Initial Study

for the

UNIVERSITY OF CALIFORNIA, RIVERSIDE

2021 LONG RANGE DEVELOPMENT PLAN

PROJECT NO. 958098

Lead Agency

University of California, Riverside
Planning, Design & Construction
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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACM	asbestos-containing materials
asf	assignable square feet
Basin	South Coast Air Basin
BMP	best management practices
BNSF	Burlington Northern Santa Fe
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
DOC	(California) Department of Conservation
DOF	(California) Department of Finance
DWR	(California) Department of Water Resources
EAP	Emergency Action Plan
EH&S	Environmental Health & Safety
EIA	(United States) Energy Information Administration
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GHG	greenhouse gas
GHGRS	Greenhouse Gas Reduction Strategy
GSA	Groundwater Sustainability Agency

gsf	gross square feet
GSP	Groundwater Sustainability Plan
HCP	Habitat Conservation Plan
HMBP	Hazardous Materials Business Plan
HRS	Focused Historic Resources Survey
I-215	Interstate 215
In/sec	inches per second
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
LRDP	Long Range Development Plan
MMthm	million therms
Mgd	million gallons per day
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System Permits
MSHCP	Multiple Species Habitat Conservation Plan
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyls
PEIR	Program Environmental Impact Report
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
PPV	peak partible velocity
RCDWR	Riverside County Department of Waste Resources
RCHCA	Riverside County Habitat Conservation Agency
RFD	(City of) Riverside Fire Department
RPD	(City of) Riverside Police Department
RPL	(City of) Riverside Public Library
RPU	Riverside Public Utilities
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Riverside Unified School District
RWQCB	Regional Water Quality Control Board
RWQCP	Riverside Water Quality Control Plant
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
SoCal Gas	Southern California Gas Company
SR 60	State Route 60
SRC	Student Recreation Center
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
the Regents	University of California Board of Regents
TIA	Transportation Impact Analysis
TPD	tons per day
UC	University of California
UCPD	UC Police Department
UCR	University of California, Riverside
U.S.	United States
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
VHFHSZ	Very High Fire Hazard Severity Zone
WMWD	Western Municipal Water District

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Initial Study and Environmental Checklist Form

for the

UNIVERSITY OF CALIFORNIA, RIVERSIDE

2021 LONG RANGE DEVELOPMENT PLAN

Project No. 958098

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I. PROJECT INFORMATION

1. Project Title

2021 Long Range Development Plan

2. Lead Agency and Project Sponsor Name and Address

The Regents of the University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607

3. Contact Person and Phone Number

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Planning, Design & Construction
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(951) 827-1484

4. Project Location

University of California, Riverside
Riverside, California 92521
(Refer to **Figure 1 – Regional Map, Figure 2 – Local Setting,** and **Figure 3 – Aerial Map**)

II. PROJECT DESCRIPTION

1. Project Location and Environmental Setting

The approximately 1,108-acre University of California, Riverside (UCR) main campus is in Riverside, approximately 3 miles east of downtown and just west of the Box Springs Mountains. The city of Riverside is in Riverside County, within a larger geographic area known as Inland Southern California, which includes western Riverside, southwestern San Bernardino counties and portions of the Pomona Valley in easternmost Los Angeles County. **Figure 1** shows the location of the campus in a regional context. The campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. Interstate 215/State Route 60 (I-215/SR 60) bisect the campus diagonally. The two resulting areas of campus are described below (see **Figure 2** and **Figure 3**).

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are in the Academic Center circumscribed by Campus Drive, including most of the original buildings. The northern half of East Campus is devoted to student housing and recreation. The bell tower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations unit of College of Natural and Agricultural Sciences. Several facilities are also on West Campus: Parking Lot 30; University Extension; and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR, is at the northern edge of Parking Lot 30. A California Department of Transportation (Caltrans) service yard is situated on an approximately 4.4-acre triangular parcel directly west of the I-215/SR 60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

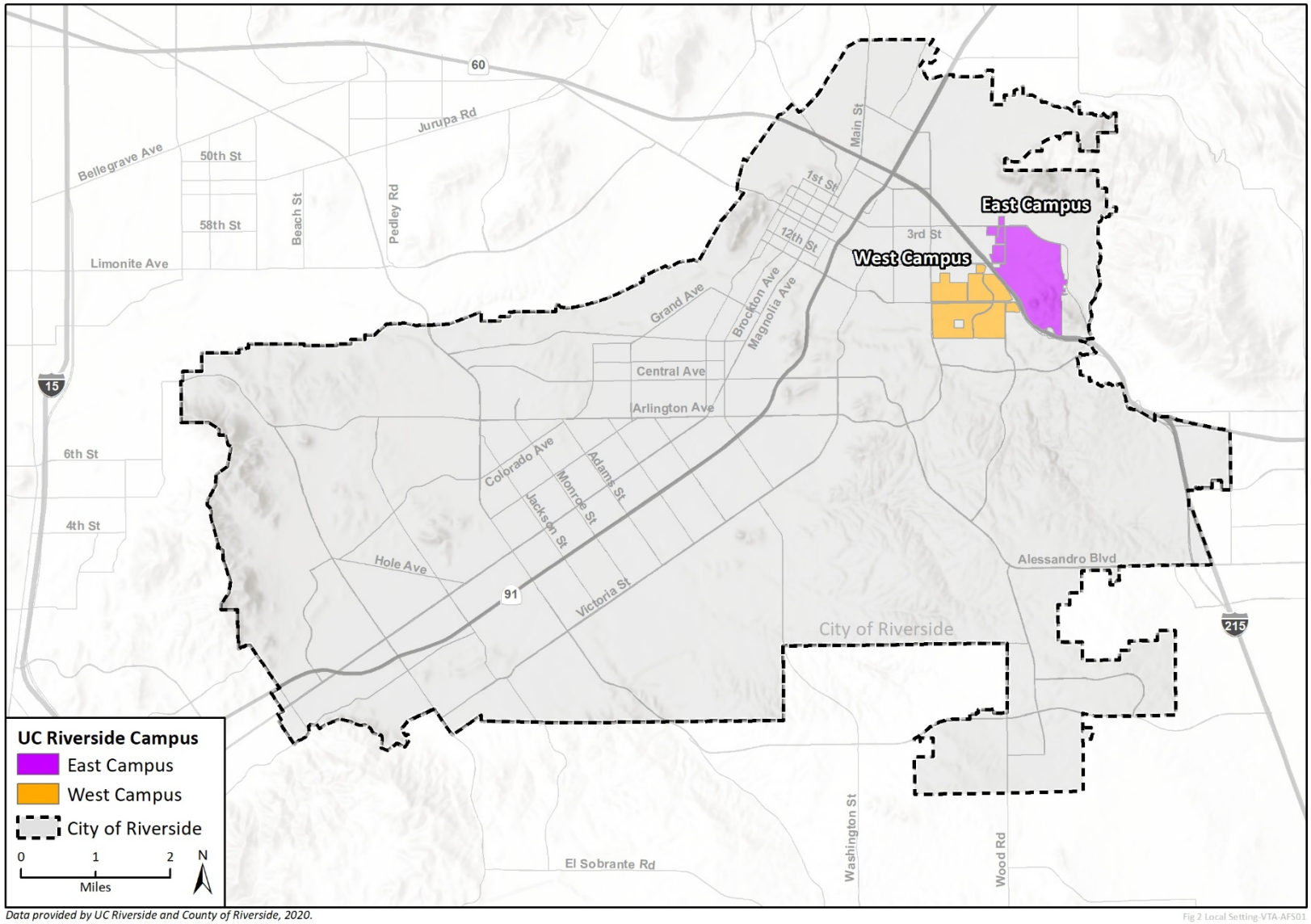
Surrounding Land Uses

Land uses surrounding the campus are primarily residential, with some commercial uses along the arterial streets. Residential uses, commercial uses, and the I-215/SR 60 freeway are located north of the campus. Residential uses, open space, and the I-215/SR 60 freeway are located south of the campus. Residential uses and open space, including the Box Springs Mountain Reserve, are located east of the campus. Residential uses and commercial uses are located west of the campus. The California Air Resources Board (CARB) Southern California headquarters facility (under construction as of early 2020) is located adjacent to the West Campus, between Chicago Avenue, Iowa Avenue, University Avenue and Martin Luther King Boulevard.

Figure 1 – Regional Map

Imagery provided by Esri and its licensors © 2020.

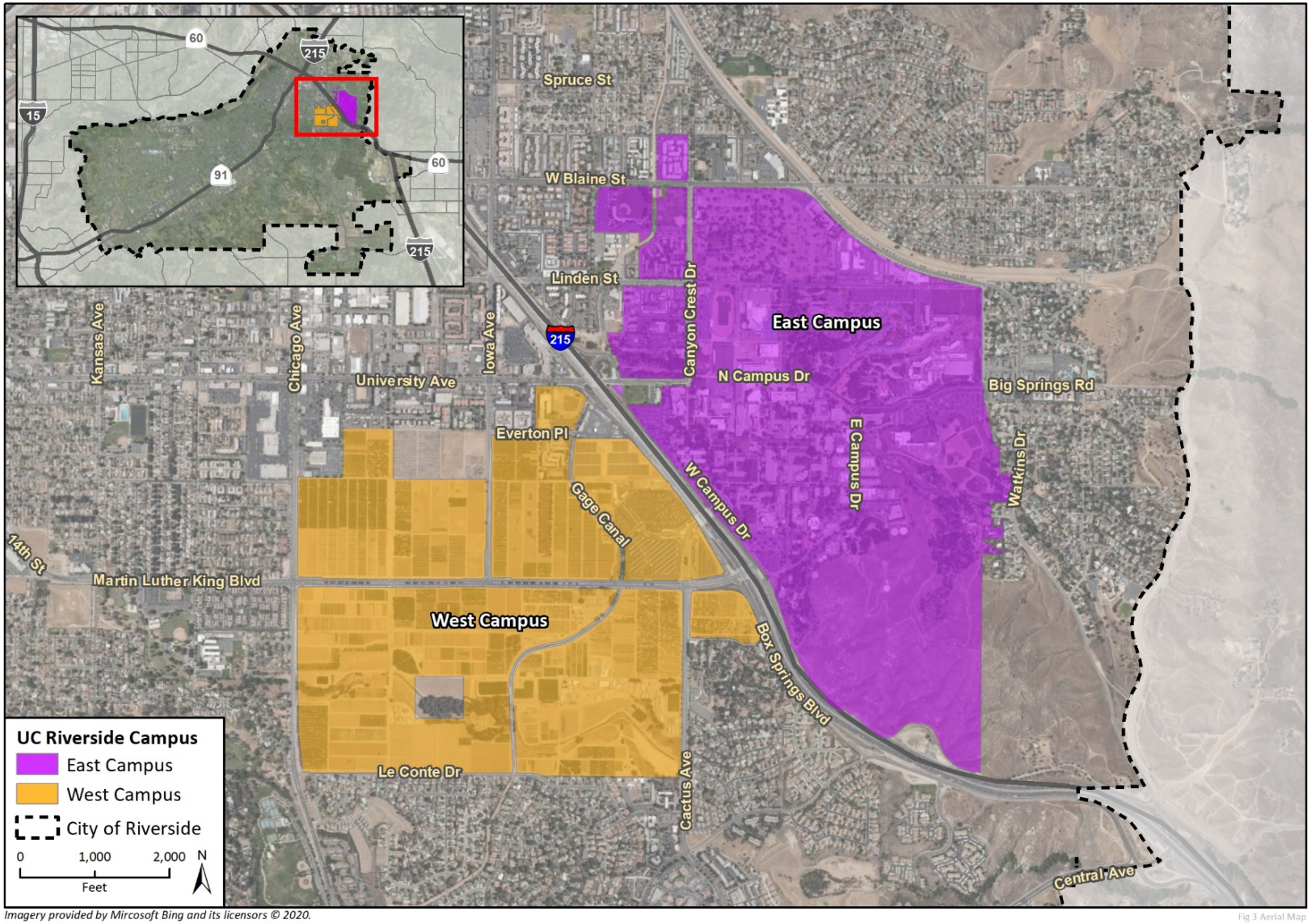
Figure 2 – Local Setting



Data provided by UC Riverside and County of Riverside, 2020.

Fig 2 Local Setting-VTA-AFS01

Figure 3 – Aerial Map



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Data provided by UC Riverside and County of Riverside, 2020.

Fig 3 Aerial Map

2. Introduction and Background

A long-range development plan (LRDP) is defined by statute (Public Resources Code [PRC] Section 21080.09) as a "physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education." UCR last approved an LRDP in 2005 and has adopted amendments since then. The 2005 LRDP planned for a student enrollment of 25,000, which it is now close to achieving.

The number of students applying to UCR generally increased between 2010 and 2019. Freshman applications increased by approximately 87 percent (from 26,480 students to 49,516 students) and transfer student applications increased by approximately 97 percent (from 6,372 students to 12,543 students) (University of California [UC] 2019a). UCR identified an enrollment-planning projection of approximately 35,000 students (Fall quarter headcount)[1] by the academic year 2035/2036.

Baseline

As of the 2018/2019 academic year, the UCR campus had approximately 4.8 million assignable square feet (asf)[2] (approximately 7 million gross square feet [gsf])[3] of academic buildings and support facilities. This included approximately 1.2 million asf of academic and research space, 1.5 million asf of administrative and support space, 1.9 million asf of student life space (not including outdoor recreation), and 0.2 million asf of corporation yard space. Additionally, in 2018/2019 the campus served approximately 23,922 total students (Fall quarter headcount), including 20,581 undergraduate students and 3,341 graduate students (UCR 2019a). Campus staff included approximately 1,702 academic faculty and staff and 3,037 non-academic staff. In addition, the campus employed approximately 3,996 student workers.

3. 2021 LRDP Overview

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf)[4] of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf)[5] of total academic, research, and support space development by the year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for approximately 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (Fall quarter headcount) by the academic year 2035/2036. It is anticipated that approximately 7,600 faculty and staff would be needed to support academic year 2035/2036 student enrollment. **Table 1** provides a comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections (2035/2036).

[1] Fall quarter headcount is the third week headcount for the academic Fall quarter.

[2] Asf refers to the sum of all areas on all floors of a building assigned to or available for assignment to an occupant or specific use (e.g., classrooms, labs, offices, study facilities) used to accomplish the institution's mission.

[3] Gsf refers to the sum of all areas on all floors of a building included in the outside faces of its exterior walls, including all vertical penetration areas, for circulation and shaft areas that connect one floor to another.

[4] Rounded to the nearest million

[5] Rounded to the nearest million

Table 1 – Baseline and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (Fall quarter headcount)	20,581	28,000	7,419
Graduate Student Population (Fall quarter headcount)	3,341	7,000	3,659
Total Student Population (Fall quarter headcount)	23,922	35,000	11,078
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	4,739	7,545	2,806
Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	4,803,500 / 7,205,250	8,502,839 / 12,754,259	3,699,339 / 5,549,009
On-Campus Housing Beds			
Residential (beds) (includes Freshman, Triples, Upperclass, and Family housing)	6,511	14,000	7,489

Source: UCR 2021 LRDP Draft Program Model

Notes:

LRDP = Long Range Development Plan

asf = assignable square feet

gsf = gross square feet

2021 LRDP Elements

There are no requirements for the content, organization, or longevity of an LRDP. The UC facilities and planning policy guidelines[6] recommend that LRDPs address four primary elements. Among other topics, these elements are described in more detail below and addressed throughout the proposed 2021 LRDP:

- **Land Use:** Identifies the location of proposed functional land use categories and provides general guidance for locating future structures and uses while maintaining adequate flexibility for future decision making.

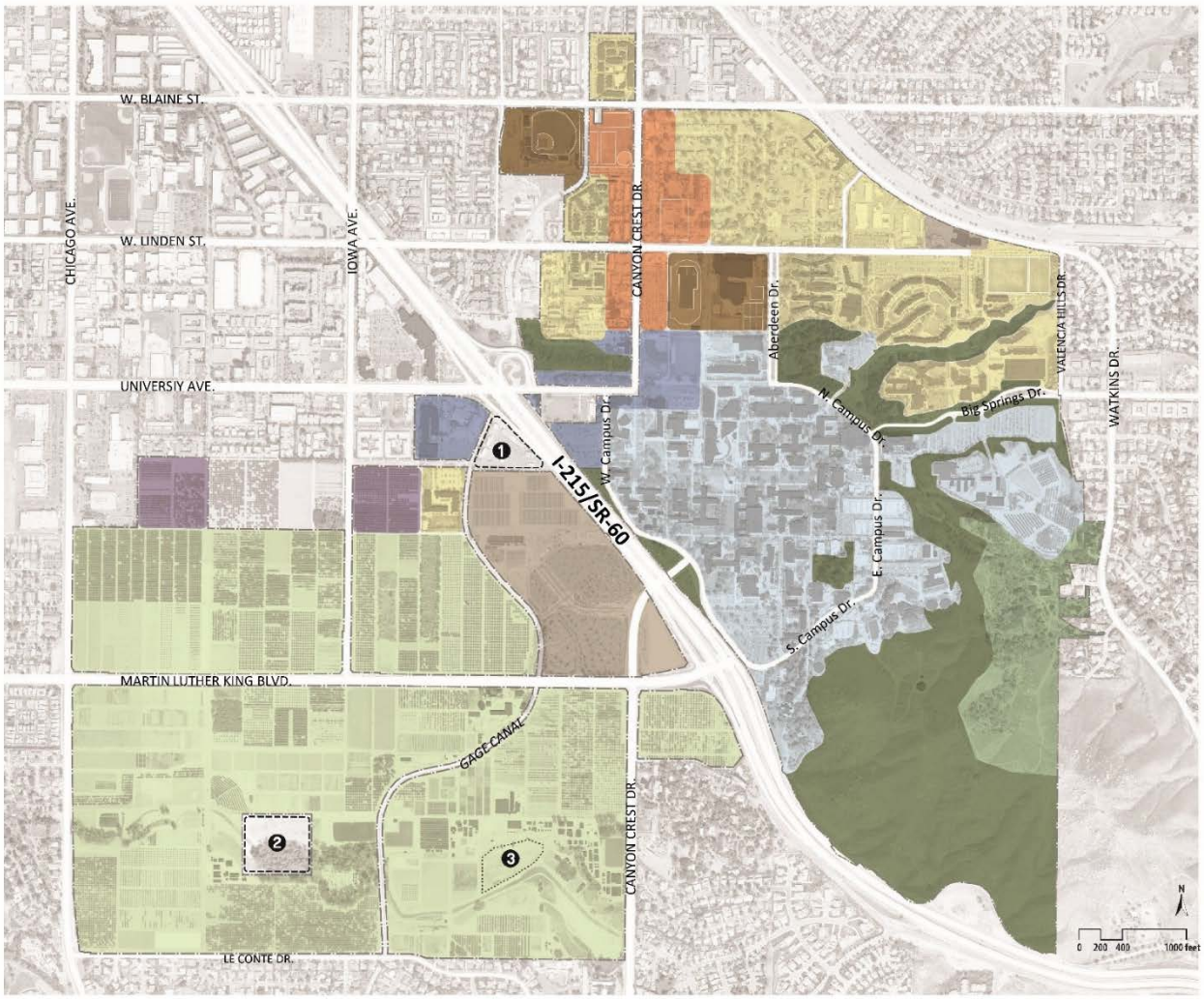
[6] https://www.ucop.edu/construction-services/facilities-manual/volume-2/vol-2-chapter-3.html#3-1

- **Open Space:** Identifies the type and character of campus open spaces, including plazas and courtyards, less formal landscaped areas, and undeveloped natural areas and restoration lands.
- **Mobility:** Shows how people are anticipated to move to and through the campus in the future. All modes of travel are considered.
- **Infrastructure and Sustainability:** Focuses on the campus systems for water, wastewater treatment, storm drainage, sewers, chilled water and steam, electrical distribution, and communications to support sustainable campus growth and resiliency. The capacity of each utility system to accommodate the growing campus population and development needs are broadly identified.

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities, and facilities on the main UCR campus. The following land use descriptions outline the general allowable uses within each land use category. Predominant uses can be described by the primary facilities, programs, and/or activities in a geographic area on campus to achieve specific planning objectives. This is not intended to be an exclusive list of uses, and in many instances, additional associated or compatible uses are also allowed within the land use categories. The proposed 2021 LRDP land uses are described below and shown on **Figure 4 – 2021 LRDP Land Use Map**. **Table 2** presents a comparison between land uses in the 2005 LRDP and those proposed in the 2021 LRDP.

