC's 10.6-mile perimeter, 1.75 miles adjoin the developed city. Approximately 53 percent of campus land, including most of the developed area, is located within the Santa Cruz city limits, and the remainder of the campus lies in the unincorporated area of Santa Cruz County (see Figure 3, Campus Boundaries).

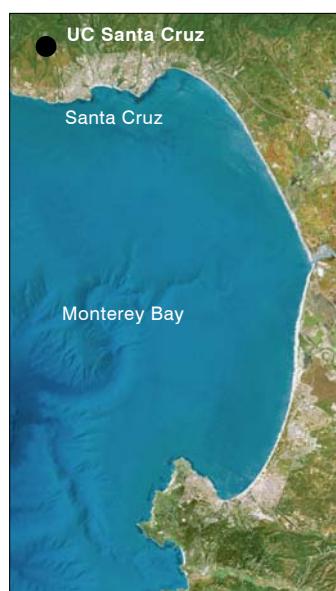
As a constitutionally autonomous state entity, the University of California and its campuses are governed by state law and Regental policy, and are not subject to local land-use regulations. UC Santa Cruz is an integral member of the regional community, linked by physical proximity, economic interdependence, shared resources and infrastructure, as well as by a rich shared cultural life. UCSC is therefore committed to working closely with local municipalities to address the potential impacts of campus growth.

The University contributes significantly to the region's economy. UC Santa Cruz is the largest single employer in Santa Cruz County. The total economic impact of UCSC is much greater than the sum of direct expenditures made by UCSC and its affiliated organizations and populations. Each dollar spent locally cycles through the area economy, generating additional income and employment.

UCSC's 1988 LRDP called for increased planning consultation and review with the City of Santa Cruz, and that recommendation has led to formal "town-gown" collaboration. Regular meetings are held between the chancellor and the mayor to ensure overall planning coordination. City, county, and UCSC staff work together on an ongoing basis to address specific issues affecting the community.

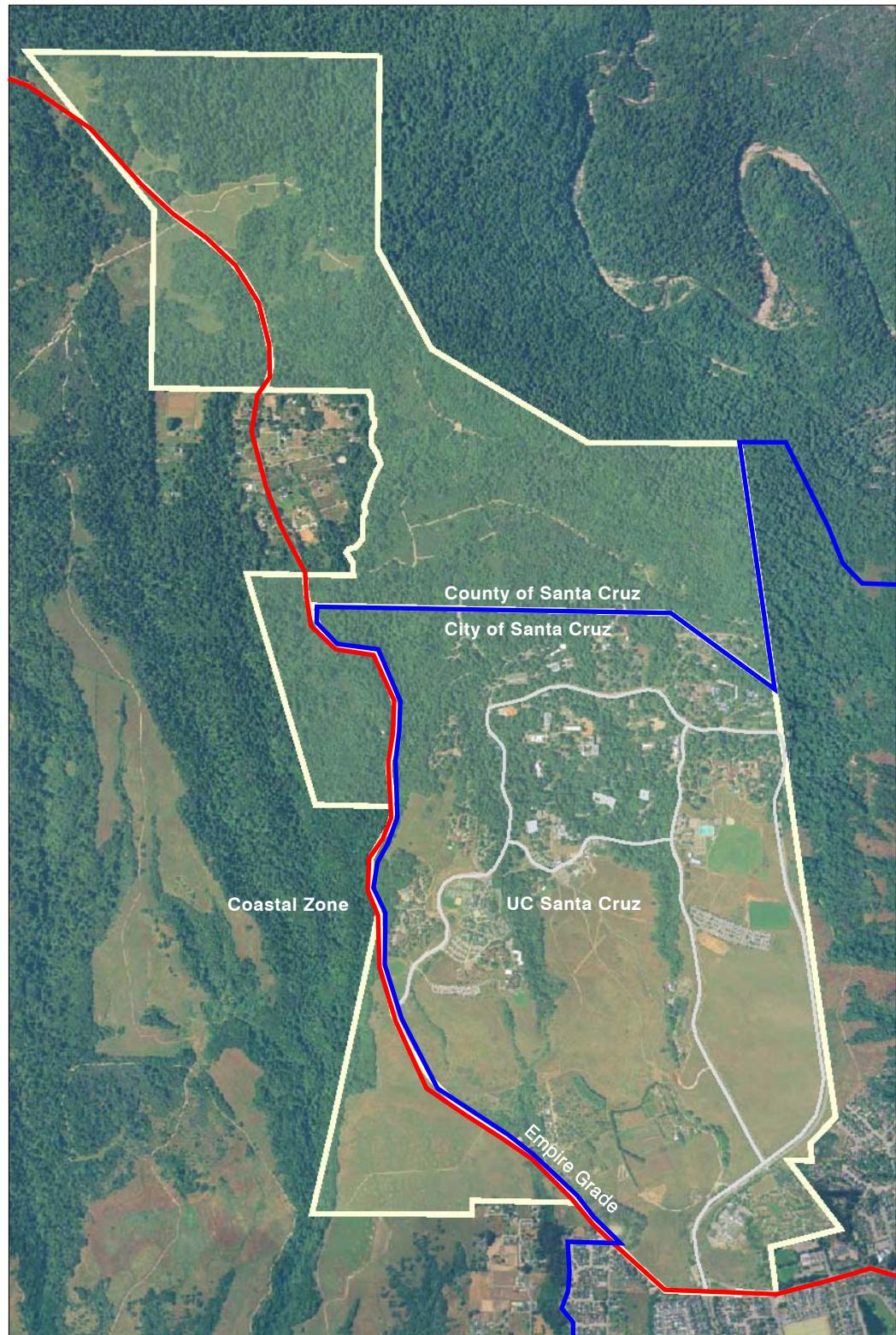
As the regional population increases, addressing the following key issues is essential to the planning processes of UCSC and the city:

- Resources and infrastructure capacity (such as water, sewer, and utilities)
- Housing
- Traffic and transportation



UCSC site on Monterey Bay

**FIGURE 3**  
**CAMPUS BOUNDARIES**



## **RESOURCES AND INFRASTRUCTURE**

UC Santa Cruz receives water and sewer treatment services from the City of Santa Cruz. Water supply has been identified as a key issue. While the City of Santa Cruz water supply system is essentially the same as in 1960, the service population has increased 190 percent and is expected to increase. In normal and wet years, the water supply system is capable of meeting the needs of the current population, but even without population increases, the system is highly vulnerable to shortages in drought years.<sup>11</sup>

UCSC's 1988 LRDP introduced a two-pronged approach to water issues—conservation to reduce water usage and University Assistance Measures to help the city improve its infrastructure. In calendar year 2003, UCSC's water usage was approximately 19 percent greater than in 1986–87, a period during which enrollment increased by 60 percent.

