# Revisions to the Draft EIR

This section contains changes to the text of the draft environmental impact report (Draft EIR) in response to certain comments. These changes are generally referenced in the responses to comments in Chapter 2, “Responses to Comments,” or are provided to be consistent with changes referenced in Chapter 2 of this Final EIR. The changes are presented in the order in which they appear in the Draft EIR and are identified by Draft EIR page number. Text deletions are shown in strikeout (~~strikeout~~) and additions are shown in underline (underline). The changes identified below do not alter the conclusions of the EIR with respect to any of the significant impacts of the project and do not necessitate recirculation of the Draft EIR.

The information contained within this chapter clarifies and expands on information in the Draft EIR and does not constitute “significant new information” requiring recirculation. (See the Master Response regarding recirculation; see also Public Resources Code Section 21092.1; CEQA Guidelines Section 15088.5.)

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References to table numbering with Section 3.16, “Transportation” on page viii have been amended as follows:

Table 3.16-6 2021 LRDP Land Use Summary and Model Inputs Vehicle Trip and Total Vehicle Miles Traveled Summary 3.16-33

Table 3.16-7 2021 LRDP Vehicle Trip and SB 743 Vehicle Miles Traveled Summary 3.16-33

Table 3.16-8 2021 LRDP Generated Residential and Employment VMT Per Capita 3.16-34~~3~~

## Executive Summary

The seventh bullet on page ES-3 has been amended as follows:

* Recognize, to the extent feasible, UC Santa Cruz and regional histories within the campus, including protecting tribal cultural resources and maintaining the integrity of existing historic structures and enhancing the Cowell Lime Works Historic District as a campus gateway.

The last paragraph on page ES-4 of the Draft EIR is revised as follows:

State CEQA Guidelines Section 15126.6(e)(2) states that when the no-project alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. As discussed in Chapter 6, “Alternatives,” the No Project Alternative is environmentally superior for all environmental resource areas. As a result, this EIR must identify an alternative among the other alternatives that is environmentally superior. Based on the environmental analysis contained in this Draft EIR, the environmentally superior alternative would be Alternative 2~~3~~.

Mitigation Measure 3.1-3a, as presented in Table ES-1 on page ES-6 of the Draft EIR is amended to state:

**Mitigation Measure 3.1-3a: Require Setback Distance from Empire Grade**

UC Santa Cruz shall require that development located north of the Arboretum and Botanic Garden entrance under the 2021 LRDP, which could be seen from Empire Grade, include a minimum setback of 200 feet from Empire Grade. If establishment of a 200-foot buffer is not feasible, a vegetated barrier or screen that prevents a direct line of site between a resource and developed structures shall be provided. Vegetation shall be native to California and selected to match existing vegetation located nearby.

Mitigation Measure 3.1-3b, as presented in Table ES-1 on page ES-7 of the Draft EIR is amended to state:

**Mitigation Measure 3.1-3b: Implement Design Measures for Protection of Views Along Empire Grade**

Development within 500 feet of Empire Grade and west of the Santa Cruz city limits and the Arboretum and Botanic Garden within the UC Santa Cruz main residential campus shall be subject to review by the Campus Design Advisory Board to ensure that design of new facilities ~~is consistent with or complimentary to other nearby campus development with respect to development scale, massing, and materials.~~ shall be visually unobtrusive and not unduly interfere with existing views. Review of future development by the Campus Design Advisory Board shall occur upon initial selection of sites. Design shall comply with standards set forth in the UC Santa Cruz Campus Standards Handbook and be generally consistent with the Physical Design Framework and Physical Planning Principles and Guidelines in the 2021 LRDP.