Figure 4 – 2021 LRDP Land Use Map



LEGEND: LAND USE DIAGRAM

1. Caltrans Yard, not in LRDP planning scope
2. City of Riverside property, not in LRDP planning scope
3. Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- ACADEMICS & RESEARCH
- AGRICULTURAL/CAMPUS RESEARCH
- LAND-BASED RESEARCH
- CAMPUS SUPPORT
- OPEN SPACE RESERVE
- UCR BOTANIC GARDENS
- RECREATION & ATHLETICS
- STUDENT NEIGHBORHOOD
- CANYON CREST GATEWAY
- UNIVERSITY AVENUE GATEWAY
- NON-UCR LAND OF INTEREST

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0
Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: UCR GIS database

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to more precise GIS mapping, the acquisition of Oban and Falkirk Apartments, and the acquisition of several properties in Frost Court and one on Watkins Avenue next to the Chancellor's residence. Approximately 18 acres of land on the West Campus was also sold to CARB.

Academics & Research (~184.3 acres)

The Academics & Research land use areas are in or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

The predominant Academics & Research uses may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses may include parking, utility infrastructure, and other campus support services.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Uses may include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

The predominant Land-based Research uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses may include parking, storage, utility infrastructure, and related support services/facilities.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural and sensitive features. This land use designation is intended to recognize that these areas are major contributors to UCR's character and ecology.

The predominant Open Space Reserve uses may include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails, and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses may include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center (SRC), the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated in the Student Neighborhood land use, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

The predominant Recreation & Athletics uses may include facilities to accommodate intercollegiate athletics and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses may include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses that facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Predominant uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; and appropriately scaled recreation and athletic facilities. Secondary permissible uses may include childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR's research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside's aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

The predominant Agricultural/Campus Research uses may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses may include parking, open space, utility infrastructure, and other support uses.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

The predominant UCR Botanic Gardens uses may include demonstration gardens, habitat restoration and management, and incidental facilities such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses may include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus "Main Street" for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs above an array

of student and commercial services that would meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets that supports the desired pedestrian experience along the main street.

The predominant Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail spaces such as banks, pharmacies, grocery outlets, etc., and restaurants; it would also feature professional services space such as outpatient medical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses may include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus' primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the day, evening, and weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

The predominant University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor's center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses may include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

The 2021 LRDP identifies two properties as potential opportunity areas for University-related uses that are not designated land uses and are not currently owned by UCR, should they become available for University use in the future. These are the existing Caltrans Yard at the east end of Everton Place and a City of Riverside-owned, approximately 8.4-acre parcel of land that is landlocked within West Campus. However, at this time there are no specific proposals for this property.

4. Sustainable Development

The UC system first issued its Sustainable Practices Policy in 2004, with the most recent update completed in 2019 (UC 2019b). The UC Sustainable Practices Policy establishes goals in nine areas of sustainable practices: green building design, clean energy, transportation, climate protection, sustainable building operations, waste reduction and recycling, environmentally preferable purchasing, sustainable food service and sustainable water systems. The policies are directed at individual projects and facilities operations throughout the UC system.

As part of UCR's commitment to responsible stewardship of its physical resources, campus development proposals under the proposed 2021 LRDP would continue to be evaluated for their environmental sustainability in accordance with the UC Sustainable Practices Policy, as well as any future programs that are developed by the UC, or UCR specifically, during the planning period for the proposed 2021 LRDP. Several strategies would focus on achieving the goal of reducing UCR's greenhouse gas (GHG) emissions over the planning period of the 2021 LRDP, with an emphasis on sustainable growth and operations.

Greenhouse Gas Emissions Reduction Strategy

UCR is preparing a GHG Reduction Strategy (GHGRS) in conjunction with the 2021 LRDP which would include measures to help reduce GHG emissions levels. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions. The GHGRS will establish a baseline inventory of GHG emissions for UCR's main campus for the 2018/2019 Baseline academic year and forecast the emissions resulting from the 2021 LRDP growth by 2035/2036. The forecast will model the maximum planned build out for the land use designations on East and West Campus as defined by the 2021 LRDP, while also accounting for planned GHG reductions from State-level policies and UC sustainability policies.[7]

5. 2021 LRDP Implementation

The proposed 2021 LRDP is a plan to guide development, but it is not an implementation plan. Adoption of the proposed 2021 LRDP does not constitute a commitment to any specific project. Rather, development under the LRDP would occur over time, based on campus needs and funding availability. The UC Regents and/or its delegated authorities must approve each development proposal, as appropriate. At the campus level, the review of campus development proposals is informed by a process that involves input from staff, faculty, and students (and the local community as appropriate). The following provides a brief description of the general process for implementing projects proposed in accordance with the campus LRDP.

Campus Development Review

The design and construction of future projects at UCR would be subject to the campus development review process. In addition to compliance with the California Environmental Quality Act (CEQA), the development review process requires review by campus committees and administrative staff, evaluation of the proposed design and construction documents, and construction inspection and site monitoring during construction. Committees and administrative offices involved in project implementation may include project sponsors, Office of the Vice Chancellor for Planning & Budget, and campus stakeholders, among others.

Although the LRDP is the primary governing planning document for the campus, several other supplemental guidance documents are in place to inform development at UCR (e.g., Physical Design Framework, Campus Design Guidelines). In general, facilities on the UCR campus comply with the design guidelines set forth in these documents. The UCR physical planning process, campus planning documents, and Design Guidelines are presented in greater detail on the UCR website at https://cpp.ucr.edu/physical-planning.

[7] The GHGRS will be prepared in line with the UC Carbon Neutrality Initiative that commits the UC system to achieving climate neutrality from Scope 1 and Scope 2 emissions sources by 2025 and climate neutrality from specific Scope 3 emission sources by 2050 or sooner (UC 2015).

Tiering Under CEQA

One purpose of the 2021 LRDP is to streamline the environmental review process for future development projects. The 2021 LRDP Environmental Impact Report (EIR) will analyze the environmental effects of the physical development program proposed by the LRDP at a programmatic level, and will provide a basis for "tiering" subsequent environmental documents that address ensuing activities in the program, pursuant to CEQA Guidelines Section 15168(c). CEQA Guidelines Section 15168(c)(5) states, "A Program EIR (PEIR) would be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good, detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the PEIR, and no further environmental documents would be required." Similarly, if it is determined that a project would not result in new or more severe previously identified significant environmental effects pursuant to PRC Section 21166 and CEQA Guidelines sections 15162 and 15163, subsequent or supplemental review may not be required.

University of California Autonomy and Policies

UCR is a part of the UC, a constitutionally created unit of the State of California. As a State entity, UCR is not subject to municipal plans, policies, or regulations such as county and city general plans or local ordinances. Although there is no formal mechanism for joint planning or coordination, because UCR values its relationship with the local communities, in some cases UCR may consider aspects of local land use plans, policies, and regulations.

The UC is governed by the UC Regents, which under Article IX, Section 9 of the California Constitution have "full powers of organization and governance" subject only to very specific areas of legislative control. The Regents promulgate policy for the UC overall, but certain policymaking, administrative, and operational duties are conferred on the UC President pursuant to the bylaws and various policies adopted by the Regents. New Presidential policy may result from the Regents' action, changes in law, or new administrative issues within the UC itself. Presidential policies are revised or rescinded based on changes to the Regents' policy, legal, or societal changes, or administrative changes. For the most part, UC policies that apply to future developments at the UCR campus are in the UC Facilities Manual.[8] Although numerous policies therein apply to campus development, relevant UCR policies will be identified and discussed in the appropriate resource sections in the forthcoming EIR.

[8] https://www.ucop.edu/construction-services/facilities-manual/index.html

III. ANTICIPATED PUBLIC APPROVALS

The Board of the Regents of the UC must act in a public meeting on the following Regents Items when considering the 2021 LRDP:

- Certify the 2021 LRDP EIR
- Adopt the Mitigation Monitoring and Reporting Program identified in the 2021 LRDP EIR
- Adopt the CEQA Findings and any Statement of Overriding Considerations if necessary
- Approve the proposed 2021 LRDP including the GHGRS, an alternative, or a variation of these plans

As individual projects are proposed, site- and condition-specific permits and/or approvals may be needed depending on the circumstances. The following public agencies may be required to issue permits or approve certain aspects of an individual project:

- Division of the State Architect – review plans in compliance with accessibility compliance
- State of California Fire Marshal – review plans in compliance with fire/life safety
- United States (U.S.) Army Corps of Engineers – permit related to discharge of fill material to waters of the U.S. (as needed)
- U.S. Fish and Wildlife Service – compliance with the federal Endangered Species Act for potential take of listed species (as needed)
- California Department of Fish and Wildlife (CDFW) – compliance with the California Endangered Species Act for potential take of state-listed species (as needed); permit for any work in a river, stream, or lake or its tributaries (as needed)
- Caltrans – permit to provide temporary access for construction within Caltrans rights-of-way
- Santa Ana Regional Water Quality Board (SARWQCB) – Coverage under general construction and industrial storm water permits; Waste Discharge Requirements for discharges to waters of the State (as needed)
- South Coast Air Quality Management District (SCAQMD) – authority to construct and permit to operate for any stationary sources (e.g., generators and fume hoods) of air contaminants emissions
- City of Riverside – potential review and approval of off-site access, roadway, bicycle paths, sidewalk improvements, utility improvements, and any encroachment permits

IV. HAVE CALIFORNIA NATIVE AMERICAN TRIBES TRADITIONALLY AND CULTURALLY AFFILIATED WITH THE PROJECT AREA REQUESTED CONSULTATION PURSUANT TO PUBLIC RESOURCES CODE SECTION 21080.3.1?

To date, UCR has received six requests for project notification pursuant to Assembly Bill (AB) 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP. As of the date of this Initial Study, three requests for consultation pursuant to AB 52 for the proposed 2021 LRDP have been received. Consultation will be ongoing. See Section VII.18, Tribal Cultural Resources, of this Initial Study for additional discussion.

V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

□ Aesthetics	■ Agriculture and Forestry Resources	■ Air Quality
■ Biological Resources	■ Cultural Resources	■ Energy
■ Geology and Soils	■ Greenhouse Gas Emissions	■ Hazards and Hazardous Materials
■ Hydrology and Water Quality	□ Land Use and Planning	□ Mineral Resources
■ Noise	□ Population and Housing	■ Public Services
■ Recreation	■ Transportation	■ Tribal Cultural Resources
■ Utilities and Service Systems	■ Wildfire	■ Mandatory Findings of Significance

VI. DETERMINATION

Based on this initial evaluation:

□ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION be prepared.

□ I find that although the proposed project could have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions to the project have been made or project-specific mitigation measures have been proposed that will avoid or reduce any potential significant effects to a less than significant level and recommend that a MITIGATED NEGATIVE DECLARATION be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Stephanie Tang	July 7, 2020
Signature	Date
Stephanie Tang	Campus Environmental Planner
Printed Name	Title

VII. EVALUATION OF ENVIRONMENTAL IMPACTS

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed 2021 LRDP. This 2021 LRDP Environmental Checklist utilizes the following terms to describe the level of significance of impacts identified in the environmental analysis:

1. A "No Impact" conclusion means that the impact does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone).

2. A "Less Than Significant Impact" refers to impacts resulting from implementation of the proposed 2021 LRDP that would not exceed the defined standards of significance.

3. A "Potentially Significant Impact" means that further evaluation and relevant technical analyses are required to determine the significance conclusion for that particular threshold topic in the forthcoming Program EIR.

ENVIRONMENTAL CHECKLIST

1. Aesthetics

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less Than Significant Impact. Scenic vistas for the campus include views of the Box Springs Mountains approximately 1 mile to the north, northeast, east, and southeast of campus; Mt. Rubidoux approximately 3 miles to the west; the San Bernardino Mountains approximately 15 miles to the northeast; and the San Gabriel Mountains approximately 20 miles to the northwest. These scenic vista areas can be seen, in general, from existing and proposed Open Space Reserve land use areas and would not be directly impacted by campus development. In other areas of the East Campus and West Campus, the existing views of the distant mountains are intermittent and substantially obstructed by campus structures under existing conditions. The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing. Development of new facilities in the Student Neighborhood, Academics & Research, University Avenue Gateway, and Canyon Crest Gateway areas may diminish views of the distant Box Springs Mountains from public vantage points, though not substantially. While impacts to scenic vistas are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact. The UCR main campus is bisected by the I-215/SR 60 freeway and is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west, none of which are officially designated or identified as eligible for designation as a State scenic highway (Caltrans 2019).

The proposed 2021 LRDP is not in nor visible from any State scenic highway; therefore, implementation of the proposed 2021 LRDP would not impact scenic resources within a State scenic highway. **No impacts** are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable regulations governing scenic quality?	☐	☐	☒	☐

Less Than Significant Impact. The campus is divided into two main areas: West Campus and East Campus. Most of the approximately 504-acre West Campus land area is used currently for agricultural teaching and research fields of citrus groves, and encompasses Parking Lot 30; a multi-story building in an urban area north of the agricultural fields (University Extension); and International Village, a two-story housing complex surrounded by agricultural fields to the west and south.

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center outlined by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. Except for areas designated as Open Space or Recreation & Athletics, the existing aesthetic form of the East Campus is urban, surrounded by vehicular roadways and interspersed with multi-use pathways, courtyards, and landscaping. Most parking areas are paved surface lots on the edges of East Campus or near housing facilities. On-campus housing ranges from single-story duplexes in a suburban-style setting to mid-rise apartment/dorm complexes with pedestrian-oriented courtyards (three to five stories). Midcentury buildings in the Academic Center tend to employ brick and concrete materials, Brutalist style architecture, and a mixture of low-, mid-, and high-rise buildings. This area also contains the Carillon Mall and the bell tower. Buildings constructed in the modern era employ similar brick and concrete facades.

The 2021 LRDP proposes a net increase in campus development of approximately 3.7 million asf (approximately 6 million gsf). Most of the facilities developed under the proposed 2021 LRDP, including academic and research facilities, administration and support, and student life and housing, would be in the East Campus or in areas of the West Campus that contain an existing built environment. Development under the proposed 2021 LRDP would include physical changes to the LRDP area that would alter its visual character and quality and increase overall massing and density within the UCR main campus. New and redeveloped facilities constructed under the framework of the proposed 2021 LRDP would be subject to the design guidelines set forth in documents such as the Physical Design Framework and Campus Design Guidelines. However, new development under the proposed 2021 LRDP

has the potential to alter the existing visual quality and character of the existing campus. While these changes are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less Than Significant Impact. Current sources of daytime glare on the UCR main campus area include glare-inducing materials such as glass and non-painted metal. Current sources of nighttime light and glare include roadway streetlights; headlights and taillights from vehicles traveling on roadways in or near campus or entering or exiting parking lots or parking garages; security lighting in parking areas, outside buildings, and pathways; and lighting associated with the outdoor athletic and recreation facilities and playfields. Implementation of the proposed 2021 LRDP would result in a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing and thus would generate light and glare from building materials, security lighting, and vehicle traffic generated by students, faculty, staff, and visitors.

Facilities developed under the proposed 2021 LRDP would be subject to the Campus Design Guidelines and the Campus Landscape Master Plan; they would include features to reduce light and glare effects, whenever feasible. However, impacts may occur based on location and density of light sources or use of building materials, lighting from outdoor athletic and recreation facilities, parking areas, and from increased vehicular traffic at night. While impacts from new lights and glare are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

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2. Agriculture and Forestry Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐

Potentially Significant Impact. The UCR main campus contains land categorized as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Most of the categorized Farmland is in West Campus, though a small area is in East Campus near the USDA Salinity Laboratory north of the Botanic Gardens (California Department of Conservation [DOC] 2016). The remaining acreage is considered Urban and Built-Up Land or Other Land (in East Campus). The broad definitions of these categories from the Farmland Mapping and Monitoring Program are provided below:

> "Prime Farmland" is irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
>
> "Farmland of Statewide Importance" is irrigated land similar to Prime Farmland that has a good combination of physical and chemical characteristics for the production of agricultural crops. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
>
> "Unique Farmland" is land of lesser quality soils that is usually irrigated but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
>
> "Urban and Built-Up Land" is occupied by structure with a building density of at least one unit for every 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
>
> "Other Land" is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded by urban development and greater than 40 acres is mapped as other land (DOC 2016).

Most farmland that fall under these categories would be located on areas categorized as Agricultural/Campus Research or Land-Based Research under direction of the 2021 LRDP. Agricultural/Campus Research would comprise approximately 19.4 acres of campus land and Land-Based Research would comprise approximately 419.3 acres of campus land. The Agricultural/Campus Research land use area would provide space to enhance and expand external engagement of UCR's research, education, and public service mission. Agricultural/Campus Research land uses would support the shared UCR and City of Riverside aspirations to build and show case Riverside as a center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses. Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities. Where these potential uses may be developed is unknown at this time. Therefore, the proposed 2021 LRDP may convert land designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland from farmland use to non-farmland uses. The proposed 2021 LRDP may have a **potentially significant impact** on Farmland, and this topic will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact. Implementation of the proposed 2021 LRDP would result in the potential conversion of existing agricultural teaching and research fields in the Land-based Research and Agricultural/Campus Research on the West Campus to non-agricultural uses. UCR, a public university, is zoned for public facilities as depicted in the City of Riverside's Zoning Map (City of Riverside 2007a), which is intended for office and public uses of property and related activities, including civic center, public schools, public buildings, parks and recreation facilities, and waterworks and drainage facilities (City of Riverside 2019a). UCR is designated public facilities/institutional on the City of Riverside's Land Use Policy Map in its 2025 General Plan (City of Riverside 2019a). Although agricultural uses and related activities are permitted in the City of Riverside's public facilities zoning designation of the UCR main campus, no portion of the UCR main campus is specifically zoned for agricultural use in the City of Riverside's Zoning Map. Furthermore, UCR is part of the UC, a constitutionally created entity of the State of California. As a constitutional entity, the UC is not subject to municipal regulations, such as Riverside County and City of Riverside general plans. Williamson Act contracts are formed between a county or city and a landowner for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally designated agricultural preserve areas is eligible for enrollment under a contract (DOC 2020a). There are no UCR lands designated under a Williamson Act contract on campus. Therefore, the

proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

No Impact. The UCR main campus is not zoned as forest land or timberland and does not meet the definition of forest land or timberland under PRC Section 12220(g) or 4526, or Government Code Section 51104(g). No forest land would be converted or lost with the implementation of the proposed 2021 LRDP. Therefore, the proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact. The UCR main campus is not zoned as forest land and does not meet the definition of forest land under PRC Section 12220(g). No forest land would be converted or lost with the implementation of the proposed 2021 LRDP. Therefore, the proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

Potentially Significant Impact. Conversion of Farmland is addressed in criterion 2(a). The proposed 2021 LRDP may have a **potentially significant impact** on Farmland, and this topic will be analyzed further in the forthcoming EIR.

The proposed 2021 LRDP would have **no impact** on forest land, and further analysis of the conversion of forest land to non-forest use in the forthcoming EIR is not warranted.

3. Air Quality

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐

Potentially Significant Impact. UCR is in the South Coast Air Basin (Basin), which is under the jurisdiction of SCAQMD. The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met, and, if they are not met, to develop strategies to meet the standards. The Basin is designated a non-attainment area for the federal standards for ozone and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$) and the State standards for ozone, particulate matter less than 10 micrometers in diameter (PM_{10}), and $PM_{2.5}$. The Basin is designated unclassifiable or in attainment for all other federal and State standards.

SCAQMD has adopted an Air Quality Management Plan that provides a strategy for the attainment of State and federal air quality standards (SCAQMD 2017). The proposed 2021 LRDP would incrementally accommodate approximately 7,419 undergraduate students, 3,659 graduate students, 843 academic faculty and staff, and 1,963 non-academic staff, resulting in a net increase to the campus population of approximately 13,884 people by the 2035 horizon year.

In its 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the Southern California Association of Governments (SCAG) forecasts that the City of Riverside's population will increase to 386,600 by 2040 — an increase of 58,499 persons relative to the 2019 population (SCAG 2015) of 328,101. A conservative approach assumes that all new students, faculty, and staff would be new residents that would move into the area from outside of the region. An increase of approximately 13,884 residents would contribute approximately 24 percent to the City of Riverside's projected population growth (13,884 UCR-affiliated population/58,499 project city population growth). It is likely that a portion of the additional students and staff would commute to campus from neighboring cities or would already live within the City of Riverside, resulting in less direct population growth.