## **HOUSING**

Rapidly increasing housing demand along much of the California coast (including Santa Cruz), coupled with limited supplies and a shortage of vacant land, make housing supply and affordability critical issues for the entire region. UCSC growth increases the pressure on the housing supply, and high housing costs make it more difficult to recruit students, faculty, and staff.

UCSC has worked to develop the housing needed to keep pace with enrollments. Between 1996–97 and 2005–06, the campus will have added housing for 2,153 students and 144 units for employee housing.

11. City of Santa Cruz 2005-2020 Draft General Plan and Coastal Program Background Report, March 2004



**FIGURE 4**  
**NEIGHBORHOOD SETTING**



## **TRAFFIC AND TRANSPORTATION**

One of the most critical planning challenges facing the region is that the number of automobile trips continues to increase faster than the growth of the population.<sup>12</sup> Projected increases in UCSC's population will increase pressure on citywide transportation systems, especially on the west side of Santa Cruz. The UCSC campus is served by a handful of streets which pass through residential neighborhoods, as shown in Figure 4, Neighborhood Setting. Further, the campus core is located more than a mile from the main entrance, and dramatic elevation changes over that distance present challenges for those traveling to the campus by bicycle or foot.

UCSC has taken an aggressive approach to reducing automobile use. It has one of the most successful university based alternative transportation programs in the country, with more than 55 percent of all "person trips"<sup>13</sup> to and from the campus made via some alternative to a single occupant vehicle. This success has been achieved through a broad range of transportation management strategies, including convenient shuttle and public transportation services; a network of pedestrian and bicycle paths; parking management; and a program of incentives to reduce employee and student automobile use.

Parking is a closely related issue and remains a challenge for the UCSC campus. Parking restrictions (such as not providing parking permits for first and second-year campus resident students) have been effective in limiting on-campus automobile use, but have also resulted in the use of neighboring residential streets for parking during the day as well as for some long-term and overnight use. The City has instituted a residential parking permit program in a number of neighborhoods near the campus.

12. City of Santa Cruz 2005-2020 Draft General Plan and Coastal Program Background Report, March 2004

13. UCSC Transportation and Parking Services Modal-mix Studies 2003-04



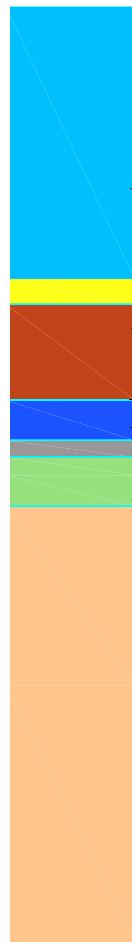
## f. Existing and Approved Development

The developed area of the UC Santa Cruz campus (existing and approved)<sup>14</sup> includes 3,113,000 assignable square feet (ASF) and 4,825,000 gross square feet (GSF)<sup>15</sup> in 420 separate buildings within 116 building complexes. This includes existing buildings and projects approved and funded after adoption of the 1988 LRD<sup>P</sup>. Campus space is classified into eight major program categories, shown below.

**TABLE 1**  
**EXISTING AND APPROVED**  
**CAMPUS DEVELOPMENT**

**TOTAL ON-CAMPUS**  
**SPACE, EXISTING AND**  
**APPROVED**

Program Classification	ASF	GSF
Instruction and Research (I & R).....	913,900	1,522,500
Organized Research Units & Organized Research Activities .....	86,700	136,500
Academic Support .....	322,000	459,000
Public Services .....	1,400	2,400
Student Services .....	134,700	200,500
Physical Education and Recreation.....	56,800	82,000
Institutional Operations .....	164,000	428,300
Student and Employee Housing .....	1,419,600	1,973,000
Other .....	13,900	20,800
<b>Total On-Campus Space .....</b>	<b>3,113,000</b>	<b>4,825,000</b>



Existing and approved on-campus space is shown by building and program classification in Appendix A. On-campus space is supplemented with space the campus owns or currently leases off-campus, consisting of 471,000 ASF and 618,000 GSF in 96 buildings within 29 complexes.

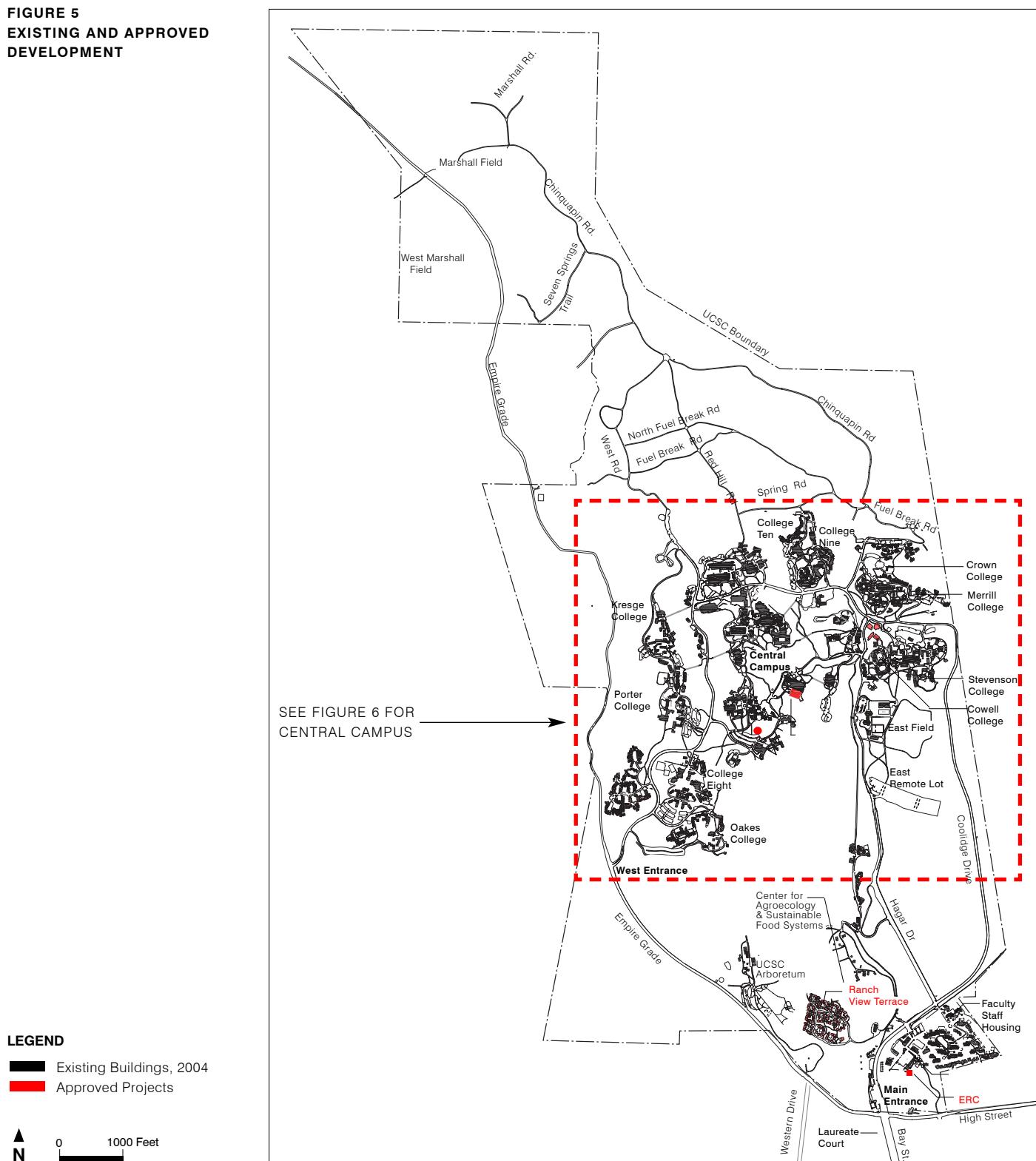
The amount of space that can be used for programs (functions) or assigned to occupants is known as assignable square feet. Gross square feet is the sum of all areas, finished and unfinished, on all floors of an enclosed structure. It includes the assignable square feet, circulation and mechanical areas, custodial services and public toilet areas, structural elements, and one-half of covered unenclosed areas.