Mitigation Measure 3.3-1, as presented in Table ES-1 on page ES-9 of the Draft EIR is amended to state:

**Mitigation Measure 3.3-1: Reduce Construction-Generated Emissions of NOX**

Per contract specification requirements, UC Santa Cruz shall require that the contractor(s) develop and implement a plan demonstrating that the off-road equipment used on-site to construct 2021 LRDP projects would achieve a fleet-wide average 45 percent reduction in NOX exhaust emissions, compared to uncontrolled aggregate statewide emission rates for similar equipment. One feasible plan to achieve this reduction would include the following:

* At least 80 percent of diesel-powered off-road equipment operating on the project site for more than two days continuously shall be equipped with engines meeting US EPA emissions standards for Tier 3 engines or equivalent, and use of Tier 4 engines shall be encouraged;
* Use of renewable diesel or other zero emissions alternative (e.g., electric) construction equipment to the degree available and feasible;
* Plan construction projects such that multiple project components (i.e., bridge ~~construction~~ or roadway construction) will not occur on the same days ~~as other construction activities~~; and
* Alternatively, if UC Santa Cruz can demonstrate through preparation of an air quality assessment report prepared by an air quality specialist that large or contemporaneous 2021 LRDP construction projects would not exceed MBARD thresholds, then the above mitigation requirements may be waived.

Mitigation Measure 3.3-2, as presented in Table ES-1 on page ES-9 of the Draft EIR is amended to state:

**Mitigation Measure 3.3-2: Reduce Operational Emissions of ROG and PM10 from All Sources**

The majority of ROG emissions are a result of aerosolized and evaporation of consumer products, which include cleaning solutions, personal care products, and pesticides. The calculation of ROG emissions from consumer products was based on the ability to control personal products over the use of consumer products, such as personal care products and household cleaners used off-campus. However, UC Santa Cruz is responsible for facility-related purchases, such as commercial cleaning and sanitizing solutions. Additional measures should also be taken to reduce ROG emissions from other sectors, such as mobile sources, landscaping equipment, and architectural coatings.

As such, UC Santa Cruz shall make every effort to reduce ROG emissions generated under the 2021 LRDP. With respect to the new construction and operations that would occur under the 2021 LRDP, UC Santa Cruz shall implement the following measures for on-campus activities:

* Use zero or low-VOC consumer products and cleaning supplies that exceed CARB's consumer product VOC standards (as defined in CCR Title 17, Division 3, Chapter 1, Subchapter 8.5, Articles 1 through 5), such as those using electrolyzed water, where available.
* Use zero-VOC architectural coatings with a VOC content no greater than 5 grams per liter.
* Increase the level of zero emission landscaping equipment over time, such as electric lawnmowers, leaf blowers, and chainsaws, ~~on campus such that~~ to attain 95-100 percent of zero emission landscaping equipment ~~is used~~ use on campus.
* Choose zero emission vehicles for all new light-duty fleet purchases.
* Choose zero or low emission vehicles for all new heavy-duty fleet purchases, where available and feasible.
* Encourage the use of zero emission vehicles by installing electric vehicle charging stations in parking facilities.
* Reduce campus vehicle speed limits to the extent feasible and install traffic calming or signal coordination to reduce the intensity of vehicle braking and acceleration.

Mitigation Measure 3.4-1, as presented in Table ES-1 on page ES-11 of the Draft EIR is amended to state:

**Mitigation Measure 3.4-1: Identify and Protect Unknown Archaeological Resources**

As early as possible in the project planning process for individual projects under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for archaeological resources. UC Santa Cruz shall determine the potential for the proposed project to result in cultural resource impacts, based on the extent of ground disturbance and site modifications anticipated for the proposed project. UC Santa Cruz shall also review confidential resource records to determine whether complete intensive archaeological survey utilizing current techniques and practices, including consultation with a culturally-affiliated Native American tribe, has been performed on the site and whether any previously recorded cultural resources are present. UC Santa Cruz shall implement the following steps to identify and protect archaeological resources that may be present in the project’s area of effects:

1. For project sites that have not been subject to a prior complete intensive archaeological survey, UC Santa Cruz shall ensure that a complete intensive surface survey is conducted by a qualified archaeologist, who meets the Secretary of the Interior’s Professional Qualification Standards in Archaeology, once the area of ground disturbance has been identified and prior to soil disturbing activities. Additionally, UC Santa Cruz shall notify the Amah Mutsun Tribal Band of the area not subject to an intensive survey and a tribal representative shall be invited to participate. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System. In the event of a find within the area of potential effects, UC Santa Cruz shall consult with a qualified archaeologist to design and conduct an archaeological subsurface investigation and/or a construction monitoring plan of the project site to ascertain the extent of the deposit relative to the project’s area of potential effects, to ensure that impacts to potential buried resources are avoided. If the qualified archaeologist determines that the archaeological material is Native American in origin and the qualified archaeologist assigned to the surveying and monitoring process is not an authorized representative of the Amah Mutsun Tribal Band, UC Santa Cruz and/or archaeologist shall ~~notify~~consult with the Amah Mutsun Tribal Band in the process of designing a survey and monitoring program ~~the appropriate Native American tribe and extend an invitation for monitoring~~.
2. Where native soils will be disturbed, UC Santa Cruz shall require contractor crews to attend an informal training session provided by UC Santa Cruz prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify UC Santa Cruz if any are found. In the event of a discovery, UC Santa Cruz shall implement item (4), below.
3. If it is determined that ~~the~~ ~~resource~~ a known archaeological site extends into the project’s area of potential effects, UC Santa Cruz shall ensure that the ~~resource~~ site is evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines Section 15064.4. This evaluation may require additional research, including subsurface testing, or avoidance measures, as described in item (5) below. If the archaeological resources is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of evaluating the significance and eligibility of the resource. If the resource does not qualify, or if no resource is present within the project’s area of effect, this will be reported in the environmental document and no further mitigation will be required unless there is a discovery during construction.
4. If an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. UC Santa Cruz shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. If the archeological resource is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of planning a survey program and evaluating the significance and eligibility of the resource. Mitigation Measure 3.4-1(2) and (3) shall also be implemented.
5. If archaeological material within the project’s area of effects is determined to qualify as a historical resource or a unique archaeological resource (as defined by CEQA), UC Santa Cruz shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or ~~other means~~ more substantial modifications where feasible that will permit avoidance or substantial preservation in place of the resource. If the archeological resource is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of planning a survey program and evaluating the significance and eligibility of the resource. If avoidance or substantial preservation in place is not possible, UC Santa Cruz shall implement Mitigation Measure 3.4-1(6).
6. If avoidance or preservation in place is not possible for an archaeological site that has been determined to meet CEQA significance criteria, before the property is excavated, damaged, or destroyed, UC Santa Cruz shall retain a qualified archaeologist who meets the Secretary of the Interior’s Professional Qualification Standards in Archaeology. UC Santa Cruz is aware that the Amah Mutsun Tribal Band (AMTB) maintains a staff of registered professional archaeologists and tribal monitors who engage in cultural resource management through the tribe’s nonprofit organization, the Amah Mutsun Land Trust (AMLT). When selecting a qualified archaeologist for work that relates to archaeological resources on campus lands that are determined to be Native American in origin, UC Santa Cruz will include AMTB/AMLT in notifications regarding forthcoming opportunities and contracts. The qualified archaeologist, in consultation with UC Santa Cruz and Native American tribes as applicable, shall prepare a research design, and plan and conduct archaeological data recovery and monitoring that will capture those categories of data for which the site is significant. UC Santa Cruz shall also ensure that appropriate technical analyses are performed, and a full written report prepared and filed with the California Historical Resources Information System; UC Santa Cruz shall also provide for the permanent curation of recovered materials.