Rincon will utilize the California Emissions Estimator Model version 2016.3.2 to assess potential air quality impacts of the proposed 2021 LRDP. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may conflict with or obstruct implementation of the applicable air quality plan. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐

Potentially Significant Impact. UCR is in the Basin, under the jurisdiction of the SCAQMD. The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met, and, if they are not met, to develop strategies to meet the standards. The Basin is designated a non-attainment area for the federal standards for ozone and $PM_{2.5}$ and the State standards for ozone, PM_{10}, and $PM_{2.5}$. The Basin is designated unclassifiable or in attainment for all other federal and State standards.

The 2021 LRDP proposes an increase in the number of students, faculty, and staff by academic year 2035/2036 and the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR campus. Construction of the proposed new buildings would result in short-term air pollution emissions associated with activities such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris (SCAQMD 2005). Operation of the UCR main campus under the proposed 2021 LRDP would result in long-term increases in air pollutants due to increased vehicle trips associated with the proposed campus population growth and emissions from energy consumption and area sources, such as landscaping equipment, in the expanded campus facilities.

Overall, the proposed 2021 LRDP would generate both short-term construction emissions and long-term operational emissions, which could result in significant impacts. Emissions have the potential to contribute to an existing air quality violation or cumulatively considerable net increases of criteria pollutants for which that region is in non-attainment. An air quality analysis will be prepared for the proposed 2021 LRDP to assess potential air quality impacts. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

Potentially Significant Impact. The 2021 LRDP proposes an increase in the number of students, faculty, and staff by academic year 2035/2036 and the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus, including new housing for students. Construction of the proposed new buildings would result in short-term air pollution emissions, primarily diesel emissions, associated with activities such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris. These emissions could potentially impact existing sensitive receptors on the campus.

An air quality analysis will be prepared for the proposed 2021 LRDP to assess potential air quality impacts to sensitive receptors. A Health Risk Assessment will also be prepared in the forthcoming EIR. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may result in exposure of sensitive receptors to substantial pollutant concentrations. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less Than Significant Impact. The California Environmental Protection Agency (CalEPA) and CARB *Air Quality and Land Use Handbook: A Community Health Perspective* identifies land uses associated with odor complaints to be sewage treatment plants, waste transfer stations, recycling facilities, petroleum refineries, biomass operations, coating operations, autobody shops, landfills, livestock operations, foundries, fiberglass manufacturing, rendering plants (CalEPA and CARB 2005). The proposed 2021 LRDP contains similar uses to the existing campus operations such as academic facilities, agricultural research, residence halls, recreation, parking, and other ancillary uses. Agricultural uses on West Campus include agricultural field research, instructional and research laboratories, greenhouses, and services supporting agricultural research. These agricultural uses do not include livestock that typically generate odors (e.g., manure).

Demolition and construction activities associated with the proposed 2021 LRDP may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. However, these are not identified as uses typically associated with significant odor emission impacts. Furthermore, the construction odor emissions would be temporary, short-term, and intermittent in nature, would cease upon completion of the respective phases of future construction activities, and generally confined to the immediate area of construction activities. Consequently, construction related impacts are considered **less than significant**, and no mitigation is required. Future proposed projects would have to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. This issue will not be discussed further in the forthcoming EIR.

4. Biological Resources

Rincon Consultants, Inc. completed the following assessment to evaluate existing site conditions and determine potential impacts to sensitive biological resources that may result from implementation of the proposed 2021 LRDP. The proposed 2021 LRDP covers the approximately 1,108-acre UCR main campus, herein referred to as the study area. The analyses provided below are based on the Biological Resource Constraints report prepared by Psomas in March 2019.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐

Potentially Significant Impact. Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the United States Fish and Wildlife Service under the federal Endangered Species Act; those considered Species of Concern by the U.S. Fish and Wildlife Service; those listed or candidates for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act and Native Plant Protection Act; animals designated as Fully Protected by the California Fish and Game Code; animals listed as Species of Special Concern by the CDFW; CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2, 3, and 4 in the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California; and species identified as sensitive by the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP, County of Riverside 2003).

Forty-one special status plant species have been reported within five miles of the study area. Of these, marginally suitable habitat for four federal and/or State-listed endangered or threatened species occurs within the naturally vegetated areas present in the study area. Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), Nevin's barberry (*Berberis nevinii*), and slenderhorned spineflower (*Dodecahema leptoceras*) all have low potential to occur (Psomas 2019a).

Additionally, 14 species with a CRPR ranking of 1A, 1B, or 2B also have low potential to occur in the study area. These 14 species are chaparral sand-verbena (*Abronia villosa* var. *aurita*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), snake cholla (*Cylindropuntia californica* var. *californica*), many-stemmed dudleya (*Dudleya multicaulis*), mesa horkelia (*Horkelia cuneata* var. *puberula*), California satintail (*Imperata brevifolia*), Parish's desert-thorn (*Lycium parishii*), Brand's star phacelia (*Phacelia stellaris*), chaparral ragwort (*Senecio aphanactis*), salt spring checkerbloom (*Sidalcea neomexicana*), prairie wedge grass (*Sphenopholis obtusata*), and San Bernardino aster (*Symphyotrichum*

defoliatum). One CRPR 4.3 species, Robinson's peppergrass (*Lepidium virginicum* ssp. *robinsonii*), has been observed within the southeastern portion of the study area, but plant species with a CRPR of 3 or 4 are not typically considered constraints on development. All the above-mentioned species are only expected to occur within the naturally vegetated areas present in the study area (Psomas 2019a).

Fifty-six special-status wildlife species occurrences were tracked within 5 miles of the study area. Five species are federally and/or State-listed endangered or threatened are candidates for listing have moderate potential to occur, including: Riverside fairy shrimp (*Streptocephalus woottoni*), Swainson's hawk (*Buteo swainsoni*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and Stephens' kangaroo rat (*Dipodomys stephensi*). Four basins, which are mapped as freshwater ponds, are in the western portion of campus and contained surface water for extended periods of time (Psomas 2019a). The unlined basins provide marginally suitable habitat for Riverside fairy shrimp. Least Bell's vireo could occur within the mixed riparian vegetation and the mulefat thicket, and the coastal California gnatcatcher could occur in the brittle bush scrub, rock outcrops, sage scrub restoration, mixed scrub, and prickly pear scrub in the naturally vegetated areas on campus. Additionally, marginally suitable habitat for Stephens' kangaroo rat occurs in the annual grassland areas and Swainson's hawk may forage in the larger campus open space areas, but do not typically nest in the project region.

Three species which are considered California Species of Special Concern, Watch List, and Fully Protected may also occur in the study area. Western spadefoot (*Spea hammondii*), burrowing owl (*Athene cunicularia*), and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) all have potential to occur (Psomas 2019a).

In addition, the following special status species have potential or limited potential to occur due to the presence of suitable or marginally suitable habitat: San Diego banded gecko (*Coleonyx variegatus abbottii*), coast horned lizard (*Phrynosoma blainvillii*), orange-throated whiptail, coastal whiptail (*Aspidoscelis tigris stejnegeri*), southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), two striped garter snake (*Thamnophis hammondii*), red-diamond rattlesnake (*Crotalus ruber*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), southern California rufouscrowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Artemisiospiza belli belli*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechia*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), southern grasshopper mouse (*Onychomys torridus ramona*), San Diego black tailed jackrabbit (*Lepus californicus bennettii*), western yellow bat (*Lasiurus xanthinus*), pallid bat (*Antrozous pallidus*), and American badger (*Taxidea taxus*) (Psomas 2019a).

Due to the potential for sensitive plant and wildlife species to occur in the study area, future development within the study area could result in habitat removal/damage or by direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐

Potentially Significant Impact. The CDFW *California Sensitive Natural Communities* list identifies sensitive natural communities throughout California, based in part on global and State rarity ranks. Natural communities having a rank of 1 to 3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. Twenty-three vegetation communities were identified in the study area (Psomas 2019a). Of these, one is considered sensitive by the CDFW: prickly pear scrub. Prickly pear scrub occurs naturally on the slopes along the UCR Botanical Gardens Road and in a small patch in the western portion of the study area. Vasey's prickly-pear (*Opuntia vaseyi*) dominates, interspersed with cholla (*Cylindropuntia* sp.) and brittle bush (Psomas 2019a). Approximately 8 acres of mixed riparian habitat is also present in the study area. CDFW does not consider this habitat a sensitive natural community but impacts to this community may be considered significant due to the potential for sensitive wildlife species to occur.

Future development in the study area could impact prickly pear scrub and/or mixed riparian vegetation through habitat removal/damage or by direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐

Potentially Significant Impact. Section 404 of the federal Clean Water Act (CWA) regulates activities affecting water resources under the jurisdiction of the U.S. Army Corps of Engineers. Waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers include navigable coastal and inland waters,

lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce.

Additionally, Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters under the Porter-Cologne Water Quality Control Act. Waterways are also regulated through Section 1602 of the California Fish and Game Code, which deals with activities affecting water resources under the jurisdiction of the CDFW. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes. Impacts to any jurisdictional waterways described above typically require permits from the listed agencies including a Section 404 permit and a Lake or Streambed Alteration Agreement. Section 6.1.2 of the MSHCP describes the process to protect species associated with riparian/riverine areas and vernal pools. As defined in the MSHCP, riparian/riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or depend on a nearby freshwater source or areas that contain a freshwater flow during all or a portion of the year.

Potential jurisdictional features were identified during the desktop review and initial survey completed by Psomas in December 2018, but a formal jurisdictional delineation was not completed. These features include the University Arroyo, including its tributaries, six basins, and the storm drain system. The University Arroyo runs along Big Springs Road, North Campus Drive, and University Avenue which enters the Gage Basin (western end of the arroyo) and then the City of Riverside storm drain system, which ultimately connects to the Santa Ana River and then to the Pacific Ocean. Portions of this drainage have been channelized and are diverted underground via culverts. Additionally, a tributary of the arroyo extends from the hills south of the UCR main campus and other small drainage features are in the hills in the southeastern corner of the campus. Culverts are located at the downstream ends of these features at I-215. There is also a tributary between Glen Mor, Pentland Hills, and Lothian residence halls which is surrounded by riparian and sage scrub habitat that has been planted as part of a restoration effort. An arroyo also runs through the northern edge of the UCR Botanic Gardens, along the road leading to the garden, and into the unlined UCR Botanic Gardens basin. Four more basins are mapped as freshwater ponds in the western portion of campus and contained surface water at the time of the 2018 survey (Psomas 2019a). Some basins are concrete-lined and others are soft-bottomed. A lined, artificial basin adjacent to undeveloped open space in the southeastern portion of the study area contained surface water at the time of the 2018 survey. These features are considered potentially jurisdictional and many of them may be considered riparian/riverine resources regulated under the MSHCP (Psomas 2019a). Additionally, drainage features present in the hills in the southeastern corner of the study area flow underground at the I-215. If these features connect to the City of Riverside storm drain system and ultimately the Santa Ana River, they may also be considered waters of the U.S. (Psomas 2019a).

Drainages in the study area contain a bed and bank where water flows during the year and/or have riparian vegetation, and therefore are likely subject to the jurisdiction of the CDFW and considered waters of the State under the jurisdiction of the SARWQCB.

Due to the presence of jurisdictional waters, future development in the study area could result in direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐

Potentially Significant Impact. UCR is located at the edge of urban development in the eastern portion of the city of Riverside and is isolated from natural areas to the north, west, and south. The southeast corner of the study area includes undeveloped open space areas linking the Box Springs Mountains to the northeast with Sycamore Canyon Wilderness Park to the southwest. The Western Riverside MSHCP identifies the southeast portion of the study area an MSHCP Criteria Area (Criteria Cell 634). Conservation in this cell will contribute to assembly of the MSHCP Proposed Constrained Linkage 7, which is the only connection between existing core habitat in Sycamore Canyon Wilderness Park to the southwest and existing noncontiguous habitat block A in the Box Springs Mountains to the northeast. Although UCR is not a signatory of the MSHCP, any future development in this southeastern portion should minimize effects on the wildlife movement corridor identified by the MSHCP. Furthermore, even though the main study area is developed, the University Arroyo, Gage Canal, and the drainage south of Martin Luther King Boulevard may provide opportunities for local wildlife movement. Wildlife may also travel through the agricultural portions of West Campus (County of Riverside 2003).

Implementation of the proposed 2021 LRDP could impact wildlife movement if future development would inhibit or restrict wildlife in these areas. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Less Than Significant Impact. UCR is a part of the UC, a constitutionally created unit of the State of California. As a State entity, UCR is not subject to municipal plans, policies, or regulations such as county and city general plans or local ordinances. Nonetheless, UCR values biological resources such as mature trees and native habitat. Currently, no tree preservation policy or ordinance is in place for campus projects. A Tree Replacement Guidelines document is being prepared for campus projects and it

includes applicable tree replacement for the removal of specified trees. The native habitat areas are primarily within the proposed 2021 LRDP Open Space Reserve designation where land forms and uses include hillsides; storm water management infrastructure; habitat restoration and management activities; trails, and small facilities such as seating and viewing areas and other amenities compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources, such as maintenance roads, storage structures, and incidental field research facilities.

The Riverside County Habitat Conservation Agency (RCHCA) acquires and manages habitat for the Stephens' kangaroo rat and other associated special status species[9]. The RCHCA Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) was developed to meet the requirements of the program's federal Endangered Species Act Section 10(a) permit and is managed by the RCHCA. The HCP establishes a reserve system where activities in the core reserve areas are limited and/or restricted. UCR does not fall within one of the designated RCHCA reserve areas (RCHCA 2018). Potential impacts are less than significant through the implementation of the RCHCA. Impacts to trees on campus shall comply with the Tree Replacement Guidelines once this document is published. Impacts to local policies or ordinances protecting biological resources would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Less Than Significant Impact. The Western Riverside MSHCP was approved and adopted by Riverside County in 2003 as a comprehensive, multi-jurisdictional HCP focusing on conservation of both species and associated habitats to address biological and ecological diversity conservation needs in Western Riverside County. In addition to constituting an HCP pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973, the MSHCP also serves as a Natural Communities Conservation Plan under the Natural Communities Conservation Planning Act of 1991. The plan provides a coordinated reserve system and implementation program that facilitates the preservation of biological diversity and maintenance of the region's quality of life. The Western Riverside County MSHCP boundaries encompass approximately 1.26 million acres. UCR is not a permittee to the Western Riverside MSHCP and therefore is not subject to the conservation efforts established in the plan. However, UCR is subject to compliance with certain sections of the MSHCP as described below, and the following analysis discusses how the proposed 2021 LRDP complies with the MSHCP.

The UCR main campus is located within the Western Riverside County MSHCP boundaries and is adjacent to conservation target areas including the Box Springs Mountains and Sycamore Canyon Park. Additionally, the southeast portion of the campus is part of the Area Plan Subunit 2: Sycamore Canyon – West and is considered an MSHCP Criterion Area (Criteria Cell 634). Conservation in Criteria Cell 634

[9] https://rchca.us/31/About-RCHCA

contributes to assembly of Proposed Constrained Linkage 7 and focuses on upland scrub habitat. Areas conserved within Criteria Cell 634 connects to upland scrub habitat proposed for conservation in Criteria Cell 635 in the Highgrove Area Plan to the east and in Criteria Cell 719 to the south. Conservation within Criteria Cell 634 will be approximately five percent of the Cell focusing in the eastern portion of the Cell. The southern portion of East Campus is within the western portion Criteria Cell 634, not the eastern portion of the Cell called out for conservation (eastern portion of Criteria Cell 634 is outside of the campus boundary and under the City of Riverside's jurisdiction). Additionally, the proposed 2021 LRDP land use in the western portion of Criteria Cell 634 is Open Space Reserve, where land forms and uses primarily include hillsides; storm water management infrastructure; habitat restoration and management activities; trails, and small facilities such as seating and viewing areas and other amenities compatible with natural open spaces. Secondary permissible uses may include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities. Since most of the southeast hills would remain undisturbed with no major facilities allowed within the Open Space Reserve, wildlife movement within and across the southeast hills would be largely unaffected by implementation of the proposed 2021 LRDP (County of Riverside 2003).

At this time, no specific campus projects are proposed, and future specific campus projects would be subject to compliance with Sections 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), 6.1.3 (Protection of Narrow Endemic Plant Species), 6.3.2 (Additional Survey Needs and Procedures), and 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface) of the MSHCP. Based on the above discussion, the proposed 2021 LRDP would not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or State HCP.

Although not a signatory of the MSHCP, UCR is given the option to use the MSHCP as a Participating Special Entity. If processing a project under the MSHCP, UCR would need to follow all aspects of the MSHCP for that project. However, if UCR chooses not to process a project under the MSHCP, the project would have to be processed under traditional consultation/permitting mechanisms. Regardless, any campus project in the plan area should ensure that it does not conflict with the provisions of the plan. Given the above discussion, impacts are considered to be **less than significant** and further discussion in the forthcoming EIR is not warranted.

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5. Cultural Resources

Rincon Consultants completed the following assessment to evaluate existing site conditions and determine potential impacts to cultural resources that may result from implementation of the proposed 2021 LRDP. The LRDP covers the approximately 1,108-acre UCR main campus, herein referred to as study area. The analyses provided below are based on the Cultural Resources Constraints Study prepared by Psomas in March 2019 (Psomas 2019b).

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would result in a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing development. UCR is currently undertaking a focused historic resources survey (HRS) report to provide important baseline information on existing conditions and the historic resource status of affected buildings under the 2021 LRDP that will guide and inform future planning of campus projects. The HRS will identify any potential historical resources on campus. The HRS will discuss whether any of the buildings on campus are eligible or potentially eligible for listing on the National Register of Historic Places and/or California Register of Historical Resources and therefore meet the definition of historical resources under Section 15064.5(a) of the CEQA Guidelines. Future development near these resources or others identified in the HRS report may cause a significant impact. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐

Potentially Significant Impact. According to the records search performed as part of the Cultural Resources Constraints Study, three known archaeological resources are present on the UCR campus. During the pedestrian survey, these resources could not be located (Psomas 2019b). However, physical indicators of human occupation could be disguised by the natural weathering of the granitic outcrops.

The eastern side of the planning area, particularly the southeastern area near the Botanic Gardens and Open Space Reserve, is considered highly sensitive for the presence of archaeological resources. It is possible that additional subsurface deposits are present and could be encountered and damaged during project-related ground-disturbing activities. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Less Than Significant Impact. According to the Cultural Resources Constraints Study, there are no known cemeteries on the UCR main campus (Psomas 2019b). In the unlikely event that human remains are unearthed during excavation and grading activities, applicable regulatory requirements pertaining to the handling and treatment of such resources would be followed. If human remains are unearthed, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur, and the Riverside County Coroner must be notified immediately to determine the origin and disposition pursuant to PRC Section 5097.98. If the human remains are determined to be prehistoric, the coroner is required to notify the Native American Heritage Commission, which would determine and notify a most likely descendant, who must complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Native American human remains would be reburied on-site or on an acceptable alternative site, along with any artifacts found with the burial. Given the required compliance with California Health & Safety Code section 7050.5 and California PRC Section 5097.98, impacts to human remains would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

6. Energy

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐

Electricity and Natural Gas

In 2018, California used 285,488 gigawatt-hours of electricity, of which 31 percent were from renewable resources (California Energy Commission [CEC] 2019). California also consumed approximately 22,223.8 million U.S. therms (MMthm) of natural gas in 2018 (U.S. Energy Information Administration [EIA] 2020a). In 2018, Riverside Public Utilities (RPU) provided approximately 0.77 percent (2,186 gigawatt-hours/285,488 gigawatt-hours) of the total electricity used in California; Southern California Gas Company (SoCal Gas) provided approximately 23.2 percent (5,156.08 MMThm/22,223.08 MMThm) of the total natural gas consumed in California (RPU 2019, California Gas and Electric Utilities 2019, SoCalGas 2020b).

RPU is the primary provider of electricity for the campus and SoCal Gas provides natural gas. UCR installed more than 9,600 solar panels (4.3 megawatts) in two campus parking lots in 2017; these generate approximately 7.6 million kilowatt hours per year (Martinez 2017). Renewable energy sources produced approximately 34 percent of RPU's power in 2018 (RPU 2019). **Table 3** and **Table 4** show the electricity and natural gas consumption by sector and total for RPU and SoCal Gas.

Table 3 – Electricity Consumption in the RPU Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
30.19	1,080.73	45.00	276.770	13.32	719.44	20.55	2,186.00

Source: CEC 2020a
Notes: All usage expressed in gigawatt-hours

Table 4 – Natural Gas Consumption in SoCal Gas Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
77.61	912.98	74.52	1,714.36	229.22	2,147.39	5,156.08

Source: CEC 2020b
Notes: All usage expressed in MMThm

Petroleum

In 2018, approximately 40 percent of the State's energy consumption was used for transportation activities (EIA 2020b). Californians presently consume over 19 billion gallons of motor vehicle fuels per year (CEC 2018a). Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 and 12.7 billion gallons in 2030, a 20 to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles.