14. See Appendix A

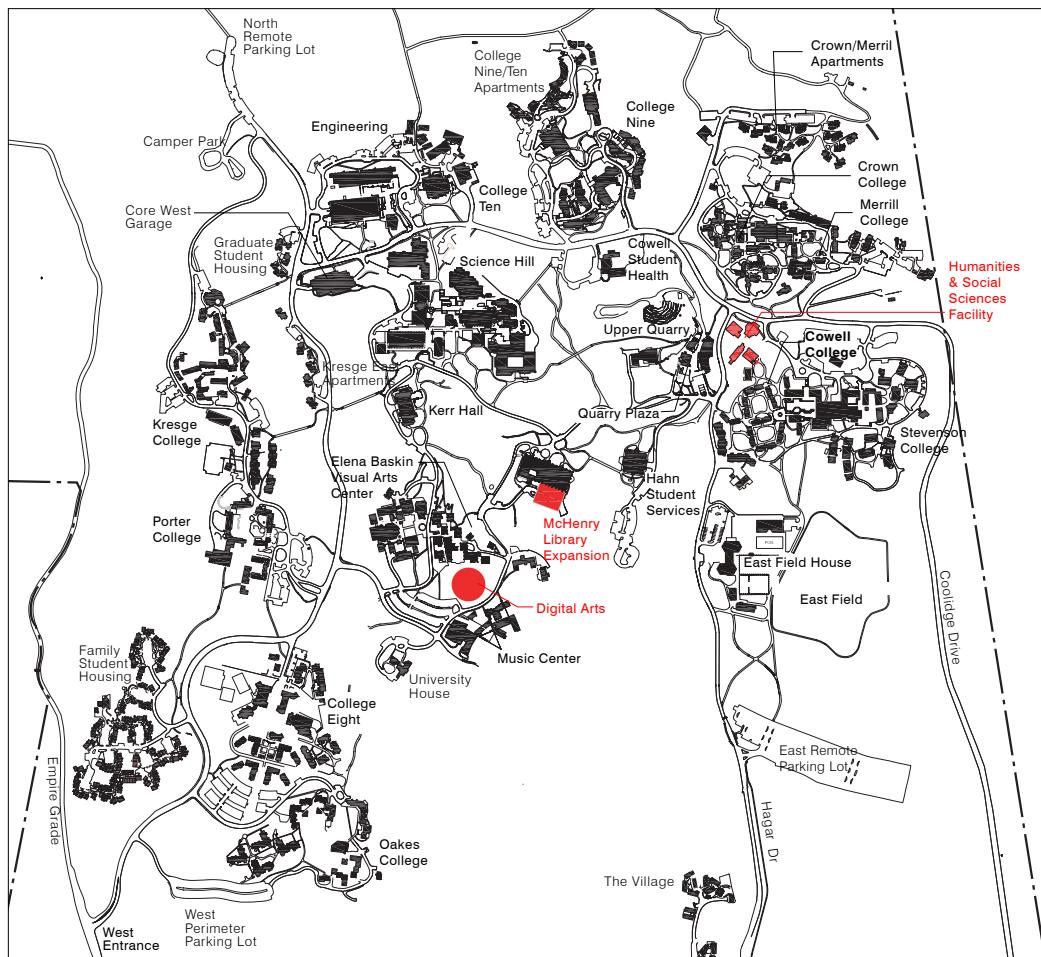
15. 1988 LRD<sup>P</sup> allowed up to 7.5 million gsf.



**FIGURE 5**  
**EXISTING AND APPROVED  
DEVELOPMENT**



**FIGURE 6**  
**EXISTING AND APPROVED**  
**DEVELOPMENT:**  
**CENTRAL CAMPUS**



**g. Campus Physical Setting**

The 2,000-acre UCSC campus is located 70 miles south of San Francisco in the County of Santa Cruz between the northwest edge of the City of Santa Cruz and the Santa Cruz Mountains. The city borders the northern edge of the Monterey Bay (see Figure 7, Physical Context), which is part of the Monterey Bay National Marine Sanctuary, a federally protected marine environment. Both the Marine Sanctuary and the Santa Cruz Mountains are known for their habitat richness and diversity.

The campus is bounded by Pogonip City Park and Henry Cowell Redwoods State Park to the east, private land holdings to the north, and Wilder Ranch State Park to the west. As a central link between the city and state parks, the campus recognizes its role in conserving open space for habitat continuity. UCSC and the state and city parks have worked collectively to maintain recreation links, monitor rare species, and create and manage restoration areas.