Mitigation Measure 3.4-4a, as presented in Table ES-1 on page ES-14 of the Draft EIR is amended to state:

**Mitigation Measure 3.4-4a: Protect Cowell Lime Works Historic District**

During project-specific environmental review of development under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for historic buildings and structures as early as possible. If the project is located within or adjacent to the Cowell Lime Works Historic District, UC Santa Cruz shall take the following measures into account in project design to preserve the historic visual quality of the historic district:

* ~~New buildings or structures within 500 feet of the district boundaries shall be subject to design review by the Design Advisory Board, to ensure that design is compatible with the historic aspect of the district and its buildings with respect to scale, massing, and materials, such that the rural historic visual character of the district is maintained.~~
* To the greatest extent feasible, a buffer of at least 200 feet shall be maintained between the boundaries of the Cowell Lime Works Historic District and new building development that would be visible against the backdrop of historic buildings from significant campus viewpoints.
* Any development, including new buildings, structures, access improvements, within a~~the~~ 500-foot buffer or within the district boundaries shall be evaluated by an architectural historian prior to implementation and conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).
* New buildings or structures within 500 feet of the district boundaries shall additionally be subject to design review by the Design Advisory Board, to ensure that design does not interfere with the historic aspect of the district and its buildings with respect to scale, massing, and materials, such that the rural historic visual character of the district is maintained.

Mitigation Measure 3.4-4b, as presented in Table ES-1 on page ES-15 of the Draft EIR is amended to state:

**Mitigation Measure 3.4-4b: Protect the Potential Campus Core Discontiguous Historic District**

During project-specific environmental review of development under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for historic buildings and structures as early as possible. For projects affecting any building identified as a potential contributor to the potential Campus Core discontiguous historic district, UC Santa Cruz shall implement the following procedures:

* For all buildings located within the potential Campus Core discontiguous historic district, projects involving interior alterations or routine maintenance work do not need review by an architectural historian.
* For minor exterior repairs that do not alter the visual appearance of the building-such as caused by water damage-to buildings that could be contributors to the potential Campus Core discontiguous historic district, if the repairs meet the “Secretary of the Interior's Standards for the Treatment of Historic Properties,” then review by an architectural historian is not required. Buildings that contribute to the potential Campus Core discontiguous historic district are Classroom Unit 1, Cowell College, Cowell Student Health Center (original construction), Crown College, East Field House, Hahn Student Services, Jack Baskin Engineering Building, Kerr Hall, Kresge College, McHenry Library, Merrill College, Nat Sci 2 Annex, Nat Sci 2 Main Building, Porter College, Stevenson College, Student Music East-KZSC Radio Station, Theater Arts, Thimann Laboratories, Thimann Lecture Hall, Thimann Receiving Building, and the University House.
* For larger exterior repairs, building additions, or demolition of buildings that could be contributors to the potential Campus Core discontiguous historic district, UC Santa Cruz shall retain a qualified architectural historian to determine if the building, or group of buildings, could be contributors ~~to the potential historic district~~. If large repairs, alterations, or demolitions are proposed at Cowell, Crown, Merrill, Porter, or Stevenson colleges, those groups of buildings shall be evaluated for their potential to comprise separate, individual sub-districts. (Note: Kresge College is not included in this group because Kresge College has been previously evaluated at a district level; due to lack of integrity, the college is not eligible for listing on the National Register of Historic Places [NRHP] or California Register of Historical Resources [CRHR.])
* The qualified architectural historian shall record the buildings on the appropriate California Department of Parks and Recreation DPR 523 forms and evaluate the buildings against NRHP and CRHR significance criteria. If the building or group of buildings does not meet the CEQA criteria for a historical resource, no further mitigation is required. If the buildings qualify as a historic resource, the architectural historian and UC Santa Cruz shall consult to consider measures that would enable the project to avoid direct or indirect impacts to the potential Campus Core discontiguous historic district or contributing building.

If the project cannot avoid modifications to the building, UC Santa Cruz shall ensure that documentation and treatment shall be carried out by a qualified architectural historian, as follows:

a) If the building or structure can be preserved on-site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).

b) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, UC Santa Cruz shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited in the McHenry Library Special Collections, and with the California Historical Resources Information System. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site-specific and comparative archival research, and oral history collection as appropriate.

c) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (b) and, when it is physically and financially feasible, it shall be moved and preserved or reused.

d) If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition or destruction cannot be fully mitigated through documentation, UC Santa Cruz shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications, where feasible, to the proposed project that would limit the degree of modification or allow the structure to be preserved intact. These could include project redesign, relocation, or abandonment. If no such measures are feasible, the historical building shall be documented as described in item (b).