Construction Energy Demand

The 2021 LRDP proposed the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus. During future campus project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The campus project would require site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

Project-related construction energy demand would be confined to the construction period, which would be relatively short in relation to the overall life of the proposed project. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of similar-sized construction projects in the region. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. However, further analysis is required to quantify energy use related to construction.

Operational Energy Demand

Operation of the UCR main campus under the proposed 2021 LRDP would increase energy demand for electricity and gasoline due to greater consumption relating to the expansion of campus buildings and increased student enrollment and campus employees. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, water, and the overall operation of the campus facilities. Gasoline consumption would be attributed to the trips generated by people employed by UCR, students commuting to campus, and visitors to the campus. As of June 2019, no new UC buildings or buildings that undergo major renovations will use on-site fossil fuel combustion, such as natural gas, for space and water heating, except in special circumstances (UC 2019b).

UCR is committed to meeting UC system-wide goals of achieving Leadership in Energy and Environmental Design (LEED) Silver Certification or better for all new buildings and LEED Certification for all major renovations. All new buildings or major renovation projects are required to comply with the UC Sustainable Practices Policy (UC 2019b). The California Green Building Standards Code (CALGreen) (California Code of Regulations [CCR], Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (California Building Code [CBC] Title 24, Part 6) require newly constructed buildings to meet energy performance standards set by the Energy Commission. As the name implies, these standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, upon implementation of the 2019 Building

Energy Efficiency Standards, nonresidential buildings will use about 30 percent less energy than 2016 Title 24 requirements due mainly to lighting upgrades (CEC 2018b). The proposed 2021 LRDP would further reduce its use of nonrenewable energy resources, as the electricity generated by renewable resources provided by the UCR campus and by RPU facilities continues to increase to comply with State requirements through Senate Bill 100.

Despite the energy efficiency measures described above, the changes proposed in the 2021 LRDP have the potential to significantly increase energy and petroleum demand and consumption due to the requirements of proposed new buildings and additional students, faculty, and staff on campus by academic year 2035/2036. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Less Than Significant Impact. The proposed increase in enrollment, employees, and development under the 2021 LRDP would result in increased energy consumption through electricity to power facilities and petroleum use through motor vehicles on the campus. As discussed in criterion 6(a), new development proposed under the 2021 LRDP would comply with the UC Sustainable Practices Policy. In addition, UCR is preparing a GHGRS as part of the 2021 LRDP that would incorporate reduction measures to help reduce GHG emissions levels, including energy efficiency measures. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions and energy use. The GHGRS will support the proposed 2021 LRDP.

Senate Bill 100 mandates 100 percent clean electricity for California by 2045. Because the proposed 2021 LRDP would be powered by the existing electricity grid and on-site solar generation, potential projects under the proposed 2021 LRDP would eventually be powered by renewable energy as mandated by Senate Bill 100 and would not conflict with this statewide plan. Therefore, no conflict with an applicable plan, policy or regulation adopted for the purpose of energy efficiency is anticipated, and impacts are considered **less than significant**. However, as this topic is still under investigation, further analysis in the forthcoming EIR is warranted.

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7. Geology and Soils

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

Less Than Significant Impact. According to the DOC's Earthquake Zones of Required Investigation map, the UCR campus is not located in an Alquist-Priolo Earthquake Fault Zone (DOC 2020b). According to the California Earthquake Hazards Zone Map, the UCR main campus is approximately 6 miles southwest of the San Jacinto Fault Zone and 18 miles northeast of the Elsinore Fault Zone. Because ground rupture occurrences are generally limited to the location of faults, development of future campus projects would not be subject to a substantial risk of fault (ground surface) ruptures.

Although the UCR main campus is not located within an active fault, the campus is in a seismically active area, as is the majority of southern California and thus is subject to seismic ground shaking. UCR completed a systemwide seismic program study in which structural engineers evaluated existing campus buildings and assigned ratings that represent the ability of each structure to address seismic hazards (UCR 2019a). While these impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

The 2021 LRDP proposes the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus. Renovations of existing campus buildings may also occur during implementation of the proposed 2021 LRDP. Development of new campus building projects would be required to conduct a site-specific geotechnical study and comply with all the provided engineering design recommendations. Additionally, future campus projects would be required to comply with the State of California Title 24, California Building Code (CBC), the

systemwide seismic program study recommendations, and the UC Seismic Safety Policy. The UC Seismic Safety Policy establishes that University policy is "to the extent feasible by present earthquake engineering practice, to provide an acceptable level of earthquake safety for students, employees, and the public who occupy University Facilities and Leased Facilities" (UC 2017). Therefore, implementation of the proposed 2021 LRDP would not expose people and/or structures to potentially substantial adverse effects resulting from strong seismic ground shaking. However, while these impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

According to Figure PS-2 of the City of Riverside General Plan Public Safety Element, the UCR main campus is characterized primarily by low potential for liquefaction, with a narrow area considered at moderate risk for liquefaction adjacent to SR 60 between Third Street and University Avenue and from University Avenue east to the Box Springs Mountains (City of Riverside 2018e). Elevations on campus range from 1,000 feet to 1,400 feet above sea level. The older alluvium and bedrock that underlies large portions of the campus are non-liquefiable regardless of groundwater depth (UCR 2005). West Campus and most of East Campus are relatively flat and not subject to landslides. The proposed 2021 LRDP would potentially develop the southeastern area of East Campus adjacent to natural hillsides, but the geologic materials on the campus render the risk for deep-seated landslides to be very low, even on natural slopes. This is due to the sturdy nature of the alluvial materials and bedrock underlying most of the campus, as these have no weak planar structures developed that could trigger a large, deep-seated landslide.

New development proposed under the 2021 LRDP would require campus building permits that undergo review and approval by UCR's Building and Safety Division and other UCR departments and staff. All campus project construction activities would be compliant with the UCR Plan Review and Building Permit Program, which specifies requirements for new construction on campus, as well as the California Building Code, and inspection protocols for existing buildings (UCR 2018). All new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement expansive and compressible soils or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC. While impacts from liquefaction and landslides are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less Than Significant Impact. Soil erosion is the process by which soil particles are removed from a land surface by wind, water, or gravity. Most natural erosion occurs at slow rates; however, the rate of erosion increases when land is cleared or altered and left in a disturbed condition. The 2021 LRDP proposes a net increase in campus development of approximately 3.7 million asf (approximately 6 million gsf). Construction activities would result in site clearance, grading, and other earthmoving activities. Any campus projects would be required to comply with SCAQMD Rule 403 – Fugitive Dust during construction, which would stabilize soils and prevent erosion through the reduction of dust

generation. Additionally, future campus projects would be required to comply with the provisions of the Statewide General Construction Activity Stormwater Permit that specifies the implementation of best management practices (BMP) (e.g., watering exposed soils; covering stockpiles of soils; installing sandbags to minimize off-site runoff; creating temporary desilting basins; construction vehicle maintenance in staging areas to avoid leaks or spills of fuels, motor oil, coolant, and other hazardous materials; installation of silt fences and erosion control blankets; timing grading to avoid the rainy season [November through April]) during project construction. Furthermore, the University has been and will continue to implement the National Pollutant Discharge Elimination System (NPDES) Phase II requirements through the implementation of Stormwater Management Program that includes construction site stormwater runoff control for sites greater than one acre and post-construction stormwater management in new development and redevelopment.[10]

Upon project completion, the site would not contain any loose or exposed topsoil, and conditions that would cause long-term erosion would not be present. New development on campus would be required to prepare a site-specific geotechnical study and be required to implement the geotechnical recommendations into the project design. New development proposed under the 2021 LRDP would require campus building permits, which require review and approval by UCR's Building and Safety Division, Fire Prevention, Facilities Services, and other UCR departments and staff. All campus project construction activities would be compliant with the UCR Plan Review and Building Permit Program, which specifies requirements for new construction on campus, as well as inspections protocol for existing buildings (UCR 2018).

Adherence to applicable rules under the UCR Plan Review and Building Permit Program would be necessary to reduce and/or prevent erosion during construction activities. Impacts to soil erosion or loss of topsoil would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less Than Significant Impact. As described above in criterion 7(a), the campus is underlain by soils with low potential for liquefaction and all new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, lateral spreading and subsidence, or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC.

10 https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html

As discussed in criterion 7(a), the older alluvium and bedrock that underlies large portions of the campus are non-liquefiable regardless of groundwater depth (UCR 2005). The geologic materials located on the campus render the risk for deep-seated landslides to be very low, even on natural slopes. This is due to the sturdy nature of the alluvial materials and bedrock underlying most of the campus, which have no weak planar structures developed that could trigger a large deep-seated landslide. The hillsides are designated as Open Space Reserve and no major development is planned in the area. While these hazards are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

Less Than Significant Impact. The Arlington and Hanford soils make up most of the relatively flat-sloped West Campus, and Soil series that comprise the East Campus include the Arlington, Hanford, Buren, and Monserate series (UCR 2005). The Arlington and Hanford soils are primarily found on the relatively flat-sloped western portion of the campus and have a low shrink-swell characteristic. The Buren series has a moderate to low shrink-swell potential. The Monserate soils are found on most of the northeastern part of the campus and shrink-swell potential is from low to moderate. Soils found at the southeastern portion of the campus, which have relatively steeper slopes than other parts of the campus, are predominately of the Cieneba and Vista series and have low shrink-swell characteristics. As most of the soils on the campus have low to moderate shrink-swell characteristics, the potential for water uptake after rainfall to cause soils to expand and damage building foundations is considered low. All new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement expansive and compressible soils or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC. Therefore, implementation of the proposed 2021 LRDP would not be located on expansive soil and there would be **less than significant impacts,** and further analysis of this issue in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

No Impact. The proposed 2021 LRDP would be served by the municipal sewer system and would not entail the construction or use of septic tanks or alternative wastewater disposal systems. Therefore, implementation of the proposed 2021 LRDP would have **no impact** related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would result in the development of new academic buildings and support facilities. Ground disturbing activities, such as grading or excavation, could affect previously unknown paleontological resources. Rocks and sediment underlying the campus are considered unlikely to be fossil-bearing (UCR 2005). However, ground disturbing activities in previously undisturbed portions of the main campus could potentially result in significant impacts to paleontological resources. Impacts would be significant if construction activities result in a potential for destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Therefore, the proposed 2021 LRDP would have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

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8. Greenhouse Gas Emissions

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐

Potentially Significant Impact. The 2021 LRDP proposes the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR campus, including student housing. Construction of the proposed new buildings would result in short-term GHG emissions associated with activities, such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris. Operation of the UCR campus under the proposed 2021 LRDP would result in long-term increases in GHG emissions on the UCR Campus due to increased localized vehicle trips associated with the proposed campus population growth and emissions from energy consumption associated with the expanded facilities.

Overall, the proposed 2021 LRDP would generate both short-term, construction-related GHG emissions and long-term operational emissions, which could result in potentially significant impacts. UCR is preparing a GHGRS as part of the proposed 2021 LRDP that would include reduction measures to help reduce GHG emissions levels. The proposed 2021 LRDP may have **potentially significant impacts** related to GHG emissions and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Less Than Significant Impact. The proposed increase in student enrollment, faculty, and staff, and development under the 2021 LRDP would result in increased GHG emissions. UCR is preparing a GHGRS as part of the proposed 2021 LRDP which would include reduction measures to help reduce GHG emissions levels. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions. The GHGRS will establish a baseline inventory of GHG emissions for UCR's main campus for the 2018/2019 Baseline academic year and forecast the emissions resulting from the proposed 2021 LRDP growth by 2035. The forecast will model the maximum planned build out for the land use designations on East Campus and West Campus

as defined by the 2021 LRDP, while also accounting for planned GHG reductions from State-level policies and UC sustainability policies.[11] Therefore, no conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG is anticipated, and impacts are considered **less than significant**. However, as this topic is still under investigation at this time, implementation of the proposed 2021 LRDP and further analysis in the forthcoming EIR is warranted.

[11] The GHGRS will also be prepared in line with the UC Carbon Neutrality Initiative, which commits the UC system to achieving climate neutrality from Scope 1 and Scope 2 emissions sources by 2025 and climate neutrality from specific Scope 3 emission sources by 2050 or sooner (UC 2015).

9. Hazards and Hazardous Materials

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less Than Significant Impact. The State of California defines hazardous materials as "any material that, because of its quantity, concentration, or chemical characteristics, poses a significant present or potential hazard to human health and the environment if released into the workplace or the environment" (California Health and Safety Code Division 20, Chapter 6.95, Section 25501) Services 2014). These include hazardous substances and wastes, along with any material that might reasonably be considered injurious to the health and safety of individuals or the environment if released. Effective January 1, 2012, AB 2286 requires all facilities with regulated hazardous materials to file required Unified Program information in an online, statewide information management system. UCR is a certified generator and handler of hazardous materials and as such is required to prepare a Hazardous Materials Business Plan (HMBP) that provides information that will help minimize the effects and extent of a release of hazardous material. The UCR HMBP is accompanied by training materials that educate those who work with or might be exposed to hazardous materials on campus, and emergency responders, including contact information, site security, and other facilities information and procedures (UCR 2016a).

Construction Transport, Use, Disposal

Potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, may be used and/or stored on site during the construction of future campus projects. The quantities would be limited, and they are not considered hazardous to the public at large. Furthermore, the transport, use, and storage of hazardous materials during project construction would be conducted pursuant to all applicable federal, State, and local regulations, including but not limited to Title 49 of the Code of Federal Regulations implemented by Title 13 of the CCR, which describes strict regulations for the safe use and transport of hazardous materials, and by the provisions discussed in detail in the UCR HMBP.

The UCR campus is a non-traditional permittee under the Phase II municipal separate storm sewer systems (MS4) Small statewide general storm water permit, which requires UCR to prevent construction site discharges of pollutants through the installation, implementation, and maintenance of BMPs and ensure compliance with Construction General Permit (State Water Resources Control Board Order 2009-0009-DWQ, as amended). As part of the compliance with the Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared for specific construction projects. Among other things, the SWPPP requires that hazardous materials be properly stored, contained, and disposed of to prevent polluted stormwater discharged from the site. As a result, proper use and disposal of these materials would not pose a significant risk to the public and the environment.

Some existing buildings may contain hazardous substances such as lead-based paint (LBP), asbestos-containing materials (ACM), or Polychlorinated biphenyls (PCB). Prior to the U.S. Environmental Protection Agency (USEPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. When LBP remains contained, it presents no significant health risk, however, though such disturbances as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and paint dust particulates, lead may contaminate surface soils or migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects, especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the USEPA in the 1970s. ACMs were commonly used for insulation of heating ducts and in the manufacture of ceiling and floor tiles. ACMs contained in building materials present no significant health risk because there is no exposure pathway. However, once these tiny fibers are disturbed, they can become airborne and pose a respiratory hazard. The fibers are very small and cannot be seen with the naked eye. Once they are inhaled, they can become lodged into the lungs and may cause cancer, lung disease, or other pulmonary complications.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs, and are required to have a label clearly stating that PCBs are not present in the unit. Chronic (long-term) exposure to some PCB formulations by inhalation in humans results in respiratory tract symptoms, gastrointestinal effects, mild liver effects, and effects on the skin and eyes such as chloracne, skin rashes, and eye irritation. Epidemiological studies indicate an association between dietary PCB exposures and developmental effects. Human studies provide inconclusive, yet suggestive, evidence of an association between PCBs exposure and cancer. Animal studies have reported an increase in liver tumors in rats and mice exposed orally to all tested PCB formulations. CalEPA has classified PCBs as a Group B2, probable human carcinogen.

The campus Environmental Health and Safety (EH&S) department oversees proper transportation and disposal of waste materials on campus and manages environmental and safety compliance for all campus projects through a Hazardous Materials Building Survey Request and Abatement Project Notification system accessible by construction project managers on the EH&S department's website.[12] Through this site, project managers are able to submit requests for surveys of Hazardous Building Materials and work with EH&S to determine the extent of, and mitigation required, for any hazardous materials that may be encountered. Disturbance, stabilization, and removal of ACM, LBP, PCBs, and any other hazardous materials would be performed in compliance with current applicable regulations.

Asbestos is regulated as a hazardous air pollutant under the Clean Air Act at the Asbestos National Emission Standards for Hazardous Air Pollutants (Title 40 of the Code of Federal Regulations, Part 61, Subpart M). This air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during demolition and renovation activities involving the handling of asbestos. Requirements of the federal Asbestos National Emission Standards for Hazardous Air Pollutants, the Cal/OSHA Asbestos in Construction standard at 8 CCR 1529, and several other occupational asbestos standards and hazardous waste management regulations are incorporated into SCAQMD Rule 1403 Asbestos Emissions from Demolition/Renovation Activities. In structures slated for demolition or renovation, any ACM would be removed in accordance with all requirements set forth in SCAQMD Rule 1403 prior to the start of

[12] https://ehs.ucr.edu/safety

demolition or renovation activities and thereby in compliance with all existing applicable federal and State regulations and standards. SCAQMD Rule 1403 requirements for virtually any facility being demolished or renovated includes surveys for the presence of all friable and Class I and II non-friable ACM, sampling and test methods, notifications, removal procedures, warning labels, signs and markings, training, supervision, and specific requirements for handling, transportation and disposal of asbestos-containing waste material.

LBP and other lead-containing materials associated with all campus projects are handled in compliance with standards set and enforced by the State of California Department of Industrial Relations Division of Occupational Safety and Health, better known as Cal/OSHA. The Lead in Construction standard at Title 8 of the California Code of Regulations, Section 1532.1 (8 CCR 1532.1) includes exposure assessment, respiratory protection, protective work clothing and equipment, medical monitoring, engineering and work practice controls and other requirements to reduce the hazard from lead in construction. The evaluation and control of lead-based paint hazards will be conducted in accordance with the guidelines set forth in Title 24 of the Code of Federal Regulations, Section 1012-1013 (Title X Housing and Urban Development). Disposal of lead-containing waste materials is managed in compliance with California Title 22, Division 4.5 Environmental Health Standards for the Management of Hazardous Waste.

During demolition and renovation activities PCB-containing materials may be found in fluorescent lighting ballasts manufactured before 1978, electrical transformers, capacitors, and other electrical equipment manufactured before 1979, and in building materials in buildings constructed or renovated between about 1950 and 1979. The Toxic Substances Control Act at Title 40 of the Code of Federal Regulations, Section 761 requires proper handling and disposal of any PCB-containing materials removed during renovations and repairs. All PCB-containing materials are managed according to these federal regulatory requirements.

With continued implementation of EH&S and the regulations described above, impacts during construction of 2021 LRDP projects would be **less than significant** under this threshold and construction impacts would not be discussed further in the forthcoming EIR.

Operational Transport, Use, Disposal

UCR is a licensed generator of hazardous waste, which includes chemical, radioactive, and biohazardous (infectious) waste (UCR 2005). As such, it is required to evaluate developments where activities include the handling of hazardous materials and to disseminate general information about the handling, storing, and disposing of hazardous materials. This includes training all individuals who may handle hazardous materials through the circulation of various safety guidance documents and other publications. Hazardous materials are managed throughout campus ranging from the art department to the biomedical sciences department and can include flammable, corrosive, and reactive materials used in a variety of ways. The 2005 LRDP Draft EIR detailed the types of hazardous materials, their use throughout the campus, and the plan for managing their transport, use, and accidental release in such a way that the impact were determined to be less than significant under that evaluation (UCR 2011). Since the 2005 EIR, the UCR HMBP is updated yearly and continues to be in line with current regulatory requirements.

Transportation of hazardous materials and wastes along any city or State roadway or rail lines in or near the campus is subject to all relevant Caltrans, California Highway Patrol, and California Department of Health Services hazardous materials and wastes transportation regulations, as applicable. Regular inspections are conducted of licensed waste transporters by agencies to ensure compliance with requirements that range from the design of vehicles used to transport wastes to the procedures to be followed in case of spills or leaks during transit.

Implementation of the proposed 2021 LRDP creates the potential of hazardous materials to increase, because the new medical school and the expanded student health center, along with other facilities could increase the risk for accidental release. However, with continued adherence to federal, State, and the UCR HMBP, the 2021 LRDP is not anticipated to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. While impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Less Than Significant Impact. Implementation of the proposed 2021 LDRP will expand square footage and student population nearly double its current amounts. This increases the potential for upset and accident conditions to arise that involve the potential release of hazardous materials into the environment. As discussed above in criterion 9(a), the UCR HMBP will continue to serve as the guiding document for prevention of such incidents. While impacts would be **less than significant**, further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school?	☐	☐	☒	☐

Less Than Significant Impact. As indicated in **Table 5**, multiple schools and one child development center are located within 0.25 mile of the boundaries of the UCR campus.