**FIGURE 7  
PHYSICAL CONTEXT**



**FIGURE 8**  
OPEN SPACE CONTEXT



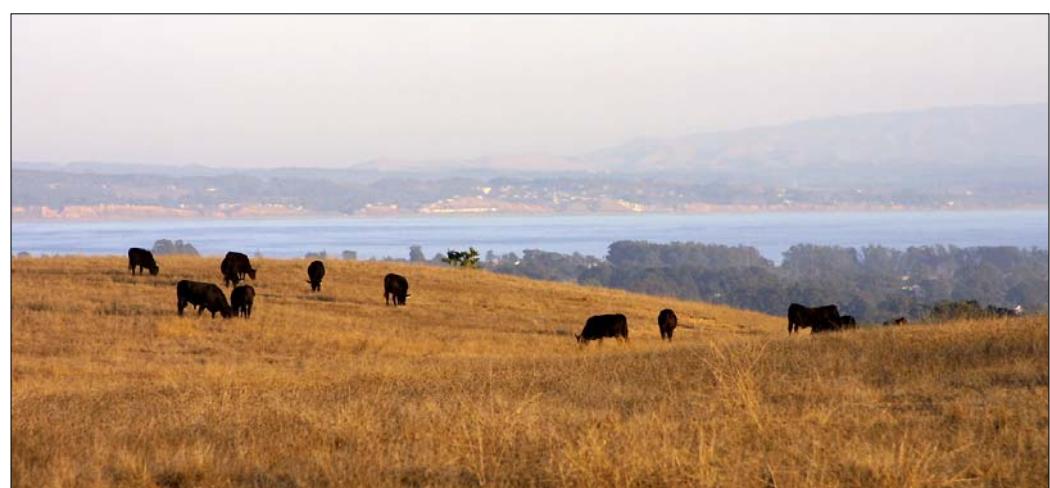
In addition to its role as part of a regional ecosystem, UCSC is an important link in the local network of recreational trails and fire roads. The University Connection (known as U-Con) Trail provides a critical east-west link across the northern campus for the Cowell Wilder Regional Trail, used by hikers, bicyclists, and equestrians (see Figure 8, Open Space Context).

#### **CAMPUS LANDSCAPE AND OPEN SPACE**

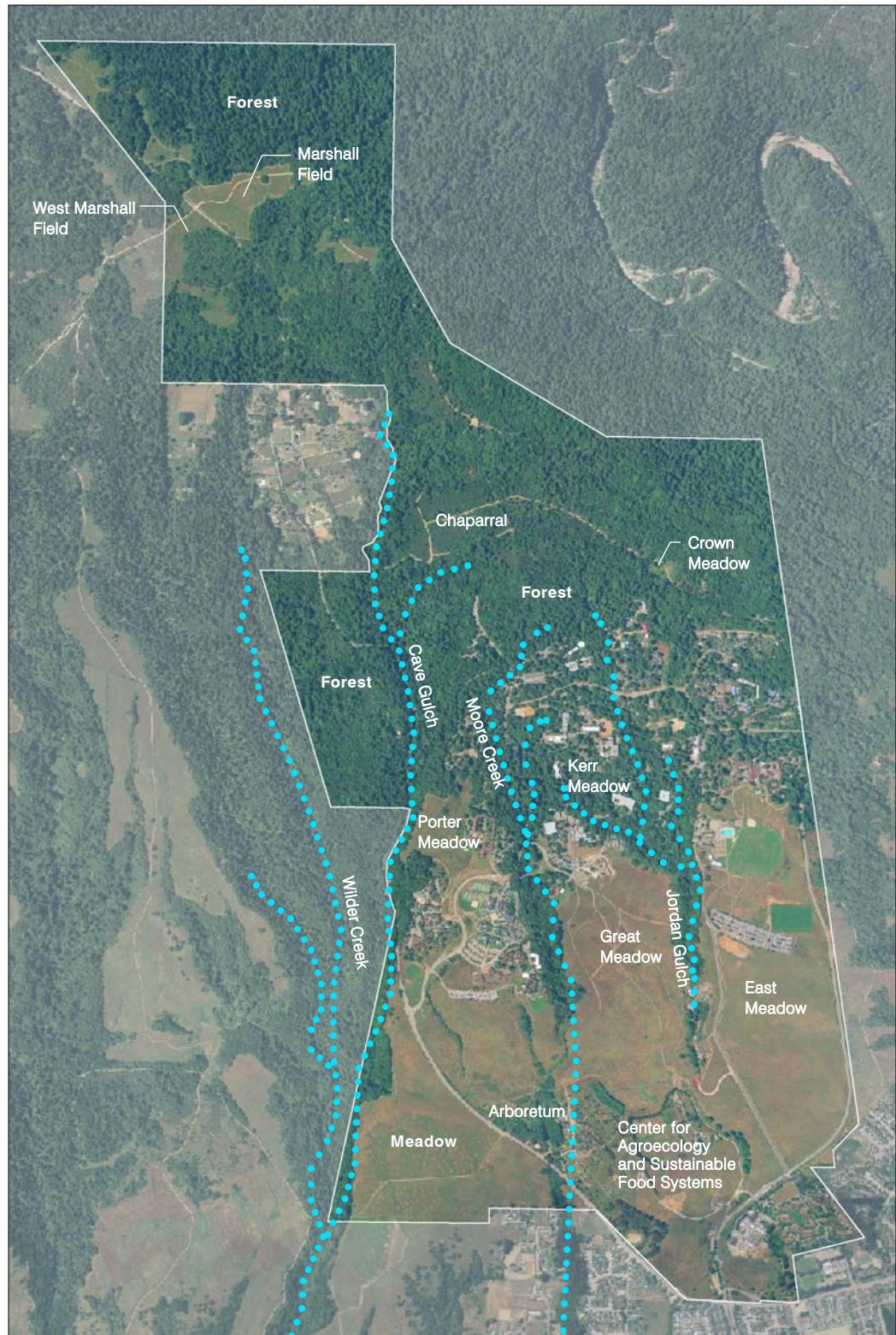
The natural landscape is the formative, iconic element of the UCSC campus and the dominant component of its powerful array of open spaces. Connected by paths and bridges, building clusters are carefully integrated into the topographic and natural features of the campus—between the ravines, hidden within the forest, or lining the edges of the meadows (see Figure 9, Campus Natural Features).

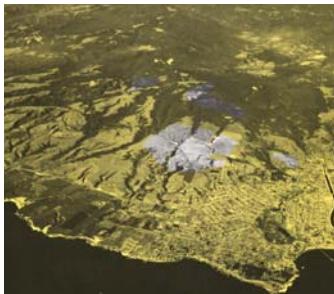
Courtyards are the most common type of developed open space. Small and varied in form, they are highly used social spaces, often closely associated with a college or academic discipline, and occasionally with food service. There are relatively few large gathering areas, such as Quarry Amphitheater, or Quarry Plaza. Field recreation areas include the playing fields north of the East Meadow and the smaller informal fields such as those near College Eight.