* For new infill construction within the potential historic district that does not involve building demolition:

a) Infill projects outside Cowell, Crown, Merrill, Porter, or Stevenson colleges would not affect the potential college sub-districts or the potential Campus Core discontiguous historic district, and do not need review by an architectural historian; and

b) Infill projects within Cowell, Crown, Merrill, Porter, or Stevenson College will require review by an architectural historian for elements such as form, massing, and scale, to ensure visual compatibility with the college, and the review shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).

Mitigation Measure 3.5-1a, as presented in Table ES-1 on page ES-19 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-1a: Conduct Project-Level Biological Reconnaissance Sensitive Species and Habitats Survey**

During the early planning stages of projects under the 2021 LRDP, the following measure shall apply:

* A data review and biological reconnaissance survey will be conducted within a particular project site by a qualified biologist prior to project activities (e.g., ground disturbance, vegetation removal, staging, construction) and will be conducted no more than one year prior to project implementation. The qualified biologist must be familiar with the life histories and ecology of species in Santa Cruz County and must have experience conducting field surveys of relevant species or resources, including protocol-level surveys for individual species, if applicable. The data reviewed will include the biological resources setting, species tables, and habitat information in this EIR. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDB, CNPS Inventory of Rare and Endangered Plants of California, consultation with appropriate campus experts (e.g. Campus Natural Reserve Manager) to obtain information on biological resources that may not be captured in other databases, relevant Biogeographic Information and Observation System (BIOS) queries, and relevant general and regional plans. BIOS is a web-based system that enables the management and visualization of biogeographic data collected by CDFW and partner organizations.
* The qualified biologist will assess the habitat suitability of the project site for all special-status plant and wildlife species as well as sensitive habitats identified as having potential to occur in the LRDP area (refer to Section 3.5.2, "Environmental Setting"), and will identify any wildlife nursery sites (e.g., heron rookeries, bat maternity roosts, monarch butterfly overwintering colonies, deer fawning areas) within the LRDP area and potential ESHAs within project sites that fall within the coastal zone. The qualified biologist will also conduct a preliminary delineation of sensitive habitats (e.g., wetlands, streams, seeps, sensitive natural communities, ESHAs) within the project site. The biologist will provide a report to UC Santa Cruz with evidence to support a conclusion as to whether special-status species and sensitive habitats are present or are likely to occur within the project site.
* If the reconnaissance survey identifies no potential for special-status plant, wildlife species, or sensitive habitats to occur, UC Santa Cruz will not be required to apply any additional mitigation measures under Impact 3.5-1 through 3.5-4.
* If the qualified biologist determines that there is potential for special-status species or sensitive habitats to be present within the project site, the appropriate biological mitigation measures, identified herein shall be implemented.

Mitigation Measure 3.5-1b, as presented in Table ES-1 on page ES-20 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-1b: Conduct Special-Status Plant Surveys and Implement Avoidance Measures and Mitigation**

If it is determined through implementation of Mitigation Measure 3.5-1a that habitat suitable for special-status plant species is present within a particular project site, the following measures shall be implemented:

* Prior to implementation of project activities and during the blooming period for the special-status plant species with potential to occur in a particular project site, as determined during implementation of Mitigation Measure 3.5-1a, a qualified botanist will conduct protocol-level surveys for special-status plants within the project site following survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version). The qualified botanist will: 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the Santa Cruz region, including special-status plants and sensitive natural communities, 3) have experience conducting floristic botanical field surveys as described in CDFW 2018, 4) be familiar with the *California Manual of Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and 5) be familiar with federal and state statutes and regulations related to plants and plant collecting.
* If special-status plants are not found, the botanist will document the findings in a report to UC Santa Cruz, and no further mitigation will be required.
* If special-status plant species are found, the plant will be avoided completely, if feasible (i.e., project objectives can still be met). This may include establishing a no-disturbance buffer around the plants and demarcation of this buffer by a qualified biologist or botanist using flagging or high-visibility construction fencing. The size of the buffer will be determined by the qualified biologist or botanist and will be large enough to avoid direct or indirect impacts on the plant