Table 5 – Distance to Schools from Campus Boundary

School	Approximate Distance in Miles to UCR LRDP Boundary	School Address	Nearest Proposed LRDP Land Use/UCR facilities
UCR Child Development Center	On Campus	3333 W. Blaine Street Riverside, California 92503	Student Neighborhood, Facilities Services
Islamic Academy of Riverside	0.06	1038 W. Linden Street Riverside, California 92507	Student Neighborhood
REACH Leadership STEAM Academy	0.08	3422 Rustin Avenue Riverside, California 92507	Recreation & Athletics/UCR Baseball Complex
Highland Elementary School	0.14	700 Highlander Drive Riverside, California 92507	Student Neighborhood, UCR Child Development Center
Emerson Elementary School	0.20	4660 Ottawa Avenue Riverside, California 92507	West Campus land-based research area
Riverside STEM Academy	0.25	4466 Mt. Vernon Avenue Riverside, California 92507	UCR Botanic Gardens
University Heights Middle School	0.25	1155 Massachusetts Avenue Riverside, California 92507	Student Neighborhood

Notes: UCR = University of California, LRDP = Long Range Development Plan

The UCR Child Development Center comprises two adjacent facilities on the northeastern corner of East Campus. It is surrounded by a surface parking lot, West Blaine Street and Watkins Drive to the east, facilities services to the southeast, and the future North District student neighborhood (currently under construction) to the southwest. Highland Elementary School is northeast of the northern campus boundary across Watkins Drive and the Burlington Northern Santa Fe (BNSF) Railway right-of-way. It is surrounded by Highland Park to the north, residential neighborhoods to the east, and the BNSF Railway to the west and south. Emerson Elementary is west of the West Campus boundary, surrounded by residential neighborhoods to the north, east, and south, and Bordwell Park to the west. Since the schools and UCR Child Development Center are not adjacent to areas of substantial development proposed under the 2021 LRDP, it is unlikely there would be substantial impacts to these locations associated with the emission of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste related to the proposed 2021 LRDP.

As discussed in criterion 9(a), construction, redevelopment, and operation of facilities associated with implementation of the 2021 LRDP would comply with existing federal, State, and university requirements for the transport, use, or disposal of hazardous materials. Removal of LBP, ACM, PCB, and hazardous materials would be performed in compliance with existing regulations. LBP and other lead-containing materials associated with proposed projects would be handled in compliance Cal/OSHA regulations regarding LBPs and lead-containing materials. CCR Title 8, Section 1532.1, requires testing, monitoring, containment, and disposal of LBPs and lead-containing materials in a manner that exposure levels do not exceed Cal/OSHA standards.

With continued adherence to the UCR HMBP, the proposed 2021 LRDP is not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of a school. While impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

Less Than Significant Impact. A review of the Cortese List database did not show the UCR main campus as a hazardous materials site. Neither are there any hazardous materials sites listed within a 1,000-foot radius of the UCR main campus (California Department of Toxic Substances Control 2020). The nearest hazardous site is located at 2755 West Main Street, approximately 2.7 miles northwest of campus. The site is listed as an active federal "superfund" site. Other sites are over 5 miles from the UCR main campus, and even with the campus expansion by the proposed 2021 LRDP, these would not create a hazard to the public during project construction or operation.

While not on the Cortese List, there is a former agricultural operations pesticide disposal site at 1060 Martin Luther King Boulevard in West Campus that was monitored by the Department of Toxic Substances Control until 2011. The constituents of concern in soil included pesticides, herbicides, and volatile organic compounds. A review of the results from 16 years of groundwater monitoring indicated no chemical was detected at concentrations greater than its maximum contaminant level. A Covenant to Restrict Use of Property was recorded on May 12, 2006 for soil within 10 feet of the ground surface at the site based on the presence of certain chemicals. The site is prohibited from use as a residence, childcare center, classroom for persons under the age of 18, or hospital, and may not be used for agriculture, drilling, or groundwater extraction (Haley & Aldrich 2017). This site is not proposed for development under the proposed 2021 LRDP.

Less than significant impacts are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. Flabob Airport is approximately 4.7 miles west of the UCR main campus, and March Air Reserve Base is approximately 6 miles southeast of the UCR main campus. The proposed 2021 LRDP project sites would not be situated within 2 miles of a public airport, public use airport, or an airport land use plan area. Therefore, the proposed 2021 LRDP would not result in any impacts from safety hazards associated with airports or airport land use plans. **No impacts** are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐

Potentially Significant Impact. UCR operates under the auspices of the UCR Emergency Action Plan (EAP), revised February 9, 2016. The plan establishes operational procedures needed for campus personnel to respond to, and recover from, a significant emergency event, in a timely and organized manner (UCR 2016b). The Emergency Action Plan also serves as the foundation for local plans developed and executed by sub-units within the purview of the campus. The UCR EAP follows federal and State requirements and fits into statewide and national emergency operations in the event of a disaster declaration by either of those authorities. The plan outlines basic information about evacuation procedures and routes and includes a map to emergency assembly areas throughout the campus. Finally, it offers descriptions of staff responsibilities at a basic level and outlines emergency notification procedures. It focuses on the facilities on the campus alone and does not discuss exiting into the surrounding community.

Roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

The construction and operation of projects associated with the proposed 2021 LRDP would not substantially alter or otherwise interfere with public rights-of-way and would provide adequate internal ingress and egress for necessary emergency response vehicles. Implementation of the proposed 2021 LRDP would not interfere with traffic circulation on designated disaster routes during construction or operation. Future campus projects would be required to comply with all applicable California Fire Code (Title 24, CCR, Section 9) requirements.

Construction of facilities associated with the implementation of the proposed 2021 LRDP could result in lane or roadway closures on the edges of campus and within the campus circulation system. Future development could affect areas identified as emergency assembly areas. Implementation of future development under the proposed 2021 LRDP would be guided by existing and future LRDP planning strategies, including those concerning transportation where circulation and traffic management would be discussed. Future development on the UCR main campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones, as in the current LRDP. Furthermore, new development would require EH&S to update the Campus Emergency Operations Plan to account for the new development and increased student/faculty/staff population. These revisions would include changes to the campus evacuation zones, emergency assembly areas, staff responsibilities, and general procedures.

Policies proposed under the 2021 LRDP will be reviewed in the forthcoming EIR to ensure that future campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. As such, impacts are considered **potentially significant** and will be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Less Than Significant Impact. Section 20, Wildfire, presents a detailed discussion of wildfire risk in and around UCR. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by California Department of Forestry and Fire Protection (CAL FIRE)* map for the City of Riverside, portions of the southeastern area of campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a Very High Fire Hazard Severity Zone (VHFHSZ) that includes the Box Springs Mountain Reserve (CAL FIRE 2007). The main campus is situated in an area that is largely developed with urban and commercial land uses, but the campus contains open space areas to the east that are sparsely vegetated grasslands with intermittent, non-native trees in areas of lower elevation. Most of the development under the proposed 2021 LRDP would occur in the northern and central areas of East Campus; however, the proposed LRDP may allow for development of new facilities in or adjacent to the VHFHSZ in the southeastern area of East Campus adjacent to the natural hillsides.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by EH&S, Campus Building Official, and Campus Fire Marshal. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the building complies with all the required codes noted above. Project structures would be required to comply with the California Fire Code regarding emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible.

Section 20, Wildfire, further discusses the exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Future development on the campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones; therefore, the proposed 2021 LRDP may result in potentially significant impacts related to impairment of an adopted emergency response plan or emergency evacuation plan. It is anticipated that the proposed 2021 LRDP would not result in significant impacts related to exposing people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, exacerbating fire risk due to the installation or maintenance of associated infrastructure, or exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. However, as wildfire is an issue of concern to the community, these potential impacts will be analyzed under the wildfire thresholds in Section 20 of this Initial Study in the forthcoming EIR.

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10. Hydrology and Water Quality

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐

Less Than Significant Impact. Development under the LRDP would result in temporary construction-related activities such as the movement of earth. The UCR campus is in the Upper Santa Ana River Watershed, within two sub-watersheds that are generally divided by the I-215/SR 60 freeway (San Bernardino Valley Water Conservation District 2015). Most of East Campus drains to the University Arroyo Watershed, while portions of the West Campus drain to the Box Springs Arroyo Watershed. The proposed 2021 LRDP is also subject to the 2016 Water Quality Control Plan for the SARWQCB and will be analyzed for consistency with this plan in the EIR.

As discussed in criterion 9(a), the UCR campus is a non-traditional permittee under the Phase II MS4 Small statewide general storm water permit, which requires UCR to prevent construction site discharges of pollutants through the installation, implementation, and maintenance of BMPs and ensure compliance with Construction General Permit (State Water Resources Control Board Order 2009-0009-DWQ, as amended). Phase I of the NPDES Program requires NPDES permits for storm water discharge from priority sources, including MS4s serving populations of over 100,000; several categories of industrial activity; and construction activity that disturbs one acre or more. Phase II of the NPDES Program regulates storm water discharges from Small MS4s (such as schools and universities). As part of Phase II of the NPDES program, the State Water Resources Control Board (SWRCB) adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including non-traditional Small MS4s, which include public campuses. The Phase II Small MS4 General Permit covers Phase II Permittees statewide.

As a Phase II permittee, UCR must comply with the MS4 permit requirements including:

1. Education and outreach program
2. Public involvement and participation program
3. Illicit discharge detection and elimination
4. Construction site storm water runoff control program
5. Pollution prevention/good housekeeping for facilities
6. Post-construction stormwater management program
7. Program effectiveness assessment and improvement

All UCR facility design and construction projects must comply with applicable State building code requirements, as well as State and federal agency regulations. All campus projects would be required to

comply with the provisions of the Statewide General Construction Activity Stormwater Permit that specifies the implementation of BMPs (e.g., watering exposed soils; covering stockpiles of soils; installing sandbags to minimize off-site runoff; creating temporary desilting basins; construction vehicle maintenance in staging areas to avoid leaks or spills of fuels, motor oil, coolant, and other hazardous materials; installation of silt fences and erosion control blankets; timing grading to avoid the rainy season [November through April]) during project construction. Furthermore, the University has been and will continue to implement the NPDES Phase II requirements through the implementation of Stormwater Management Program that includes construction site stormwater runoff control for sites greater than one acre and post-construction stormwater management in new development and redevelopment.[13]

Storm drain infrastructure for the campus projects would include area drains, roof drain connections, and piped conveyance of stormwater to the water quality treatment basins/devices and connections to the existing storm drain system. Stormwater would be treated by a coalescing silt/sand oil/water separator (clarifier). Water quality treatment would consist of biofiltration basins, proprietary treatment devices, and/or underground storage vaults. These BMPs would slow the velocity of water and allow sediment and debris to settle out of the water column, thereby minimizing the potential for downstream flooding, erosion/siltation, or exceedances of stormwater drainage system capacity. Operation and maintenance of the proposed 2021 LRDP would not violate water quality standards or otherwise substantially degrade water quality.

As described above, construction and operation of the proposed 2021 LRDP is expected to occur in compliance with applicable water quality standards and waste discharge requirements. Although impacts to surface and groundwater quality are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐

Potentially Significant Impact. The Riverside area is located within the Upper Santa Ana Valley Groundwater Basin, and the UCR main campus is located near the southeastern edge of the Riverside-Arlington Subbasin. Groundwater in this subbasin is replenished by multiple sources including infiltration from Santa Ana River flow, underflow past the Rialto-Colton Fault, intermittent underflow from the Chino Groundwater Subbasin, return irrigation flow, and deep percolation of precipitation (California Department of Water Resources [DWR] 2004). The Riverside-Arlington Subbasin is approximately 65 percent adjudicated, with the Adjudication Judgment administered by Western Municipal Water District (WMWD). The portion of the Riverside-Arlington Subbasin that is not adjudicated is identified by the DWR as a low-priority groundwater basin, meaning that it is not subject to management direction of the

[13] https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html

Sustainable Groundwater Management Act of 2014. Basins that are designated as High Priority are subject to the Sustainable Groundwater Management Act and a Groundwater Sustainability Plan (GSP) administered by a Groundwater Sustainability Agency (GSA) is required.

DWR's prioritization of the Riverside-Arlington Subbasin has changed over recent years, as described below (Groundwater Exchange 2018):

- 2014: Basin prioritization – High. Water quality degradation issues known in several public supply wells.
- 2016: Riverside-Arlington Subbasin boundaries modified along with the boundaries of Yucaipa Subbasin 8-002.07, Bunker Hill Subbasin 8-002.06, and Rialto-Colton Subbasin 8-002.04 to align with adjudicated areas.
- 2018: Draft Basin Prioritization – High. Hydrographs generally show increasing water levels starting around 1960 and stabilizing or declining somewhat after the 1980s.
- 2018: Final Basin Prioritization – Very Low.
- 2019: DWR released the *Sustainable Groundwater Management Act 2018 Basin Prioritization* report, which outlined the process involved with reassessing the priority of the groundwater basins in California following the 2016 basin boundary modifications; through this process, the Riverside-Arlington Basin was designated as very low-priority, and therefore not requiring a GSP (WMWD 2020).

Although the Riverside-Arlington Subbasin is currently identified as Very Low Priority, WMWD applied to DWR and was approved as the GSA for the Riverside-Arlington Subbasin; as such, WMWD is proceeding with the process of meeting with stakeholders and creating a GSP for the subbasin, with the support of Proposition 1 grant funding awarded to WMWD by the DWR. At the time of drafting this Initial Study for the proposed 2021 LRDP, a GSP for the Riverside-Arlington Subbasin is not in place and the proposed 2021 LRDP would therefore not interfere with the implementation of a GSP.

Under this significance criterion, adverse impacts to groundwater supply could occur indirectly, by disrupting recharge rates or patterns to the underlying groundwater basin, or directly, by increasing use of local groundwater supply. The UCR main campus is presently developed and characterized by large areas of impervious surfaces, such as paving for streets and buildings. Infiltration and percolation of precipitation occurs in permeable areas such as open space areas in East Campus and, research fields located in West Campus. The proposed 2021 LRDP would introduce additional impervious areas through development of new buildings. As such, development of the proposed 2021 LRDP could interfere with groundwater recharge due to increased impervious surfaces.

Implementation of the proposed 2021 LRDP would increase water demands on the campus project sites due to the introduction of up to approximately 11,000 new students and 2,800 new faculty and staff, some of whom would reside in on-campus housing. Water service to the UCR main campus is provided by the City of Riverside Public Utility Department. Water delivered by the City of Riverside is sourced from local groundwater resources. Therefore, implementation of the proposed 2021 LRDP may result in a decrease of groundwater supplies and would have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or	☒	☐	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP would not alter the course of a stream or river. However, full build-out of the proposed 2021 LRDP would result in site-specific alterations to the local drainage patterns. Planning and design of the proposed 2021 LRDP would include stormwater drainage features to accommodate runoff associated with new project features. Additional sources of pollution are addressed under significance criterion 10(a) above, for potential impacts associated with water quality and waste discharge requirements; no additional impacts associated with polluted runoff have been identified.

The proposed 2021 LRDP would increase the area of impervious surfaces on the campus area and would implement post-construction stormwater management control measures on-site through infiltration, evapotranspiration, storm water runoff harvest and use, or a combination of the three. In addition, as described above for significance criterion 10(a), project-specific SWPPPs would be developed and implemented to minimize or avoid potential water quality impacts during construction and operation of individual campus projects. Also as described above, construction and operation of the proposed 2021 LRDP is expected to occur in compliance with applicable water quality standards and waste discharge requirements, based upon project-specific design features and BMPs. Without BMPs, this would be a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Less Than Significant Impact. The UCR main campus is not located in a tsunami hazard area and is therefore not subject to inundation by tsunami. The UCR main campus is also not located in proximity to a standing body of water that could experience a seiche, or large wave activity associated with a seismic event, and therefore is not subject to inundation by seiche. Implementation of the proposed 2021 LRDP would not increase or otherwise alter the area's potential to be inundated by tsunami or seiche. Therefore, this impact analysis is focused on the potential for flooding from storm events to result in water quality impacts.

The Federal Emergency Management Agency (FEMA) identifies the majority of the UCR main campus (and the City of Riverside as a whole) as Zone X, or an Area of Minimal Flood Hazard. This includes areas outside of defined Special Flood Hazard Areas, or flood hazard areas associated with the area of inundation from a storm of magnitude with the likelihood of occurring once every 100 years, or the storm with a one percent chance of occurring during any given year. There is a FEMA-designated Zone AE surrounding University Wash, which bisects the UCR campus and is shown on FEMA's Flood Insurance Rate Maps 06065C0727G and 06065C0726G, including Letter of Map Revision 10-09-0680P (FEMA 2008). The proposed 2021 LRDP would not expand or otherwise alter existing FEMA flood hazard areas.

Implementation of the proposed 2021 LRDP would not introduce projects subject to inundation by the failure of a levee or dam. The closest dam to the UCR main campus is Seven Oaks Dam, approximately 24 miles upstream of the Santa Ana River from Riverside. The Santa Ana River itself is more than 3 miles from the UCR main campus at its nearest point. Due to the distance and existing structures between the UCR campus and the Santa Ana River, the potential for release of pollutants due to a flood event from the catastrophic failure of Seven Oaks Dam is remote. Therefore, implementation of the proposed 2021 LRDP would not expose people or structures to a significant risk of release of pollutants due to inundation related to flooding from the failure of a levee or dam.

The proposed 2021 LRDP would not involve the storage or processing of pollutants such that they may be spilled or released due to inundation, should a flood hazard event occur. As discussed in criterion 10(a) and 10(c), implementation of the proposed 2021 LRDP would occur in compliance with UCR's MS4 permit and as such, the potential for campus project activities to result in pollutant release would be minimized or avoided. Potential impacts of the proposed 2021 LRDP associated with the release of pollutants due to project inundation would be **less than significant** and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP would result in increased drinking water and irrigation water demand due to the expansion of UCR facilities and increase in enrollment and employees under the proposed 2021 LRDP. As discussed in criterion 10(a), 10(b), and 10(c), increased water demand on the UCR main campus, construction activities, and expanded impervious surface on the campus could potentially impact water quality and groundwater supplies. Therefore, the proposed 2021 LRDP could potentially conflict with existing water quality control or groundwater management plans. The proposed 2021 LRDP could have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

11. Land Use and Planning

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project physically divide an established community?	☐	☐	☒	☐

Less than Significant Impact. The UCR main campus is in the southeastern portion of Riverside, bisected by the I-215/SR 60 freeway. The City of Riverside General Plan, which includes the UCR main campus, has identified UCR as a public facility/institutional land use (City of Riverside 2012). The campus is adjacent to and surrounded by single- and multi-family neighborhoods, office/commercial retail development, government facilities, and open space areas. The UCR main campus is developed with academic, research, agricultural, recreational, athletic, maintenance, housing facilities, campus support facilities, and designated open space areas.

The 2021 LRDP proposes approximately 7,489 new beds in on-campus housing, 2,322,541 asf (3,483,812 gsf) of new facility space for student life (including housing), 896,229 asf (1,344,344 gsf) of new facility space for administration and support, and 480,569 asf (720,854 gsf) of new facility space for academic and research. The proposed 2021 LRDP would direct campus growth and identify locations for future land use, including location of new facilities, new and redeveloped open space and recreation areas, transportation options and needs, infrastructure capacity and management, and sustainability. Utility infrastructure improvements would be temporary and would not physically divide existing neighborhoods or the surrounding community.

The on-campus community consists of students (undergraduate and graduate), faculty, and staff. The implementation of the proposed 2021 LRDP would develop buildings and facilities on the existing main campus. Development under the proposed 2021 LRDP would occur in phases over the planning period as more housing and facilities are needed and to maintain all campus functions by developing areas of campus at appropriate and strategic times. Overall, the proposed 2021 LRDP would build upon the existing campus framework and development to accommodate increases in enrollment, would improve on-campus amenities, and would not divide the on-campus or surrounding community. The proposed 2021 LRDP currently includes the following draft objectives and policies to increase connections to surrounding communities and improve multi-modal access within and adjacent to the campus:

- Objective LU1.1: Serve as good stewards of limited campus lands and natural resources as UCR continues to grow and develop toward its enrollment goals.
  - Policy: Promote increased densities on East Campus through increased site coverage and heights of future projects flanking northern and western gateways and campus loop road.
- Objective LU1.2: Retain existing land-based research operations on West campus, while balancing the need for innovative partnerships and initiatives.
  - Policy: Require increased development density on East Campus to fully accommodate proposed new space per the 2021 LRDP.