A web of pathways connects the many parts of the campus creating a pedestrian experience that is rich and varied. A journey might follow a sidewalk, a forest path, a bridge, a service road, or a pedestrian courtyard street as one passes through an episodic sequence of developed and natural areas. North/South routes cover significant changes in elevation. While east/West routes follow the contours, they must traverse the gulches and are marked by a series of pedestrian bridges, as Figure 10 shows.



**FIGURE 9**  
**CAMPUS NATURAL FEATURES**

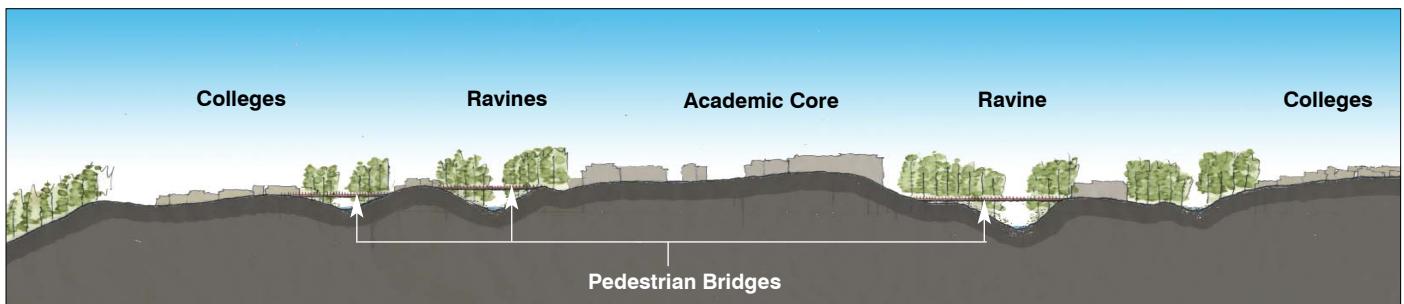




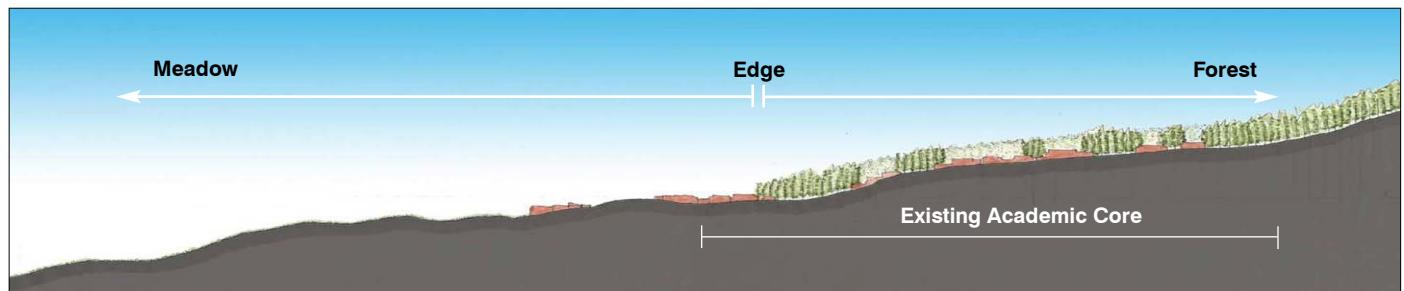
University of California South Central Coast Campus Site Selection Study  
1959

## TOPOGRAPHY

Topography is a determining factor in the development of the UC Santa Cruz campus. It presents a clear structure that creates the drama of the landscape and directs past and future campus development. From the main entrance at the south, the land elevation rises nearly 900 feet to the far north end of the campus in a series of stepped terraces. Several drainages have scoured ravines down the slope, which divide the central and south campus into three zones in the east/west direction. In places at Moore Creek, Jordan Gulch, and Cave Gulch, these ravines are as much as 70 feet deep and 350 feet wide. The combination of the terraced land and the ravines make the campus setting unique and poses particular challenges for circulation and siting of development.



**FIGURE 10**  
**SITE SECTION ACROSS RAVINES (EAST/WEST)**

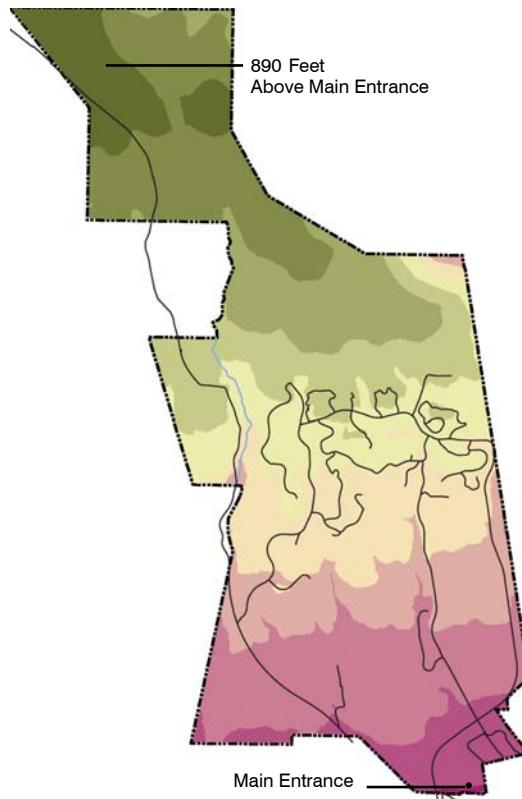


**FIGURE 11**  
**SITE SECTION DOWN SLOPE (NORTH/SOUTH)**

**FIGURE 12  
ELEVATION (LEFT)**

**Legend**

[Color Box]	301-400 Feet
[Color Box]	401-500 Feet
[Color Box]	501-600 Feet
[Color Box]	601-700 Feet
[Color Box]	701-800 Feet
[Color Box]	801-900 Feet
[Color Box]	901-1000 Feet
[Color Box]	1001-1100 Feet
[Color Box]	1101-1200 Feet



