The stewardship of the UC Davis campus history and the rich collection of natural and cultural resources is a fundamental task for the LRDP. This chapter is organized into three sections. The first section briefly describes campus history. The second section pertains to the ecological history of campus and the stewardship of ecosystems going forward. The third section pertains to the conservation of natural resources and the management of campus infrastructure and built systems.

Together, these three sections represent the baseline conditions of this particular place and establish the physical, climatic and ecological context to which the LRDP responds. From this contextual frame, the LRDP establishes important planning objectives for the stewardship of campus history as well as natural and cultural resources.
CAMPUS HISTORY

In the years before European settlement of the Americas, the southwest portion of the Sacramento Valley and the northeast uplands of the Sacramento San Joaquin Delta were home to the Patwin tribe. Though their numbers were radically reduced by disease and dislocation associated with Spanish and early Californian settlers, the Patwin tribal community still remains in the valley.

In the mid to late nineteenth century, Davisville emerged as a small agricultural town with a modest train depot located between Sacramento and Oakland. In 1905, Judge Peter J. Shields sponsored legislation supporting the formation of a new university farm for the University of California, then located solely in Berkeley. Davisville won the competition for the University Farm in 1906, and the doors of what would become UC Davis opened in 1908. The University Farm evolved into the College of Agriculture; the Veterinary School was added in 1948; and in 1959, the Davis campus became a comprehensive university of its own, the University of California, Davis.
In the more than one hundred years since the founding of the University Farm, UC Davis has grown to be a top tier public research university, with an international reputation for leadership in sustainability. Today, UC Davis has four colleges and six professional schools with more than a quarter million alumni living in California.

UC DAVIS

- College of Agricultural and Environmental Sciences
- College of Biological Sciences
- College of Engineering
- College of Letters and Science
- School of Law
- School of Graduate School of Management
- School of Medicine
- Betty Irene Moore School of Nursing
- School of Veterinary Medicine
- School of Education
Today’s main campus includes more than 5,000 acres, most of which is dedicated to agricultural research (Figure 2.1). The 900-acre Central campus, the area located between State Route 113, Interstate 80 and the City of Davis, is where the vast majority of teaching and research activities are located. For reference, the UC Berkeley core campus is almost 200 acres.

Over the next hundred years the impact of new technologies, new social structures and climate change will ripple throughout the regional landscape, socially, economically and environmentally. The LRDP establishes a flexible framework for future development, as UC Davis continues to evolve in response to new societal challenges and new forms of knowledge acquisition.

**FIGURE 2.1** The four main areas of campus
CHAPTER 2: CAMPUS HISTORY AND STEWARDSHIP

CAMPUS HISTORY PLANNING OBJECTIVES

- RESPECTFULLY ACKNOWLEDGE NATIVE AMERICAN HERITAGE
  In collaboration with local tribes and the campus Native American communities, look for opportunities to express Native American heritage in the campus landscape and respectfully acknowledge the early inhabitants of this region. Provide active stewardship of potential archeological resources through ongoing protection, evaluation and consultation.

- CELEBRATE CAMPUS HISTORY
  Preserve and interpret campus history for future generations; integrate appropriate and relevant narratives about architecture and the greater history of UC Davis into the campus fabric to enrich the sense of place; preserve heritage cork oak alleys and historical olive tree windrows as key elements of the cultural landscape.

- FOSTER A SENSE OF PLACE
  As campus continues to evolve, foster a sense of place through the preservation of key visual elements; protect campus landmarks, such as the iconic water towers, as significant visual elements that provide continuity with the passage of time; preserve significant views, such as the views across the expansive agricultural fields towards the Blue Ridge Berryessa Mountains, as important elements of campus visual character.

- PRESERVE A GRACIOUS CAMPUS LANDSCAPE
  Preserve the formal and informal campus landscape as a network of public space for the greater community; create architectural forms that frame gracious open spaces and welcome people to campus; provide appropriately scaled transitions between building entrances and the greater campus landscape.

- FOSTER RESILIENT LANDSCAPES
  Curate a more resilient campus landscape that responds to the challenges of climate change; convert underutilized lawn areas into drought tolerant plant communities that require less water for irrigation and offer greater resiliency.

Picnic Day Parade (1916)
CHAPTER 2: CAMPUS HISTORY AND STEWARDSHIP

ECOSYSTEMS

For millennia Putah Creek transferred soil particles from the inner coast range to the flat lands of the Sacramento Valley and created one of the richest depositories of soil on earth. During flood events, as Putah Creek overwhelmed the riverbanks, the muddy waters inundated surrounding areas, and deposited fertile soil across the valley floor.

This geomorphic dynamic established the subtle topography of the valley and created the circumstances for two plant communities to evolve and thrive throughout the region. Riparian forests and oak savanna grasslands were the predominant environmental habitats and represent the conservation platform for ecosystem preservation and restoration.

The diversion of Putah Creek in the late nineteenth century and the construction of Monticello Dam in the middle of the twentieth century significantly altered the geomorphological process of Putah Creek. While the prevalence of flooding has been greatly reduced and the natural environment greatly altered, the natural forces that shaped pre-settlement ecosystems persist, albeit within a new context that is significantly altered and affected by human intervention.