- Objective LU1.3: Maintain the height and character of the Mid-Century Core to preserve its unique design legacy in the mid-century core.
  - Policy: Plan and design future buildings consistent with the existing established heights, building setbacks, and character of the Academic Center.
- Objective LU1.4: Generally locate higher density future growth adjacent to and outside of the campus loop road.
  - Policy: Allow increased heights and increased density on underutilized lands such as surface parking lots and in infill areas to meet future needs.
- Objective LU1.5: Continue to grow on-campus student housing to 40% and increase student life activities.
  - Policy: Provide increased housing capacity and student life facilities in existing student neighborhoods in the northern portions of East Campus.
- Objective LU1.6: Enhance Canyon Crest Drive as a new campus "Main Street" and northern gateway.
  - Policy: Ensure that all proposed buildings include a mix of active uses that have a street interface.
- Objective LU1.7: Celebrate the University Avenue corridor as the primary gateway into campus.
  - Policy: Promote new facilities in this area which serve a broad swath of the campus population, engage the community, and support multi-modal access.
- Objective LU1.8: Enhance campus edges to promote a welcoming impression to visitors and visually communicate the transition to campus-owned land areas.
  - Policy: Locate key campus community-related facilities to engage campus edges and enhanced landscape strategies.

The proposed 2021 LRDP would not physically divide the established community around UCR or the on-campus community, and there would be **less than significant impact**. No further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

For an impact to be considered potentially significant, any inconsistency would also have to result in a significant adverse change in the environment not already addressed in the other resource chapters of this Initial Study.

Less Than Significant Impact. UCR is part of the UC, a constitutionally created entity of the State of California. As a constitutional entity, the UC is not subject to municipal regulations, such as Riverside

County and City of Riverside general plans. Implementation of the proposed 2021 LRDP would primarily affect existing campus facilities within the UCR main campus area. Increases in building development, student housing, parking activity, and associated student activity would occur throughout the UCR main campus, but primarily in East Campus. Development under the proposed 2021 LRDP would complement and build upon changes that have been made under the 2005 LRDP. This development would continue the activation, use, and improvement of the campus' facilities and open spaces.

The intensity of use and development on the UCR main campus would increase incrementally throughout the next 15 years. Proposed land use changes and increased intensity would be consistent with the overarching land use development goals and vision for the UCR main campus. UCR and the City of Riverside will consult with one another during the proposed 2021 LRDP and the City of Riverside's General Plan Update processes. The proposed 2021 LRDP would direct campus growth and identify locations for future land use, including location of new facilities, new and redeveloped open space and recreation areas, transportation options and needs, infrastructure capacity and management, and sustainability. Development under the proposed 2021 LRDP would include physical changes to the main campus area that are being analyzed in the individual resource chapters in this Initial Study. Future development carried out would be controlled by the proposed 2021 LRDP, which is the comprehensive plan to guide future physical development of the campus.

Most of the proposed development and changes would be concentrated in the Academics & Research, Canyon Crest Gateway, University Avenue Gateway, and Student Neighborhood areas of the East Campus area that are not directly adjacent to the off-campus community. While policies from the neighboring jurisdictions are not applicable to UCR, development under the proposed 2021 LRDP would consider existing and planned uses in the surrounding community, particularly in the northern areas of East Campus near Blaine Street and West Linden Street, the northeastern areas of East Campus near Watkins Drive, and the northern areas of West Campus near University Avenue and Iowa Avenue, indicated by the following proposed 2021 LRDP draft objectives and policies:

- Objective LU1.6: Enhance Canyon Crest Drive as a new campus "Main Street" and northern gateway.
  - Policy: Ensure that all proposed buildings include a mix of active uses that have a street interface.
- Objective LU1.7: Celebrate the University Avenue corridor as the primary gateway into campus.
  - Policy: Promote new facilities in this area which serve a broad swath of the campus population, engage the community, and support multi-modal access.
- Objective LU1.8: Enhance campus edges to promote a welcoming impression to visitors and visually communicate the transition to campus-owned land areas.
  - Policy: Locate key campus community-related facilities to engage campus edges and enhanced landscape strategies.
- Objective M1.1: Reduce future traffic, parking demand, and GHG Emissions, by increasing student housing on campus up to 40% of the projected enrollment in 2035.
  - Policy: Develop the University Avenue and Canyon Crest Drive Gateway streetscapes to support increased use and functional efficiency of the RTA system, improved clarity of drop-off and pick-up locations for ride-sharing services, reduced conflict, and improved safety for cyclists, pedestrians, and emerging micro-mobility solutions in these increasingly busy mixed-mode circulation areas.

As required by Section 15125(d) of the CEQA Guidelines, this section discusses any inconsistencies between the proposed 2021 LRDP and applicable regional plans. The regional plans relevant to the

proposed 2021 LRDP include the 2016 SCAG RTP/SCS, the 2016 Water Quality Control Plan for the SARWQCB, and the 2016 SCAQMD Air Quality Management Plan. A consistency analysis between the applicable regional plans and the 2021 LRDP would be needed to determine if the proposed 2021 LRDP would conflict with these applicable plans. Information provided in the consistency analysis would be derived from assessments conducted for traffic, air quality, and other applicable impact areas and included in the forthcoming EIR. These plans are already proposed for further evaluation in the forthcoming EIR as part of the Transportation (Section 17(a)), Air Quality (Section 3(a)), and Hydrology (Section 10(a)) analyses in the EIR. Therefore, the project would not result in additional significant adverse change in the environment not already addressed in the other resource chapters of this Initial Study. Therefore, this would be a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

12. Mineral Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact. The UCR campus is located on lands classified as Mineral Resource Zone 3 (MRZ-3), which are areas of undetermined mineral resource significance (City of Riverside 2012). According to the City of Riverside General Plan 2025, the quarrying of granitic rock was once a significant industry in Riverside, but these operations have not been active for decades. There are no known mineral resources on campus; the existing LRDP and proposed 2021 LRDP does not allow for mining. Therefore, the proposed 2021 LRDP would not result in the loss of availability of valuable mineral resources. **No impact** would occur and further discussion in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

No Impact. The UCR campus is located on lands classified as MRZ-3, which are areas of undetermined mineral resource significance (City of Riverside 2007a). According to the City of Riverside General Plan 2025, granitic rock quarrying was once a significant industry in Riverside, but these operations have not been active for decades (City of Riverside 2012). There are no known mineral resources on campus; neither the existing LRDP nor the proposed 2021 LRDP allow for mining. Therefore, the proposed 2021 LRDP would not result in the loss of availability of a locally important mineral resource recovery site. **No impact** would occur and further discussion in the forthcoming EIR is not warranted.

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13. Noise

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of applicable standards?	☒	☐	☐	☐

Potentially Significant Impact. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2020). Noise-sensitive land uses include those uses where noise exposure could result in health-related risks to individuals and places where quiet is an essential element of the intended purpose. Residential dwellings are of primary concern; land uses such as childcare centers, K-12 schools, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, trails, cemeteries, and playgrounds are considered sensitive to increases in noise levels. Noise-sensitive land uses closest to the campus include on-campus and off-campus residences and hotels, and on-campus uses such as classrooms, childcare centers, libraries, and the Student Health Services. Recreational uses could also be considered noise sensitive receptors.

Construction

Sources of construction noise could include heavy-equipment operation, pile drivers, and other equipment associated with grading, excavation, and building construction. Trucks, haulers, and other construction equipment traveling to and from the campus construction sites and staging areas could increase noise levels to the point of nuisance for on-campus sensitive receptors. While construction hours could be limited to certain times of day and days of the week, impacts are **potentially significant** during construction and further analysis in the forthcoming EIR is warranted.

Operation

Operational noise could be generated by increased traffic entering and exiting the campus and by the increase in student, faculty, and staff population. Operational building systems would be required to comply with State regulations, but the increase in gross square footage predicted by the proposed 2021 LRDP could result in **potentially significant** impacts for operational noise over the long-term. This impact warrants further analysis in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP could include substantial ground-borne vibration that would affect student housing, academic facilities, laboratories, among other uses on-campus and at nearby off-campus uses (e.g., single-family and multi-family residences) as construction activities (e.g., grading, excavation, and building construction) have the greatest potential to generate ground-borne vibration affecting nearby receivers. A vibratory roller and an impact pile driver would be the greatest sources of vibration during general campus project construction activities. Construction vibration estimates are based on vibration levels Caltrans and the Federal Transit Authority (FTA) provide for these types of equipment as indicated in **Table 6** (Caltrans 2020, FTA 2018).

Table 6 – Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (in/sec)
Pile driver (impact)	Upper Range: 1.518
	Typical Range: 0.644
Pile driver (sonic)	Upper Range: 0.734
	Typical Range: 0.170
Vibratory roller	0.210

Source: Caltrans 2020, FTA 2018
Notes: in/sec = inches per second, ppv = peak partible velocity

Table 7 and **Table 8** detail the limits at which human annoyance associated with vibration is usually different if it is generated by a steady state or a transient vibration source.

Table 7 – Human Response to Steady State Vibration

PPV (in/sec)	Human Response
3.6 (at 2 Hz)-0.4 (at 20 Hz)	Very disturbing
0.7 (at 2 Hz)–0.17 (at 20 Hz)	Disturbing
0.10	Strongly perceptible
0.035	Distinctly perceptible
0.012	Slightly perceptible

Source: Caltrans 2020
Notes: in/sec = inches per second, ppv = peak partible velocity

Table 8 – Human Response to Transient Vibration

PPV (in/sec)	Human Response
2.0	Severe
0.9	Strongly perceptible
0.24	Distinctly perceptible
0.035	Barely perceptible

Source: Caltrans 2020
Notes: in/sec = inches per second, ppv = peak partible velocity

Pile driving is a construction activity known to generate excessive ground-borne vibration. It is unknown at this stage of planning if pile driving would be required to drive foundation piles into the ground for any campus projects that would occur under the proposed 2021 LRDP. This analysis conservatively assumes campus project implementation would involve use of impact pile drivers for more than one location. The upper range for an impact pile driver would create approximately 1.518 inches per second (in/sec) peak particle velocity (PPV) at 25 feet (FTA 2018). If conservative estimated distances from campus project construction to existing buildings, a pile driver may be used within 50 feet of those structures. This would equal a vibration level of 0.7086 in/sec PPV at the nearest buildings, which would exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV. This could cause damage to sensitive laboratory facilities and equipment and disrupt research and instruction that uses this equipment. Furthermore, sensitive collections or specimens could be damaged and older buildings could incur damage from the vibration. The distance to which an impact pile driver would exceed 0.2 in/sec PPV would be approximately 160 feet. As it is unknown if pile drivers would be needed for future campus projects at this stage of planning, conservative estimates indicate impacts could be **potentially significant** and detailed technical analysis in the forthcoming EIR is warranted.

Another potential source of substantial vibration during general campus project construction activities would come from a vibratory roller, which would be used during paving activities and may be deployed within 50 feet of the nearest buildings. A vibratory roller would create approximately 0.210 in/sec PPV at 25 feet (FTA 2018). This would equal a vibration level of 0.098 in/sec PPV at 50 feet. As it is unknown if vibratory rollers would be needed for future campus projects at this stage of planning, conservative estimates indicate impacts could be **potentially significant** and detailed technical analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

No Impact. Flabob Airport is approximately 4.7 miles west of the UCR main campus, and March Air Reserve Base is approximately 6 miles southeast of the UCR main campus. The proposed 2021 LRDP campus project sites would not be situated within two miles of a public airport, public use airport, or an airport land use plan area. Therefore, implementation of the proposed 2021 LRDP would not result in any impacts from exposure to excessive noise levels generated by airports or private airstrips. **No impacts** are anticipated and no further discussion in the forthcoming EIR is warranted.

14. Population and Housing

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would incrementally accommodate approximately 7,419 undergraduate students, 3,659 graduate students, 843 academic faculty and staff, and 1,963 non-academic staff, resulting in a net increase to the campus population of approximately 13,884 people by the 2035 horizon year. The proposed 2021 LRDP would provide on-campus or campus-controlled student housing for approximately 40 percent of the student population, equal to approximately 7,489 new on-campus beds. Therefore, approximately 6,395 new students and faculty/staff would be expected to reside in non-university housing by 2035 (13,884 net increase to the campus population – 7,489 new on-campus beds).

A conservative approach assumes that all new students, faculty, and staff would be new residents that would move into the City of Riverside and Riverside County from outside of the region. The estimated 2019 and forecasted 2035 populations for the City of Riverside and Riverside County are shown in **Table 9**.

The population growth attributed to the proposed 2021 LRDP would account for approximately 11.4 percent of the City of Riverside's forecasted growth (6,395 off-campus residents/55,999 total resident growth) and one percent of Riverside County's forecasted growth (6,395 off-campus residents/632,954 total resident growth).

Table 9 – City and County Population Growth

Jurisdiction	2019 Population	Forecasted 2035 Population	Anticipated Growth 2019-2035	Proposed 2021 LRDP Increase (Off-Campus Population)	Percent Growth Attributed to the 2021 LRDP
City of Riverside	328,101	384,100	55,999	6,395	11.4
County of Riverside	2,422,146	3,055,100	632,954	6,395	1.0

Source: City of Riverside 2018a, California Department of Finance (DOF) 2019; SCAG 2016

The contribution of new residents would be incremental; using a conservative estimate of even population growth year over year, approximately 426 new residents would be added each year over the proposed 15-year life of the 2021 LRDP. This incremental contribution to the area population growth would likely be lower than this estimate, as it can be logically assumed that some new students and

faculty/staff would come from residents already living in the area prior to enrollment or employment. The City of Riverside and Riverside County could absorb the incremental population increase over the proposed 15-year life of the 2021 LRDP and would not need to construct new housing or infrastructure as a direct result of the proposed 2021 LRDP.

The proposed 2021 LRDP may induce indirect population growth due to regional commercial and business activity. This indirect population growth would be included in regional SCAG population forecasts and would not be considered unplanned. Therefore, impacts related to direct and indirect unplanned population growth would be less than significant. Furthermore, the proposed 2021 LRDP would be serviced by existing infrastructure and no new roads are proposed that would indirectly increase unplanned population growth. Therefore, the proposed 2021 LRDP would not induce substantial unplanned population growth in the City of Riverside or Riverside County. The proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. The proposed 2021 LRDP would direct the construction of new on-campus housing. The proposed 2021 LRDP may require the renovation or demolition and replacement of existing housing, which may result in the temporary displacement of students residing on campus. Renovations would not permanently displace existing students. It is anticipated that redevelopment and/or remodeling of existing on-campus housing would occur over the summer months when student population would be reduced.

As discussed in criterion 14(a) above, approximately 6,395 students and faculty/staff would be accommodated in non-affiliated, off-campus housing units, conservatively assumed to all be either in the City of Riverside or Riverside County more broadly. In 2019, the persons per household rate for the City of Riverside was 3.28 and 3.2 for Riverside County (DOF 2019). Assuming those rates are maintained to 2035, the proposed LRDP could generate a need for approximately 1,950 housing units over the proposed 15-year life of the 2021 LRDP.

The City of Riverside's estimated 2019 housing inventory was 100,760 units, with a vacancy rate of 4.9 percent. Therefore, a total of 4,937 units are currently unoccupied. The County of Riverside's 2019 housing inventory was 847,851, with a vacancy rate of 12.8 percent. Thus, 108,525 units are currently unoccupied throughout the County (DOF 2019). Estimated 2019 and forecasted 2035 City of Riverside and Riverside County housing units are shown in **Table 10**.

The housing needs of the proposed 2021 LRDP would account for approximately 11.5 percent of the City of Riverside's forecasted housing growth (1,950 housing units/16,940 total housing units) and 1.2 percent of Riverside County's forecasted housing growth (1,950 housing units /161,149 housing units).

Table 10 – Estimated and Forecasted City and County Housing Units

Jurisdiction	2019 Housing Units	Forecasted 2035 Housing Units	Anticipated Growth 2020-2035	Proposed 2021 LRDP Need (Non-affiliated, off-campus housing)	Percent of New Housing Units that Would Accommodate the 2021 LRDP Housing Needs
City of Riverside	100,760	117,700	16,940	1,950	11.5
County of Riverside	847,851	1,009,000	161,149	1,950	1.2

Source: DOF 2019; SCAG 2016

The contribution of new residents would be incremental; using a conservative estimate of even housing unit need year over year, approximately 130 housing units would be needed each year over the proposed 15-year life of the 2021 LRDP. As discussed in criterion 14(a) above, this number would likely be far lower, as it can be logically assumed that a portion of the new students and faculty/staff would be drawn from people already residing in the area. Given the current area vacancy rates, the City of Riverside and Riverside County more generally could absorb this housing demand and new housing construction would not be required merely because of the implementation of the proposed 2021 LRDP.

Under State law, the City of Riverside and neighboring jurisdictions address planning for housing needs in the housing elements of their general plans in compliance with the SCAG Regional Housing Needs Assessment. Local policies would guide housing development to accommodate the needs of future population growth, particularly housing for low-income residents (including students), and decrease potential impacts to existing residents from housing and economic displacement.

The proposed 2021 LRDP would not displace substantial numbers of existing people or housing and would not necessitate the construction of new housing beyond what is already forecasted for the City of Riverside or Riverside County. Therefore, the proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

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15. Public Services

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: a) Fire protection?	☒	☐	☐	☐

Potentially Significant Impact. UCR is within the service district of the Riverside Fire Department, which is responsible for fire protection, fire safety inspections, community education, and emergency preparedness planning and training for the Riverside community. In 2017, City of Riverside Fire Department (RFD) responded to 38,501 calls for service, or 0.12 calls per resident in its service population (City of Riverside 2017). During the first quarter of 2019, turnout time for all 14 RFD fire stations was 2:06 minutes, and RFD is seeking a "turnout time" to under 2:00 minutes at all fire stations (City of Riverside 2019b). The City of Riverside allocated seven percent of the City's operating budget to RFD in Fiscal Years 2018/2019 to 2019/2020 for 248 FTE positions (City of Riverside 2020). Riverside City Fire Station 4, located at 1496 W. Linden Street, is approximately 0.6 mile northwest by local streets from UCR Extension, the nearest UCR facility. It employs one captain, one engineer, one firefighter, and one firefighter/paramedic, and has one engine and one water tender. RFD maintains mutual and/or automatic aid agreements with City of Corona Fire Department, City of Colton Fire Department, one military fire department, Riverside County Fire Department, and San Bernardino County Fire Department.

In November 2016, the RFD identified the severity of the need to replace vehicles as they had exceeded their life cycle, mileage, or hour limits, and were incurring high costs in repairs. On May 16, 2017, City Council approved a 5-year spending plan of Measure Z funding which included a one-time allocation of $14.5 million to the RFD for new apparatus and required equipment. The purchase of these units will replace most of the current front-line apparatus, while some of the aged units will become part of the reserve fleet. As a result of Measure Z funding, RFD was able to increase truck companies by 25 percent, increase personnel and paramedics, and improve response times (City of Riverside n.d.).

The UCR Fire Prevention program is intended to ensure responsible and consistent protection for persons and property in, on, and exposed to UCR administered properties in conformance with California statues, regulations, and University policy. The program addresses emergency incident

response, fire, panic, explosion, and disaster preparedness. On-campus student housing facilities experienced one fire incident in 2018.

UCR's Building and Safety Division, Fire Prevention, Facilities Services, EH&S, and/or other UCR departments and staff is responsible for inspection, fire protection engineering, and fire prevention. The campus has historically maintained a Memorandum of Understanding with the State Fire Marshal to provide additional support, and the Campus Fire Marshal is a designated Deputy State Fire Marshal. Projects developed under the proposed 2021 LRDP would comply with all regulations of Sections 13000 et seq. of the California Health and Safety Code, which pertain to fire protection systems, including provision of smoke alarms, fire sprinklers, fire extinguishers, appropriate building access, and emergency response notification systems.

Buildout of the proposed 2021 LRDP may increase the need for fire protection services within the RFD service area. Implementation of the proposed 2021 LRDP would result in the expansion of existing academic programs, extra-curricular activities, and development of housing and instructional facilities, however, would not fundamentally change the nature of campus operations, and the LRDP may result in retrofitting or replacing older structures with modern structures built to more stringent fire code requirements. Therefore, implementation of the proposed 2021 LRDP is not anticipated to result in an increase in incident calls per capita. However, increased building density, size, and building heights may require additional fire equipment, such as ladders, and increased personnel to respond to fires (City of Riverside 2017).