**FIGURE 13 (RIGHT)  
SLOPES**

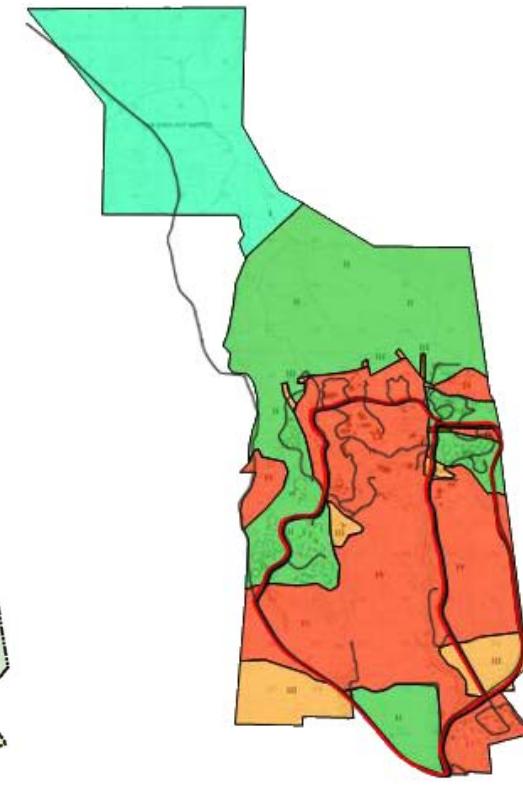
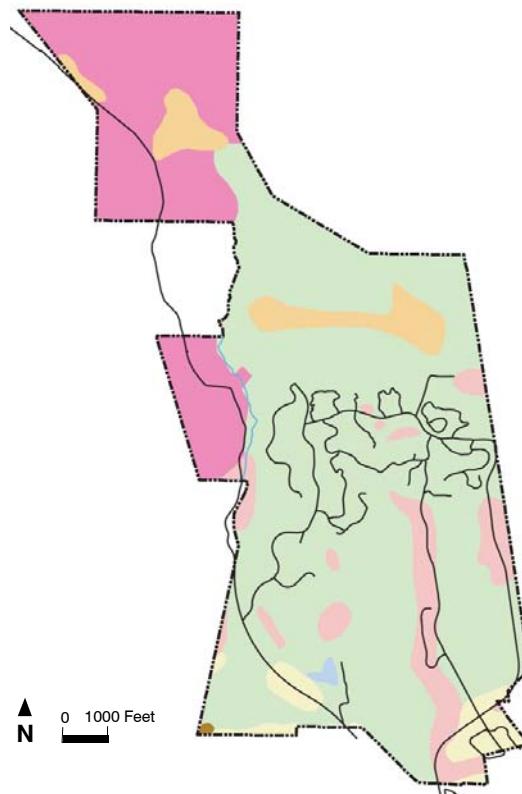
**Legend**

[Color Box]	0 - 5 %
[Color Box]	5 - 10 %
[Color Box]	10 - 20 %
[Color Box]	20 - 30 %
[Color Box]	30 - 40 %
[Color Box]	Greater than 40 %

**FIGURE 14 (LEFT)  
GEOLOGY**

**Legend**

[Color Box]	Qcu – Coastal terrace deposit, undifferentiated (Pleistocene)
[Color Box]	Tsm – Santa Margarita Sandstone (Upper Miocene)
[Color Box]	ga – Granite and adamellite (Cretaceous)
[Color Box]	m – Marble (Mesozoic or Paleozoic)
[Color Box]	qd – Quartz diorite (Cretaceous)
[Color Box]	sch – Metasedimentary rocks (Mesozoic or Paleozoic)



**FIGURE 15 (RIGHT)  
KARST HAZARD MAP**

**Legend**

[Color Box]	Zone I: No hazard
[Color Box]	Zone II: Low hazard
[Color Box]	Zone III: Moderate hazard
[Color Box]	Zone IV: High hazard

N 0 1000 Feet

## **GEOLOGY**

The UCSC campus lies on the southeastern end of Ben Lomond Mountain, a major ridge of the Santa Cruz Mountains. Ben Lomond Mountain rises in a series of step-like terraces from sea level in the City of Santa Cruz to an elevation of almost 2,600 feet at the summit to the northwest. The UCSC campus spans a number of these marine terraces.

Campus bedrock consists of two major types: marble terrane that underlies most of the campus, including the central, developed portion of campus, and a granitic terrane that underlies the area north of the Cave Gulch neighborhood and forms intrusions into marble bedrock in several north-central and southern campus locations (See Figure 15, Geology). Karst features, including ravines, sinkholes, and caverns, are readily apparent in the lower and central campus, developed as a result of the dissolution of marble along fractures, joints, and faults. This condition can have important implications for building development. Figure 16 shows how the hazard of encountering karst formations varies throughout the campus.

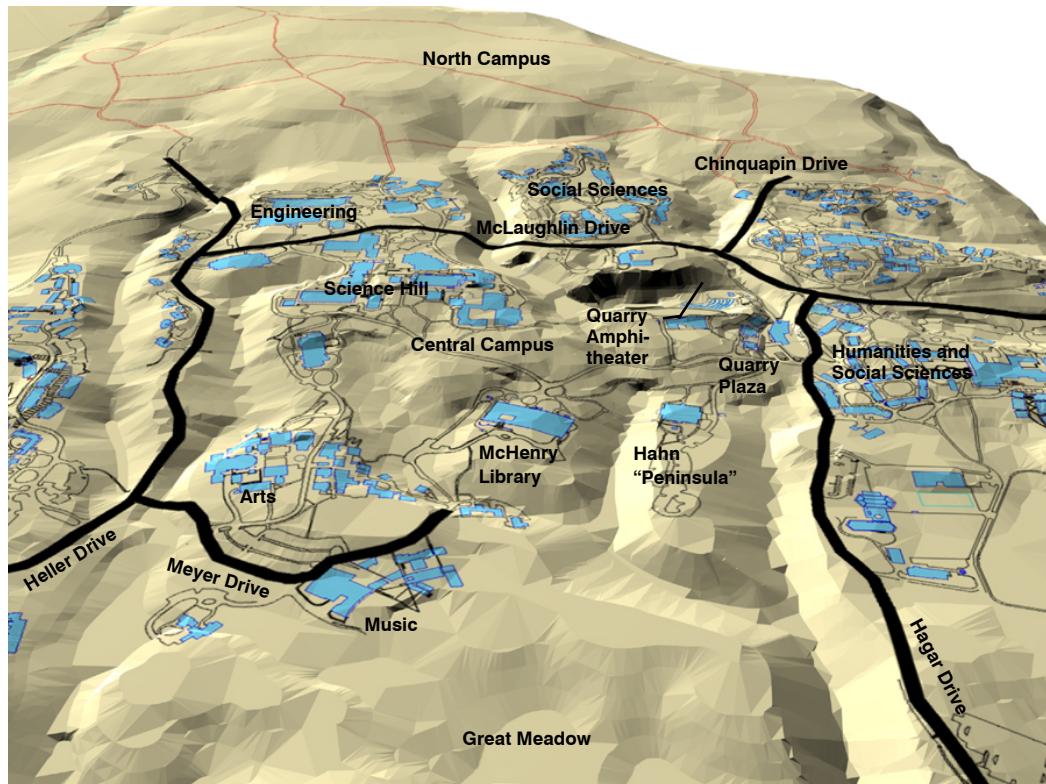
"Mima mounds" are an unusual geologic feature found in the northwestern and southwestern portions of the campus. These low, flattened mounds, 30 to 60 feet in diameter, are separated from each other by depressions that form vernal pools during the rainy season, and which remain moist into mid-summer.