The Putah Creek Riparian Reserve and associated oak woodlands and native grasslands on Russell Ranch are the primary lands on campus dedicated to the stewardship of these specific plant communities and native ecosystems. The other, more altered landscapes throughout campus also serve as habitat and support ecosystem functions.

Campus contains over two thousand acres of agriculture that also support various ecosystems. While cropland is a dynamic landscape feature that is frequently altered throughout the year, these cultivated lands function as habitat for some wildlife species such as songbirds and small rodents. Orchards and vineyards also function as habitat, albeit it with relatively low value for native wildlife due to the lack of understory vegetation that would provide food and cover for wildlife to thrive.

The formal landscapes of the Core Campus and other developed portions of campus function as an urban habitat and offer ecosystem benefits as well. Campus has a rich collection of cork oaks and other ornamental trees that have been...
planted over the past hundred years. A few heritage oaks remain as signposts to the distant past, primarily along the remnant creek in the UC Davis Arboretum; these trees are treasures. The campus canopy functions as habitat for a variety of species.

The less formal, interstitial landscapes throughout campus exist as undeveloped open spaces consisting largely of non-native annual grasses. These lands still function as habitat for resident and migratory wildlife species seeking refuge and prospect, cover and forage. Small mammals, reptiles and birds can be found in this habitat type.

ECOSYSTEM PLANNING OBJECTIVES

- PRESERVE ECOSYSTEM HEALTH
  Preserve and promote ecosystem vitality throughout campus; incorporate biodiversity and resiliency into the design of green infrastructure and restoration of natural systems.

- PROMOTE URBAN ECOLOGY
  Integrate ecosystem functions into the more urban landscapes of campus and increase the habitat value across the cultural landscape; systematically convert underutilized lawn areas into habitat.

- CONSERVE BIODIVERSITY
  Preserve and enhance existing environmental lands and conserve biodiversity for the greater purpose of conservation.

- PRESERVE SOIL INTEGRITY
  Preserve the integrity of soils as a vital resource for ecosystem functions throughout campus; reduce soil erosion from wind and rain; consider tail water ponds and wind rows as well as other best-practices to minimize loss of soil; minimize soil compaction.

- LEVERAGE SCIENCE
  Foster academic partnerships and support opportunities on campus to conduct environmental research to guide the stewardship of ecosystem health.
CHAPTER 2: CAMPUS HISTORY AND STEWARDSHIP

BUILT SYSTEMS

UC Davis maintains and operates a complex network of infrastructure in support of the academic mission and the built environment. The built systems throughout campus represent one of the most important opportunities for improved stewardship of natural resources and for a more resilient campus. The built systems are organized into two broad sections: water and energy. The LRDP contains planning objectives to conserve natural resources through the stewardship of these systems.

UC Davis operates and maintains six water systems on campus; each with unique opportunities and challenges for greater stewardship. There is a domestic system for potable water and fire protection, an irrigation system for the formal landscapes in the core campus, another irrigation system for agricultural fields, a drainage system for storm water and flood protection, a collection and treatment system for sewage, and a heating and cooling system for the core campus that relies upon chilled water and steam. In general campus relies upon a variety of sources for water including the Sacramento River, Putah Creek and several aquifers. The reclaimed water from the ‘waste’ water treatment plant serves as a thermal resource for the campus chilled water system.

Many of these systems require significant amounts of energy and represent a great opportunity for conservation and improved stewardship. In addition to the six water systems, staff operate and maintain a complex system for the production and distribution of energy as well as the interconnection with the public energy grid. The complex relationships between these systems and the possibility of new systems represents another opportunity for conservation and improved resiliency.
CHAPTER 2: CAMPUS HISTORY AND STEWARDSHIP

BUILT SYSTEMS PLANNING OBJECTIVES

- **ENCOURAGE SUSTAINABLE ARCHITECTURE**
  Promote more sustainable buildings; when renovating existing buildings, update the building systems as well; when feasible replace ‘temporary buildings’ with more energy efficient structures; when designing new structures promote the use of more sustainable systems to reduce overall energy.

- **RESILIENT WATER SUPPLY**
  Preserve access to water; foster greater resiliency with regards to water supply; consider water recycling programs to conserve and reuse natural resources; explore possible uses of reclaimed water from the sewage treatment plant; consider the integration of gray water collection and treatment systems to minimize impact on the sewage treatment plant and to reduce demands on the aquifer.

- **CONSERVE WATER**
  Protect aquifer as a resource for future generations; enhance water conservation programs for all campus systems, especially the core campus irrigation system. Conserve domestic water to minimize diversion of water from deep aquifers, the Sacramento River and Putah Creek.

- **FOSTER GREEN INFRASTRUCTURE**
  Continue to integrate storm water treatment basins throughout campus to reduce flood impact, improve water quality, recharge local aquifers, and integrate drought-tolerant landscapes across the campus.

- **PRESERVE AIR QUALITY**
  Foster the production of more renewable energy to preserve air quality and reduce greenhouse gas emissions; continue to reduce average energy use across all segments of campus; develop programs to reduce and divert waste from land fill; support campus composting and recycling programs.