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 926 new residents annually over the proposed 15-year life of the 2021 LRDP (13,884/15 years = approximately 926 residents per year). The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in the City of Riverside and surrounding region.

RFD may need to increase staff and/or facilities to adequately respond to the increase in service population, which may necessitate the construction of new facilities which could cause **potentially significant environmental impacts** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Police protection?	☐	☐	☒	☐

Less Than Significant Impact. The University of California Police Department (UCPD) is located on campus at 3500 Canyon Crest Drive Riverside, California 92507. UCPD operates 24 hours-per-day, 365 days a year. It employs police officers, security guards, and Community Service Officers to deliver public safety services on campus, and near the campus. UCPD is accredited by the California Commission on Police Officer Standards and Training and vested with the authority and responsibility to enforce all applicable local, State, and federal laws. All UCPD Officers are duly sworn peace officers with statewide authority as defined in California Penal Code Section 830.2(b), are authorized to carry firearms, and have the authority and duty to conduct criminal investigations and make arrests. At times UCPD supplements

its staff with officers from other agencies who have arrest authority under mutual aid agreements. UCPD has primary jurisdiction over the UCR campus and properties owned, leased, or controlled by the University in adjacent areas. In 2018, UCPD responded to 66 criminal offenses on campus (non-residential areas and residence halls) and 10 off-campus criminal offenses (non-campus and public property). The most common criminal offenses were burglary and motor vehicle theft (UCR 2019b).

UCPD enjoys a close working relationship with the Riverside Police Department (RPD), the Riverside County Sheriff's Department as well as the local branches of the California Highway Patrol. UCPD personnel regularly meet with agents assigned to the Riverside Field Office of the Federal Bureau of Investigation to exchange information to prevent criminal activity on campus.

The need for police services on campus would increase incrementally in association with the increase in student, staff, and faculty population under the proposed 2021 LRDP. The increased population on campus would require additional routine services to provide additional patrols of the campus and maintain police presence. Additional administrative staff may be necessary to support the increases in patrol personnel. To maintain adequate levels of police protection to serve the anticipated increase in campus population, the UCPD may need to purchase additional equipment and/or hire more personnel, which may result in the need for further facility space. It is anticipated that the proposed 2021 LRDP would accommodate these facility needs as part of the proposed approximately 896,229 asf (1,344,344 gsf) of new administrative and support facility space proposed in the buildout projections for the 2021 LRDP, and there would be no additional environmental impacts beyond those already being analyzed as part of the proposed 2021 LRDP.

The RPD serves the rest of the City of Riverside, with the nearest RPD station located approximately 2.2 miles west of UCR at 4102 Orange Street Riverside, California 92501. The proposed 2021 LRDP would incrementally increase the service population of the RPD, as it would be anticipated that most new students and employees would primarily reside in the RPD service area when living off campus. The City of Riverside has allocated $126 million (13 percent) of Fiscal Year 2018/2019 – 2019/2020 operating budget to fund 557 FTE positions, 197 of which are in field operations (City of Riverside 2020). In 2018, the RPD responded to 245,000 calls for service. Measure Z funding generated more than $20 million for RPD staff, 49 vehicles, and one police aircraft (City of Riverside 2018b).

The City of Riverside plans to construct a new RPD headquarters to replace the downtown facility (4102 Orange Street), which may or may not be decommissioned. The building size, location, and completion date for the new headquarters have yet to be determined (Gonzalez 2020). Planning for new or physically altered RPD stations is based on an assessment of Riverside's need for new facilities. The incremental contribution to demand for increased RPD protection services would be offset by payment of proportionate property taxes and sales taxes to the City of Riverside by the residents. Likewise, property taxes and sales taxes from new residents in neighboring jurisdictions would support the appropriate police protection agency. An evaluation of the environmental impacts of implementation of the future headquarters is not feasible at this time, given that a location and other design details are unknown. Therefore, the proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Schools?	☐	☐	☒	☐

Less Than Significant Impact. UCR is in the service area of the Riverside Unified School District (RUSD), which serves a large portion of Riverside, as well as the nearby unincorporated areas of Highgrove and Woodcrest (City of Riverside 2007b). RUSD currently serves nearly 42,000 students in preschool through twelfth grade. Schools in the district include 29 elementary schools, seven middle schools, five comprehensive high schools, three alternative schools and a science, technology, engineering, arts, and mathematics (STEAM) specialty school. There are a variety of preschool options at different schools as well as transitional kindergarten classes at each elementary school (RUSD 2019). RUSD's median enrollment standards are 750 students per elementary school, 900 students per middle school, and 2,500 students per high school (RUSD 2016).

The proposed 2021 LRDP would result in approximately 13,884 additional area residents by the 2035 horizon year. UCR faculty, staff, and students could potentially introduce new children to the area who would attend nearby schools, which would occur incrementally over the proposed 15-year life of the 2021 LRDP.

A 2019 survey showed that 1.7 percent of undergraduate students and 14 percent of graduate students at UCR identified as a parent living with their children (UC 2019c). The proposed 2021 LRDP would accommodate an additional 7,419 undergraduate students and 3,659 graduate students by 2035. Based on the 2019 survey information, it is anticipated that the proposed 2021 LRDP would result in approximately 126 additional undergraduate students living with children at home (1.7 percent of 7,419), and 512 additional graduate students living with children at home (14 percent of 3,659), or 638 total UCR students living with children at home. The average number of children per family in California is 1.95 (US Census 2000). Using this information as a guide, an estimated 1,244 children (1.95 multiplied by 638) could reside with UCR students.

However, not all children would be school age (five years and older). According to the U.S. Census, 24 percent of the City of Riverside total population is under the age of 18 and 6.5 percent of the total population is under the age of five; therefore, 27 percent of children under 18 are assumed to be under the age of five (6.5 percent of 24 percent total population), and 73 percent would be school age (U.S. Census 2019). Using this data as a guide, approximately 908 school-age children (73 percent of 1,244) could reside with UCR undergraduate and graduate students over the proposed 15-year life of the 2021 LRDP.

The proposed 2021 LRDP also would result in approximately 2,806 additional employees (faculty and staff). A conservative approach assumes each new employee would be new to the City of Riverside and would occupy an individual housing unit. Using the RUSD student generation rate of 0.48 students per dwelling unit), this increase in faculty and staff equates to approximately 1,358 school age children (RUSD 2012).

Combined, the proposed 2021 LRDP would result in a conservative estimate of 2,266 school-age children (908 plus 1,358), or approximately 151 additional students each year, added incrementally to the RUSD student population over the 15-year life of the proposed 2021 LRDP.

Upon implementation of its Facilities Master Plan, which guides development for the next 15-20 years, RUSD will be able to accommodate approximately 45,500 students district-wide; an increase in approximately 3,500 students (RUSD 2016). The RUSD Facilities Master Plan prioritizes replacing portable facilities with permanent facilities, renovating gymnasiums, undertaking energy efficient upgrades, constructing maker labs and STEAM facilities, and constructing multi-purpose rooms to meet the needs of a growing student population. Potential environmental impacts related to the construction of new or expanded school facilities would be assessed on a project-specific level.

Students residing near UCR and attending public schools would likely attend the Riverside STEAM Academy, Highland Elementary, Longfellow Elementary, University Heights Middle School, and John W. North High School, because these are the closest RUSD public schools to the campus. **Table 11** shows the current enrollment and capacity at each school upon implementation of facility plans.

Table 11 – Public School Enrollment and Capacity

School	2018-19 Enrollment[1]	Total Capacity[2]	Remaining Capacity
Riverside STEAM Academy	636	900	264
Highland Elementary	704	850	101
Longfellow Elementary	741	750	9
University Heights Middle School	850	900	50
John W. North High School	2,228	2,500	272

Source: [1]Education Data Partnership 2020; [2]RUSD 2016

Should new housing development be constructed to accommodate the general increase in area population, which would include UCR-affiliated students, faculty, and staff, school impact fees would be paid to the local school district to address school capacity impacts. RUSD is authorized to collect a fee per square foot for new residential development pursuant to Government Code Section 65995(b)(2) for new private industrial, commercial, or residential construction that exceeds 500 square feet (RUSD 2020). UCR provides family housing options for a portion of its student population. Developer fees are not collected for on-campus housing development, as this regulation does not apply to public institutions, including UCR facilities. However, most of the school age children that would result from the proposed 2021 LRDP would live in non-university affiliated housing, which may contribute to school fees.

Although the proposed 2021 LRDP would likely have a **less than significant impact** on the need for new or physically altered school facilities, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Parks?	☒	☐	☐	☐

Potentially Significant Impact. Parks and recreation facilities are addressed in Section 16, *Recreation*, of this Initial Study. Unlike other issue areas in Public Services, the project would have a **potentially significant impact** on recreation facilities on and around campus due to the increase in student and employee populations, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Other public facilities?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would result in approximately 13,884 additional residents (students, faculty, and staff) by the 2035 horizon year. This population increase may increase the service population of Riverside Public Library (RPL) and potentially other libraries in neighboring cities. All UCR students have access to the Tomas Rivera Library, the Orbach Science Library, and the Special Collections and University Archives, and it is anticipated that UCR students will primarily patronize the on-campus library facilities. The proposed 2021 LRDP would increase library facilities by 50 percent, including collaboration and study areas for students, the impacts of which are being analyzed as buildout under the proposed 2021 LRDP.

The City of Riverside currently provides library services from the Main Library and seven branch libraries that serve the existing city population of 328,101 residents. With a collection of approximately 425,000 books and other library materials, as well as 400 public access computers (including catalogs) and an annual circulation of 1.23 million, RPL is a major provider of information services and cultural programs in California's Inland Empire (City of Riverside 2020a). A new, 42,000-square foot Main Library in downtown Riverside is currently under construction and anticipated to open summer 2020. The City of Riverside does not have library facility per capita goal, but the City of Riverside General Plan contains the objective to "ensure that the library system remains a premier information and independent learning resource for the Riverside residents and a complement to formal education," with a policy goal to "provide ample and convenient library facilities" (City of Riverside 2012). RPL operations is funded by the City's General Fund, which allocated $8.6 million (approximately 1 percent) of its Fiscal Years 2018/2019 – 2019/2020 Operating Budget to library services to provide 60 FTE staff positions (City of Riverside 2020b).

The Riverside County Library System has 39 branches, the closest facilities being the Highgrove Library approximately 2.25 miles north of UCR, Woodcrest Library approximately 6.0 miles southwest of UCR,

and Louis Rubidoux Library approximately 4.2 miles northwest of UCR. It also has a bookmobile service. Library facilities currently have 333,884 square feet available (County of Riverside 2015). Recently, Riverside County supervisors approved spending up to $50 million to build three new library branches to be completed by 2021, in Desert Hot Springs, Menifee, and French Valley (Press Enterprise 2019).

Planning for new or physically altered library facilities is based on an assessment of the cumulative need for new facilities. The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 426 new residents each year over the proposed 15-year life of the 2021 LRDP. Future residents would pay proportionate property and sales taxes to Riverside and neighboring cities, which would support investments in new or expanded library facilities and amenities. As a result, the new residents would contribute to the financing of library services. The increased population from implementation of the proposed 2021 LRDP is not anticipated to require new or altered library facilities, beyond those facilities already proposed as part of the LRDP, to meet the relatively small increase in service demand. Furthermore, potential environmental impacts related to the construction of new or expanded public facilities would be assessed on a project-specific level by the applicable lead agency. Therefore, this impact would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

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16. Recreation

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would guide the future use and development of recreation and open space areas on the UCR main campus. Buildout under the proposed 2021 LRDP includes development of new recreational facilities. Therefore, this analysis focuses upon the extent to which the proposed 2021 LRDP would impact existing non-affiliated, off-campus neighborhood and regional parks and recreational facilities.

UCR Parks and Recreation Facilities

Currently, UCR contains approximately 67.5 acres of land designated Recreation & Athletics for approximately 23,922 students. UCR's SRC is in the northern area of East Campus south of Linden Street. The SRC is divided into two sections: SRC North and SRC South. SRC North contains the 22,000-square foot SRC Arena (maximum capacity of 3,000), four Multi-Purpose Rooms, racquetball and squash courts, basketball and badminton courts, locker rooms, and Conference and Training Rooms. SRC South contains the 8,297-square foot Multi-Activity Court Gym, climbing wall, jogging track, kitchen, six tennis courts, lap pools, recreation pool, spa, pool deck, pool grass area, and sand volleyball court. Gym membership is included in student tuition (UCR 2020a).

The UCR Botanic Gardens, located on more than 40 acres on the southeastern side of the East Campus, is a living plant museum with more than 3,500 plant species and thousands of specimens from around the world. The UCR Botanic Gardens is utilized for teaching, research, and demonstration purposes, as well as for enjoyment, passive recreation, and appreciation of nature. The UCR Botanic Gardens houses several buildings on the site, including a Gatehouse with two small restrooms and a meeting room near the entrance. Located on the UCR Botanic Gardens property are a second restroom building, garage used as an office and equipment space, propagation lath house, greenhouse, and the Schneider House. The UCR Botanic Gardens hosts events for visitors year-round. There is no charge for admission to the UCR Botanic Gardens and it is open to all UCR students and the public (UCR 2020b).

The proposed 2021 LRDP would establish a UCR Botanic Gardens Land Use category, which would encompass the existing UCR Botanic Gardens. Predominant land uses would primarily include demonstration gardens; habitat restoration and management; and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses would also include support facilities for the UCR Botanic Gardens and parking.

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in Riverside or neighboring cities.

The 2005 LRDP designated 14.1 acres of the West Campus and 53.4 acres of the East Campus for Athletics & Recreation land uses. Implementation of the proposed 2021 LRDP would retain existing student recreational facilities and would provide new open space and recreation facilities to accommodate the increase in student population. Under the proposed 2021 LRDP, approximately 28.7 acres of the campus with the highest concentration of existing recreational uses would be designated Athletics & Recreation. The Recreation & Athletics land uses would be concentrated in two areas in the northern portion of East Campus and include the SRC, the track facility, tennis courts, and the baseball stadium on Blaine Street. Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses. Additional recreational facilities would be interspersed within other land use categories (e.g., Student Neighborhood).

UCR Student Affairs manages the UCR's SRC and the recreational fields. UCR employs technicians, mechanics, and maintenance staff to repair fitness equipment, as well as heating, ventilation, and air conditioning equipment, plumbing, pools, turf, and other recreational facility components. The same level of management and maintenance of campus facilities would be provided throughout the implementation of the proposed 2021 LRDP. New recreational facilities are proposed under the proposed 2021 LRDP to accommodate the increase demand. Therefore, because new recreational facilities are proposed and maintenance of existing recreational facilities would continue to occur, substantial deterioration of on-campus recreational facilities is not anticipated.

City of Riverside Parks and Recreation Facilities

The City of Riverside's Park System includes almost 3,000 acres of park land, consisting of 58 developed, natural, or undeveloped parks.

The City of Riverside has a goal of three acres of local parks per thousand population, consisting of 0.75 acre of Community Park per thousand population and 2.25 acres of Neighborhood Park per thousand population (City of Riverside 2019b). The City currently has 202.63 acres of Neighborhood Parks and 351.48 acres of Community Parks. **Table 12** shows the current park to population ratios and future park to population ratios with implementation of the proposed 2021 LRDP.

Table 12 – Parkland to Population

Type of Park	City Park Standard	Existing Park to Population Ratio	With 2021 LRDP Park to Population Ratio
Neighborhood Park	2.25 acres/1,000 residents	0.62 acre/1,000 residents	0.59 acre/1,000 residents
Community Park	0.75 acre/1,000 residents	1.07 acres/1,000 residents	1.03 acres/1,000 residents

Source: City of Riverside 2019b; DOF 2020

As shown in **Table 12**, the City of Riverside currently does not meet its park to population standards for Neighborhood Parks or Community Parks. All UCR students would have access to on-campus recreational facilities, but they may also patronize parks and recreational facilities in the City. In addition, the projected increase in campus population associated with the proposed 2021 LRDP could result in increased use of off-campus recreational facilities. Use of off-campus public recreational

facilities by UCR students, faculty, and staff could occur in two ways: 1) UCR students, faculty, and staff who live off-campus and use recreational facilities near their residences; and 2) UCR students who live on campus and use recreational facilities off-campus in the surrounding neighborhoods.

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 926 new residents each year over the proposed 15-year life of the 2021 LRDP. Non-affiliated, off-campus residential housing developments are subject to the Quimby Act (Government Code Section 66477), which allows a city or county to require the dedication of land or impose a requirement for payment of in-lieu fees, or a combination of both, for park or recreational facilities as a condition for the approval of a tentative map or parcel map for private development projects. Thus, the necessary funding and/or land to develop recreation facilities to serve campus populations living off campus would be provided to the City of Riverside (assuming all students are living off-campus in the City of Riverside's jurisdiction) by private housing developers as part of the Quimby Act requirements during the development of new residences.

Furthermore, funding for maintenance for those facilities is provided through property assessments and taxes distributed to the City of Riverside, whose responsibility it is to provide and maintain such recreational facilities; it is anticipated that this would occur in accordance with the City of Riverside's General Plan and community plans. Additionally, the increase in UCR population growth is accounted for in SCAG's population projects for the City of Riverside's General Plan. Furthermore, with implementation of the proposed 2021 LRDP, new recreational facilities would be constructed on campus for both UCR populations and the public to use.

Use of off-campus public recreational facilities in the surrounding neighborhoods by UCR students, faculty, and staff who live on campus could also increase incrementally as a result of the implementation of the proposed 2021 LRDP. However, this outcome is expected to be limited with the recreational opportunities provided on campus. Students would continue to be able to use the on-campus recreational facilities as part of their enrollment fees, which would likely reduce the use of off-campus recreational facilities by students. Also, with implementation of the proposed 2021 LRDP, the potential for recreational opportunities would be provided on campus within the Recreation & Athletics, Student Neighborhood and Canyon Crest Gateway LRDP land use areas. It is not anticipated that implementation of the proposed 2021 LRDP would result in substantial increased usage of non-affiliated, off-campus public recreational facilities by on-campus populations that would result in the substantial physical deterioration of facilities would occur or be accelerated. Impacts are anticipated to be **less than significant**; however, this issue will be addressed in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would include the development of land use categories for recreational spaces on campus, including approximately 28.7-acre Athletics & Recreation land use category and 43.7-acre UCR Botanic Gardens land use category. However, these proposed land use categories would encompass existing recreational facilities. The Recreation & Athletics land use category would be concentrated in two areas in the northern portion of East Campus and include the SRC, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience in the daytime, evenings, and on weekends. Recreation & Athletics predominant land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. The proposed 2021 LRDP would also designate approximately 43.7 acres for the UCR Botanic Gardens land use category, which would allow facilities that would support the UCR Botanic Gardens functions and programs for passive recreation opportunities. There would also be opportunities for active and passive recreation in other 2021 LRDP land use categories.

The development of new recreational facilities is part of the proposed 2021 LRDP and could result in adverse physical impacts on the environment during the construction and/or operation period, as these facilities would be one component of the overall LRDP program, and the physical environmental impacts of these facilities will be analyzed as part of the proposed project. Therefore, the 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

17. Transportation

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐

Potentially Significant Impact. Primary vehicular access to the UCR campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, as well as secondarily from other local streets under the 2021 LRDP. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. The 2021 LRDP does not propose any substantive changes to the existing campus transportation network. Implementation of the propose 2021 LRDP would not disrupt service or inhibit access to existing transit services.

Implementation of specific campus projects under the proposed 2021 LRDP may result in temporary closure of on-campus traffic lanes or roadway segments in the project vicinity to permit the delivery of construction materials, to transport exported soil, or to provide adequate site access during construction of utility connections or other project-related features. Future campus projects may also include updates or minor realignments to existing on-campus circulation and bicycle and pedestrian facilities. However, activities associated with future campus projects would adhere to applicable UCR and UC system-wide policies and review procedures prior to implementation.