Although campus bedrock is highly faulted, there is no evidence that these faults have been active since Holocene times (within the last 10,000 years). Earthquake fault rupture and soil liquefaction are not considered campus geologic hazards. However, campus structures could be expected to undergo severe shaking during earthquakes centered on the nearby San Andreas fault (12 miles to the northeast of the campus) or on the San Gregorio-Hosgri fault system (10 miles to the southwest).

## **SOILS**

Campus soils are characteristically derived from underlying rock. Calera soils are marble-derived clay loams found in wooded areas of the western campus. Granite-derived Diamond Springs and Holland loams located in the northern campus and the area immediately south of the Cave Gulch neighborhood support grasses, oaks, and pines. Pinto Loams, derived from Quaternary marine deposits, are commonly found in the lower campus meadows, with scattered patches occurring in the central campus meadows and forests. Sandy loams, derived from sandstone, are found in northern campus lands supporting chaparral, oaks, and pines. Felton loams, derived from mica schists, support both grasslands and forests in the central campus.

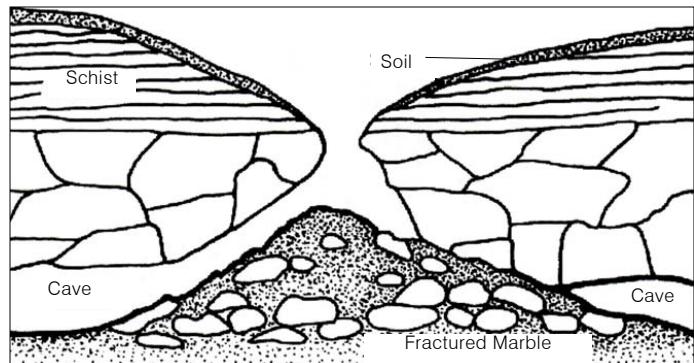
**FIGURE 16**  
TOPOGRAPHY OF THE DEVELOPED CAMPUS



**Sinkhole**



**Sinkhole Formation**



## **HYDROLOGY**

It is estimated that the mean annual runoff from the campus varies from eight inches on the lower campus to sixteen inches on the upper campus. In general, drainage on the upper campus is by surface runoff, although some rainfall in that area is captured by a porous sandstone formation that in turn supplies springs and seeps on and off campus. Surface runoff on much of the central and lower campus is significantly less than runoff on other nearby lands due to the subsurface drainage system provided by campus sinkholes and subterranean solution channels.

## **CLIMATE**

The campus climate is characterized by warm, dry summers and mild, rainy winters. High temperatures and low precipitation are the norm from approximately April through August. The months from November through March are dominated by cooler temperatures and heavy rains. Though winters are typically mild, colder winds from inland regions with more continental climates can result in short-term cold snaps. Both summer and winter temperatures are moderated by the marine influence, and summer fog is a common occurrence. Winds are generally northwesterly and seldom reach severe intensities; in addition, much of the campus is sheltered from prevailing winds by hills and trees.

Rainfall averages approximately 30 inches per year. Over the past 25 years, it has ranged from 15 inches in 1989 to 59.8 inches in 1983. Rainfall levels vary considerably on campus with elevation; the lower campus receives an average 30 inches of rainfall annually, while the upper campus receives 40 to 45 inches. Average evapotranspiration is an estimated 36.6 inches.<sup>16</sup>

## **VEGETATION**

Four broadly defined vegetation communities predominate on campus: grasslands, redwood forest, mixed evergreen forest, and chaparral. Other localized and ecologically unusual or regionally uncommon plant communities in the north campus include coastal prairie and vegetation habitats that have developed around forest springs or seeps.

The grasslands on campus are primarily found on the lower campus, which is dominated by rolling, gently sloping meadows divided by two north/south canyons with densely forested slopes. These meadows, originally composed of native perennial bunch grasses, now contain mostly introduced Mediterranean annual grasses. The patches of native grasslands in this area are synonymous with the coastal prairie mentioned above, and are considered a sensitive habitat type. Meadows or openings in the redwood forests of the north campus also support coastal prairie communities.



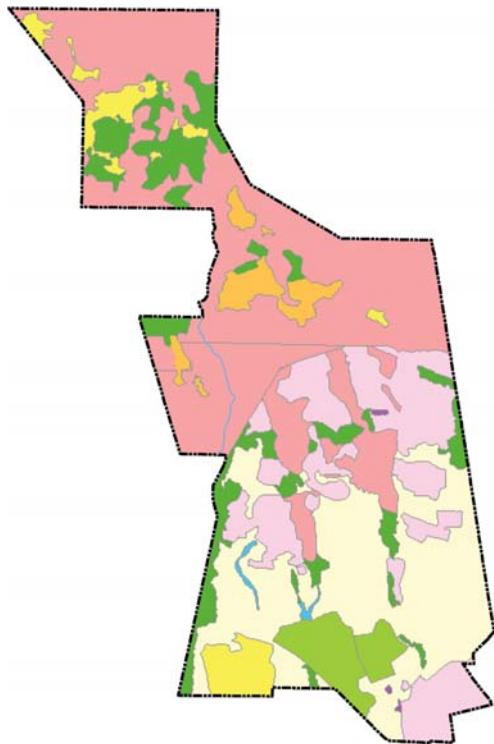
16. Urban Water Management Plan 2001

**FIGURE 17 (LEFT)**  
**VEGETATION**

**Legend**

- [Orange] Chaparral - Manzanita
- [Pink] Developed
- [Green] Evergreen
- [Light Green] Arboretum/Irrigated Farm areas
- [Yellow] Native Coastal Grasses
- [Purple] Northern Coastal Scrub
- [Light Yellow] Non-Native Grassland
- [Blue] Riparian
- [Red] Redwood

▲ 0 1000 Feet  
N



**FIGURE 18 (RIGHT)**  
**CAMPUS WATERSHEDS**

**Legend**

- Watersheds

Closed canopy redwood forests predominate in areas between buildings in the developed core campus, with patches of grassland and mixed evergreen vegetation also occurring. Mixed evergreen and redwood forests, with an associated highly diverse understory, are found on the steeply sloped land immediately to the north of the developed campus, and numerous springs and seeps in the area support distinctive assemblages of plant species. Virtually all of the redwoods are second-growth trees, since old-growth stands were heavily logged from early settlement times until the early 1900s. Mixed evergreen forests on campus are dominated by coast live oak, California bay, tanbark oak, madrone, and Douglas fir.