As part of the forthcoming 2021 LRDP EIR, a transportation impact analysis (TIA) will be prepared to assess the potential transportation impacts of the proposed 2021 LRDP, and to analyze consistency with the 2016 SCAG RTP/SCS. Policies proposed under the 2021 LRDP will be reviewed under the forthcoming EIR to ensure that future campus project complies with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐

Potentially Significant Impact. As part of the 2021 LRDP EIR, a TIA will be prepared to assess the consistency of the proposed 2021 LRDP with CEQA Guidelines section 15064.3, subdivision (b) and other pertinent transportation regulations. CEQA guidelines have recently been updated to change the requirements for transportation impact analysis as initiated under Senate Bill 743. The new guidelines are intended to better account for the environmental impacts of growth and development related to transportation rather than only considering congestion. The TIA will assess the impact of the proposed 2011 LRDP on vehicle miles of travel to reflect the number of vehicle-trips generated by the campus and the expected distance that drivers will travel to/from UCR for their work/school trips on a per service population basis, as well as other trips generated by on-campus housing. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Less Than Significant Impact. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. As such, implementation of the proposed 2021 LRDP would generate a mix of traffic similar to existing conditions (primarily commuter traffic from students, faculty, and staff). With more students and employees, the volume of traffic across all modes would increase which may result in slower travel speeds for some modes. Fire and emergency access would remain the same. The proposed 2021 LRDP does not propose any substantive changes to the existing campus transportation network. Implementation of the proposed 2021 LRDP would not disrupt service or inhibit access to existing transit services.

The existing farm equipment used on campus generally follow internal routes on West Campus. At times, the farm equipment will cross over Martin Luther King Boulevard at the gates west of Iowa Avenue and at the intersection of Martin Luther King Boulevard and Parking Lot 30. Additionally, the farm equipment would cross Canyon Crest Drive and cross Iowa Avenue just south of the CARB facility. When there is work on East Campus, the farm equipment would travel on Canyon Crest Drive and take

the campus loop to the fields. Staff participates in tractor safety training and are required to abide by State law when driving on streets. It is anticipated that the process, procedures, and safety would remain the same with implementation of the proposed 2021 LRDP.

Project-level details of campus planned development are not included in the proposed 2021 LRDP at this time as this is a long-range planning level document. Any new sidewalk or paths would be designed and constructed to UCR design standards, and potentially applicable City of Riverside standards (if within City of Riverside's public right-of-way), to minimize hazardous conditions and would undergo project-specific environmental review for project-scale hazards when the specific campus project advances through the development process. The campus project development process includes review of means of egress, safety to life and property from fire and other hazards attributed to the built environment, and safety to fire fighters and emergency responders during emergency operations. As part of campus project-level environmental review, input from emergency services, including the campus's designated Deputy State Fire Marshal, would be solicited to ensure that emergency access meets the standards of service providers (UCR 2018).

Policies proposed under the proposed 2021 LRDP will be reviewed in the forthcoming EIR to ensure that future campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, while impacts related to transportation hazards are anticipated to be **less than significant**, further analysis will be included in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in inadequate emergency access?	☒	☐	☐	☐

Potentially Significant Impact. Vehicular access to and around the UCR campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, and other local streets under the 2021 LRDP. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. The proposed 2021 LRDP does not propose any substantive changes to the existing campus transportation network.

As discussed in criterion 9(f) of this Initial Study, roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

Implementation of specific campus projects under the proposed 2021 LRDP may result in temporary closure of on-campus traffic lanes or roadway segments in the project vicinity to permit the delivery of construction materials; to transport exported soil; or to provide adequate site access during construction of utility connections or other project-related features. Future campus projects may also include updates or minor realignments to existing on-campus circulation and bicycle and pedestrian facilities. However, activities associated with future campus projects would adhere to applicable UCR and UC system-wide policies and review procedures prior to implementation.

Project-level details of campus planned development are not included in the proposed 2021 LRDP at this time as this is a long-range planning level document. Any new sidewalk or paths would be designed and constructed to UCR design standards, and potentially applicable City of Riverside standards (if within City of Riverside's public right-of-way), to minimize hazardous conditions and would undergo project-specific environmental review for project-scale hazards when the specific campus project advances through the development process. The campus project development process includes review of means of egress, safety to life and property from fire and other hazards attributed to the built environment, and safety to fire fighters and emergency responders during emergency operations. As part of campus project-level environmental review, input from emergency services, including the campus's designated Deputy State Fire Marshal, would be solicited to ensure that emergency access meets the standards of service providers (UCR 2018).

Policies proposed under the 2021 LRDP will be reviewed in the forthcoming EIR to ensure that the campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

18. Tribal Cultural Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☒	☐	☐	☐

Potentially Significant Impact. Chapter 532, Statutes of 2014 (i.e., Assembly Bill 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." Assembly Bill 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource." Per Assembly Bill 52, Native American consultation is required upon request by a California Native American tribe that has previously requested that UCR provide it with notice of such projects.

To date, UCR has received six requests for project notification pursuant to AB 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP.

As discussed in Section 5, *Cultural Resources*, of this Initial Study, UCR is currently undertaking an HRS report to identify any potential historical resources on campus. Future development near these resources or others identified in the HRS report may cause a potentially significant impact. The HRS may find potential resources that could be of importance to Native American tribes. Due to the potential to impact culturally sensitive tribal resources in the area, the project may have a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

Potentially Significant Impact. As discussed in Section 5, *Cultural Resources*, of this Initial Study, there is potential for implementation of the project to disturb unknown cultural resources. To date, UCR has received six requests for project notification pursuant to AB 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP.

Potential resources that may be exposed during ground disturbance activities could be of importance to Native American tribes. Due to the potential to impact potentially culturally sensitive tribal resources in the area, the project may have a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

19. Utilities and Service Systems

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐

Potentially Significant Impact. Development of projects under the proposed 2021 LRDP would be adjacent to existing campus development and would connect to existing wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities and infrastructure. However, the on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demand on existing infrastructure, which may result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the proposed 2021 LRDP may have **a potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐

Potentially Significant Impact. Riverside Public Utilities (RPU) supplies domestic water to UCR. The RPU service area is approximately 75 square miles, of which approximately 70 square miles are in Riverside's City boundaries. RPU's water supply consists primarily of groundwater, with additional sources, including recycled water and imported water. UCR also has rights to potable water in the Gage Canal. All existing and planned water supply entitlements, water rights, and/or water service contracts that may be used to serve future development associated with the proposed 2021 LRDP are set forth in the current City of Riverside Urban Water Management Plan (UWMP, RPU 2016). The 2015 UWMP identifies

adequate potable water supplies to meet future demands through 2040 within the RPU's water supply service area under normal weather conditions. The 2015 UWMP projects surplus water supplies under all scenarios, including multiple dry years. RPU used SCAG regional forecasts of future population, land use data, and demographic trends for the 2015 UWMP, including demand associated with growth and expansion at UCR (RPU 2016). The Regents of the University of California can extract 554 acre-feet per year from the San Bernardino Basin area, which is considered in the UWMP.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. The proposed 2021 LRDP would accommodate 13,884 additional residents by the 2035 horizon year. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in Riverside and surrounding region. Conservatively, the contribution of the proposed 2021 LRDP to the City of Riverside's forecasted population would account for approximately 3.6 percent of the city's forecasted growth.

The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demand on water supplies. Further analysis is needed to determine if that increase in demand would be within the parameters of the demand forecasted in the UWMP. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐

Potentially Significant Impact. RPU's Sewage Systems Services Program and Treatment Services unit collects, treats, and disposes of all wastewater generated within the City of Riverside and is responsible for compliance with State and federal requirements governing the treatment and discharge of all domestic and industrial wastewater generated in its service area, including the UCR main campus. The Riverside Water Quality Control Plant (RWQCP) treats all campus-generated wastewater, with UCR operating its own collection system that connects to the City's system. The RWQCP currently treats an average of 30 million gallons per day (mgd) and has a capacity of 40 mgd. The RWQCP is currently being expanded and retrofitted and would have a capacity of 46 mgd. The City's Wastewater Integrated Master Plan addresses facility needs for projected wastewater influent flow through the year 2025 and identifies improvements that would increase the capacity of the RWQCP up to 52.2 mgd, although at this time, the City is increasing the treatment capacity of the RWQCP to 46 mgd (City of Riverside 2008).

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demands on the wastewater treatment provider and its capacity to serve the future specific campus project's projected demand in addition to the provider's existing commitment. Further analysis is needed to determine if that increase in demand would be within the parameters of the demand forecasted in the City's Wastewater Integrated Master Plan. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐

Potentially Significant Impact. During and after construction of the campus projects implemented under the proposed 2021 LRDP, UCR would be required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), and other applicable local, State, and Federal solid waste disposal standards. Further reduction in solid waste generation would occur with implementation of the UC Policy on Sustainable Practices (UC 2019c).

The City of Riverside Solid Waste Division is responsible for the collection and handling of residential refuse, recycling, and green waste (compostable organic waste) generated within the City of Riverside, including the UCR campus. Riverside County Department of Waste Resources (RCDWR) operates five landfills, has a contract agreement for waste disposal with an additional private landfill, and administers several transfer station leases (RCDWR 2020). One of these transfer stations is the Robert A. Nelson Transfer Station, located at 1830 Agua Mansa Road, which receives refuse from western Riverside County. The transfer station is operated by Burrtec Waste Industries, is permitted to accept up to 4,000 tons of solid waste per day, and currently processing approximately 2,500 to 3,000 tons of solid waste per day (UCR 2019c). Solid waste from UCR is disposed at the Badlands Landfill, in the City of Moreno Valley, which has an estimated capacity of approximately 15.7 million cubic yards. Based on the current permit, the landfill is expected to close in 2022. The Badlands Landfill is permitted for a maximum of 4,500 tons per day (tpd) for disposal plus 300 tpd for beneficial reuse (CalRecycle 2019). After the landfill closes in 2022, waste would go to the remaining landfills that RCDWR operates (i.e., Blythe, Desert Center, Lamb Canyon, Oasis). These facilities are regulated at the federal, State, and local levels and monitored for compliance.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. Campus projects

implemented under the proposed 2021 LRDP would generate both construction and operational solid waste. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in solid waste disposal. Further analysis is needed to determine if that increase in demand would be within the capacity of RCDWR operations and the Robert A. Nelson Transfer Station. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

Potentially Significant Impact. During and after construction of the projects implemented under the 2021 LRDP, UCR would be required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), and other applicable local, State, and federal solid waste disposal standards. Further reduction in solid waste generation would occur with implementation of the UC Policy on Sustainable Practices.

The California Integrated Waste Management Act of 1989 (AB 939) mandates that local jurisdictions divert at least 50 percent of all solid waste generated by 2020.

Consistent with the UC Sustainable Practices Policy, the UCR campus is committed to diverting at least 75 percent of its solid waste from landfills with a goal of diverting 100 percent. To accomplish this, UCR implements a waste/source reduction and recycling program that includes sorting and separating wastes to simplify the removal of recyclable materials and the expansion of composting procedures associated with landscaping and agriculture to reduce the solid waste flow. The campus has constructed a transfer station on the West Campus at Parking Lot 30. UCR collects the recyclables and waste on campus and delivers these materials to the transfer station for hauling. Athens Services picks up the recyclable material for recycling. UCR delivers waste, in UCR haul trucks, to the Nelson Transfer Station from which Burrtec Waste Industries then transports 100 percent of the non-recyclable material to a waste-to-energy facility. UCR composts all green wastes on campus. In addition, UCR is carrying out a shift in its procurement practices toward recyclable, second generation, or reusable products to the extent feasible. As of 2017-2018 (the most current available data year), UCR has achieved an approximately 68 percent solid waste diversion rate, including waste from construction and demolition (UC 2019b).

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. Campus projects implemented under the proposed 2021 LRDP would generate both construction and operational solid waste. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in solid waste disposal. LRDP policies will be reviewed under the forthcoming EIR to ensure that the proposed 2021 LRDP complies with federal,

State, and local management and reduction statutes and regulations related to solid waste. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

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20. Wildfire

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐

Potentially Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007).

The RFD has created emergency response maps for the open lands in the City of Riverside. The response maps were created through the collaborative efforts of Fire, Information Technology, and the Parks and Recreation Departments. According to the Box Canyon Reserve Incident Action Plan Emergency Response Map, the closest Reception Center and Staging Area to the areas of campus located in or near a VHFHSZ is at Islander Park on the corner of Big Springs Road and Mt. Vernon Avenue. Type I Engine fire access is available on certain trails at Islander Park, at the foothills of the Box Springs Mountain Reserve (City of Riverside 2018c).

As discussed in criterion 9(f) of this Initial Study, roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

The construction and operation of projects associated with the proposed 2021 LRDP would not substantially alter or otherwise interfere with public rights-of-way and would provide adequate internal ingress and egress for necessary emergency response vehicles. Implementation of the proposed 2021 LRDP would not interfere with traffic circulation on designated disaster routes during construction or operation. The proposed 2021 LRDP would be required to comply with all applicable California Fire Code (Title 24, CCR, Section 9) requirements.

Construction of facilities associated with the implementation of the proposed 2021 LRDP could result in lane or roadway closures on the edges of campus and within the campus circulation system. Future development could affect areas identified as emergency assembly areas. Implementation of future development under the proposed 2021 LRDP would be guided by existing and future LRDP planning strategies, including those concerning transportation where circulation and traffic management would be discussed. Future development on the campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones, as in the current LRDP. Furthermore, new development would require Office of Emergency

Management (OEM) to update the Campus Emergency Operations Plan to account for the new development and increased student/faculty/staff population. These revisions would include changes to the campus evacuation zones, emergency assembly areas, staff responsibilities, and general procedures. Impacts are considered **potentially significant impact**; this impact will be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007). The biggest factors for assessing wildfire risk include drought, slope, flammability of vegetation, and burn severity (length of time from last fire). Since fires burn faster uphill, slope is a crucial factor in fire spread. Vegetation provides fuel for fires. Rock and sand, water, and cultivated crops are considered non-burnable, while grasslands and hay are considered prime fuels for fire growth. Areas with steeper slopes often have more severe burns (Tufts University 2018). Low relative humidity and strong winds are critical weather conditions that could lead to rapid or dramatic increases in wildfire activity (CAL FIRE 2020).

The UCR campus is subject to Santa Ana winds, which are strong, extremely dry offshore winds that affect Southern California in autumn and winter. They can range from hot to cold, depending on the prevailing temperatures in the source regions, the Great Basin and upper Mojave Desert (Tufts University 2018). The winds are known for the hot dry weather (often the hottest of the year) that they bring in the fall and are infamous for fanning regional wildfires (UCR 2012). Santa Ana winds are a type of downslope windstorm that occur over Southern California from the coastal mountains westward and from Ventura County southward to the Mexican border (Rolinski et al. 2016).

Wildfire smoke produced from combustion of natural biomass contains thousands of individual compounds, including particulate matter, carbon dioxide, water vapor, carbon monoxide, hydrocarbons and other organic chemicals, nitrogen oxides, and trace minerals. Wildfires can move into the wildland urban interface, burning homes and structures and thereby consuming man-made materials in addition to natural fuels. Wildfire behavior will vary depending on natural fuel type; fires in forest fuels can range from mild to severe and can spread very slowly or extremely rapidly depending on weather and fuel conditions. Wildfires in forests can last for weeks or months and are often the type that results in the

most severe and longest duration air quality impacts. Smoke levels in populated areas can be difficult to predict (USEPA 2019).

The 2021 LRDP would increase the density of development on campus, with new structures and infrastructure which would be constructed to modern fire code and safety standards. The campus is situated in an area that is largely developed with urban and commercial land uses, but the campus contains open space areas to the east that are sparsely vegetated grasslands with intermittent, non-native trees in areas of lower elevation. The 2021 LRDP would include potential redevelopment in areas previously disturbed and not within the steep, vegetated slopes and hillsides where fire risk is greatest. Development of new facilities under the 2021 LRDP would primarily be concentrated in the northern and central areas of East Campus, surrounded by existing urban development away from the open space areas prevalent near the base of the Box Springs Mountain east and south of campus. As Santa Ana winds generally move from northeast to southwest, most of the new development on campus would not exacerbate wildfire risk from winds. However, the proposed 2021 LRDP would potentially allow development of new facilities in or adjacent to the VHFHSZ in East Campus south of South Campus Drive and adjacent to the natural hillsides.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by UCR's Building and Safety Division, Fire Prevention, EH&S, OEM, and/or other UCR departments and staff. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the campus building complies with all the required codes noted above. Campus structures would be required to comply with the California Fire Code with regard to emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible.

While impacts related to exposing people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire are anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007). The proposed 2021 LRDP would direct new development on the UCR campus; however, utilities would be installed underground and would not exacerbate fire risk.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by UCR's Building and Safety Division, Fire Prevention, EH&S, OEM, and/or other UCR departments and staff. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the building complies with all the required codes noted above. New or relocated utilities and systems would comply with State fire codes to reduce the risk of fires and therefore would not exacerbate fire risk. While impacts related to fire risk from installation or maintenance of associated infrastructure anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007).

Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can more easily creep away downslope sides of foundations and reduce lateral support. Major post-wildfire hazards are unstable hill slopes and altered drainage patterns. Slopes may suffer landslides, slumping, soil slips, and rockslides.

As discussed in criterion 10(d), the proposed 2021 LRDP would not expand or otherwise alter existing FEMA flood hazard areas and is not considered subject to inundation by the failure of a levee or dam. West Campus is relatively flat and not subject to landslides, while the southeastern portion of East Campus contains natural hillsides. However, the proposed 2021 LRDP would include potential redevelopment in areas previously disturbed and not within the steep, vegetated slopes and hillsides where fire risk slope instability is greatest and would not expose people or structures to downslope or downstream flooding or landslides. While impacts related to exposing people or structures to risks from post-fire slope instability or flooding are anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

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21. Mandatory Findings of Significance

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP may result in potentially significant impacts to biological resources and encountering unknown archaeological and tribal cultural resources during ground disturbing activities. Potential degradation of the quality of the environment may occur, which would result in a **potentially significant impact**, and impacts will be analyzed further in the forthcoming EIR as part of the biological resource analysis and cultural resources/tribal cultural resources analyses.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP is a long-term plan for campus growth and to meet program needs, and the plan would be developed with consideration of long-term environmental goals. For example, in conjunction with the proposed 2021 LRDP, UCR is preparing a GHGRS that would include measures to achieve long-term GHG environmental goals along with the proposed 2021 LRDP. However, as this topic is still under investigation at this time, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted as part of the individual resource areas.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP, in conjunction with other projects in the surrounding area, may result in impacts that are cumulatively considerable. In addition, impacts directly associated with the proposed 2021 LRDP have the potential to be cumulatively considerable.

Impacts found to be potentially significant, or less than significant but warranting additional analysis in the forthcoming EIR, will also be analyzed for **potentially significant cumulatively considerable impacts**. These include impacts related to Aesthetics (Criterion a, c, and d), Agriculture and Forestry Resources (Criterion a and e), Air Quality (Criterion a, b, and c), Biological Resources (Criterion a, b, c, and d), Cultural Resources (Criterion a and b), Energy (Criterion a and b), Geology and Soils (Criterion a, c, and f), GHG Emissions (Criterion a and b), Hazards and Hazardous Materials (Criterion a [operational], b, c, and f), Hydrology and Water Quality (Criterion a, b, c, and e), Noise (Criterion a and b), Public Services

(Criterion a, c, and d), Recreation (Criterion a and b), Transportation (Criterion a, b, c, and d), Tribal Cultural Resources (Criterion a and b), Utilities and Service Systems (Criterion a, b, c, d, and e), and Wildfire (Criterion a, b, c, and d).

Impacts found to be less than significant and not warranting additional analysis in the EIR, and those areas with a conclusion of no impact, would inherently also not result in cumulatively considerable impacts and no further cumulative analysis is required in the forthcoming EIR. These topics include Aesthetics (Criterion b), Agriculture and Forestry Resources (Criterion b, c, and d), Air Quality (Criterion d), Biological Resources (Criterion e and f), Cultural Resources (Criterion c), Geology and Soils (Criterion b, d, and e), Hazards and Hazardous Materials (Criterion d, e, and g), Hydrology and Water Quality (Criterion d), Land Use and Planning (Criterion a and b), Mineral Resources (Criterion a and b), Noise (Criterion c), Population and Housing (Criterion a and b), and Public Services (Criterion b and e).

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Potentially Significant Impact. In general, impacts to human beings are associated with air quality, geological hazards, GHG emissions, hazards and hazardous materials, hydrologic hazards and water quality, noise, and wildfire impacts. As detailed in the preceding responses, the 2021 LRDP may result, directly or indirectly, in adverse hazards related to air quality (Section 3), geological hazards (Section 7), GHG emissions (Section 8), hazards and hazardous materials (Section 9), hydrologic hazards and water quality (Section 10), noise (Section 13), and wildfire (Section 20). Based on the analysis in this Initial Study, direct and indirect impacts to human beings because of implementing the proposed 2021 LRDP may be a **potentially significant impact** and will be analyzed further in the forthcoming EIR as part of the individual resource areas.

VIII. LIST OF PREPARERS

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IX. SUPPORTING INFORMATION SOURCES

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