A band of chaparral vegetation occurs north of the developed campus. This community is dominated by dense large shrub stands of manzanita, with ceanothus, oaks, and knobcone pine also present. The remainder of the undeveloped north campus lands is vegetated primarily with mixed evergreen forests, although stands of dwarf redwood forest, redwood forests, and grasslands also occur.

**Santa Cruz Manzanita**



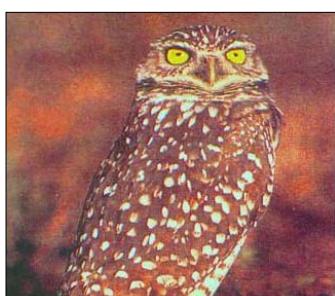
One plant listed by the State of California as endangered, San Francisco popcorn flower (*Plagiobothrys diffusus*), is reported to occur in meadows on the north campus. No other rare or endangered plant species listed by the state or under the federal Endangered Species Act have been found on campus, although three, Santa Cruz manzanita (*Arctostaphylos andersonii*), Point Reyes horkelia (*Horkelia marinensis*), and Marsh

Microseris (*Microseris paludosa*), fit the definition of “endangered, rare, or threatened” species under the California Environmental Quality Act (CEQA). The Santa Cruz manzanita is widespread but unevenly distributed in the chaparral communities of the north campus area. The Point Reyes horkelia occurs in scattered patches in Marshall Field area. Marsh microseris was found in the south part of the campus in 1986 but not located in 2002 surveys.

#### **WILDLIFE**

The UCSC campus supports a wide range of wildlife. Various wildlife species are associated with the distinct plant communities found on campus. Campus mixed evergreen forests support a range of mammals, reptiles, cave species, and birds. The redwood forests are visited by many wildlife species. Campus grasslands support rodents, rabbits, and insects, which in turn are preyed upon by birds (including raptors), bats, and terrestrial predators (including coyotes and mountain lions). The chaparral supports reptiles, small birds, and predators such as the bobcat and the gray fox.

Top: Ohlone tiger beetle  
Middle: California red-legged frog  
Bottom: Western burrowing owl



Two important bird species which are known to occur on campus in limited numbers are the golden eagle (*Aquila chrysaetos*), protected by federal law and found foraging primarily in the southern end of campus near large open grasslands, and the Western burrowing owl (*Athene canicularia*), a state species of special concern. Both of these species are found in association with the open grasslands in the southern portion of the campus.

The Ohlone tiger beetle (*Cicindela ohlone*) is a federally endangered species and occurs in scattered patches of coastal prairie located on both the northern campus and in the mima mound area of the southern campus. The California red-legged frog (*Rana aurora draytonii*) is a federally threatened species that breeds in a pond at the Arboretum and occurs in the Moore Creek drainages.

Special-status species known or expected to occur in the UCSC region include the monarch butterfly (*Danaus plexippus*: wintering habitat protected by California Department of Fish and Game), and raptors such as the bald eagle (*Haliaeetus leucocephalus*: federally protected); white-tailed kite (*Elanus leucurus*: FSC); American peregrine falcon (*Falco peregrinus*: federal species of concern (FSC) and state endangered); Cooper's hawk (*Accipiter cooperi*: California species of special concern CSC); sharp-shinned hawk (*Accipiter striatus*: CSC); northern harrier (*Circus cyaneus*: CSC); and merlin (*Falco columbarius*: CSC). With the exception of merlin, which are only expected to occur in the area during winter, all of these raptors could potentially be found nesting and foraging within the UCSC campus area in grasslands (or other open country), riparian, open water, and/or wetland habitats.



### **SCENIC RESOURCES**

UCSC occupies a magnificent site that provides a broad spectrum of visual images. Long-range views are impressive and memorable, both from the forest edge on the upper campus looking downward to the ocean and the city and from the lower campus looking upward. From most viewpoints along the forest edge on the upper campus, sightlines are unbroken and sweeping. Prominent upper campus viewpoints are the Cowell College plaza, Baskin Visual Arts, University House, the knoll at Porter College, and the field at Oakes College. From the lower campus, points along Empire Grade, Coolidge Drive, and Hagar Drive offer panoramic views across the grasslands to the forested background. In addition, the campus is regarded as an important visual resource for the city, especially as an open backdrop to the developed areas of western Santa Cruz. Short-range views on campus are influenced by topography and vegetation type, with the visual impression formed not from broad panoramas but from relatively close-range detail.



### **PREHISTORIC CULTURAL RESOURCES**

There is evidence of human activity on the campus lands as far back as 1,200 to 5,000 years ago. While the seasonal hunter-gatherer lifestyle of the Ohlone people left little in the way of built or structural artifacts, the Ohlone did practice centuries of yearly brush burning. This practice encouraged the growth of preferred food sources and reduced the risk of larger forest fires. It also created the strongly delineated line between forest and meadow that remains the seemingly natural landscape we see today. There are other signs



of the Ohlone people's presence throughout the campus lands, including shell middens, small artifacts, burial grounds, and village sites. While this LRDP has avoided known cultural resources areas when planning development sites, they are not mapped here in an effort to protect them from disturbance.

#### HISTORIC CULTURAL RESOURCES



In 1851 Isaac Davis and Albion Jordan purchased a 160-acre site in Santa Cruz County, near the corner of what is now known as the intersection of Bay and High Streets, and constructed three limestone processing kilns still extant on the UCSC campus. Lime was a primary ingredient for mortar and plaster, important building materials in the nineteenth century.



A successful limestone operation hinged on several factors including a good supply of limestone, a local fuel supply for the kilns, a means of transportation, and most importantly a local market in which to sell the products. Santa Cruz was an ideal location, offering excellent limestone deposits, extensive strands of redwood trees, proximity to water and land routes, as well as access to a port city, San Francisco. By the 1880s, the Davis and Cowell Lime Company was the largest limestone operation of its kind on the West Coast, employing 175 workers.



By the beginning of the twentieth century lime was in lesser demand, and its production costs were increasing. Several factors contributed to the decline of lime production, including deforestation. As a result of commercial lumbering and lime production, no large virgin redwood trees have been identified on campus.