Mitigation Measure 3.5-2a, as presented in Table ES-1 on page ES-23 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-2a: Conduct Site-Specific Habitat Suitability Analysis for California Red-Legged Frog, Obtain Incidental Take Authorization through Consultation with USFWS, Implement Minimization Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that aquatic or upland habitat determined to be suitable for California red-legged frog migration, dispersal, foraging, or refuge is present within a particular project site ~~(Biosearch Environmental Consulting 2020, Figure 3.5-7)~~, the following measures shall be implemented during the planning stages for each individual project under the 2021 LRDP:

* A qualified biologist will conduct a site-specific habitat suitability verification analysis to confirm the likelihood of the species to be present. To be qualified, the biologist will: 1) be knowledgeable in California red-legged frog life history and ecology, 2) be able to correctly identify California red-legged frogs and habitats, 3) have experience conducting field surveys of relevant resources, 4) be knowledgeable about state and federal laws regarding the protection of special-status species, and 5) have experience using CDFW’s CNDDB. The habitat assessment will include, but will not be limited to:
* Identification or verification of the vegetation communities present in the project site.
* Consideration of known occurrences within the LRDP area;
* Description of the project, including proposed project construction activities;
* Analysis of the type and likelihood of impacts on California red-legged frog as a result of project implementation; and
* Potential project modifications or additional measures that may avoid and minimize mortality, injury, and disturbance of California red-legged frog and habitat.
* Results of the site-specific habitat suitability verification analysis will be submitted to UC Santa Cruz for review and consideration.
* Based on the results of the site-specific habitat suitability verification analysis, a qualified biologist will determine if any of the following would occur: injury or mortality of California red-legged frog; or disturbance of individuals or adverse effects on California red-legged frog breeding, upland refugia, or dispersal habitat.
* If a qualified biologist determines that the individual project would have no substantial adverse effect on red-legged frog or its habitat and would not result in any injury or mortality, implementation of that individual project may proceed.
* For those areas where adverse modification of critical habitat or disturbance, injury, or mortality of California red-legged frog cannot be avoided, UC Santa Cruz shall, in consultation with USFWS, implement impact minimization for construction-related impacts (e.g., installation of exclusion fencing around the project construction site) and compensatory actions for habitat impacts, including purchase of credits at a conservation bank or creation of additional habitat at a minimum 1:1 mitigation ratio, as well as adaptive management strategies to ensure long-term conservation of mitigation lands. No actions that could adversely affect California red-legged frog will be allowed if adverse effects would result, unless consultation with USFWS is completed and additional measures are implemented.

To the extent the project may result in “take” of the species, UC Santa Cruz ~~may~~shall pursue incidental take coverage by either pursuing consultation and biological opinion under Section 7 of the federal ESA (where there is some federal nexus) or by developing an HCP, which would require authorization by USFWS under Section 10 of the ESA. Such an HCP could provide long-term conservation and incidental take coverage for species listed under ESA with potential to occur in the LRDP area: California red-legged frog and Ohlone tiger beetle. Typically, HCPs include the following:

* Measures that UC Santa Cruz will undertake to monitor, minimize, and mitigate for such impacts, the funding available to implement such measures, and the procedures to deal with unforeseen or extraordinary circumstances.
* Alternative actions to the taking analyzed by UC Santa Cruz, and the reasons why the alternatives were not adopted.
* Biological goals and objectives, which would define the expected biological outcome for each species covered by the HCP.
* Adaptive management, which includes methods for addressing uncertainty and also monitoring and feedback to biological goals and objectives.
* Monitoring for compliance, effectiveness, and effects.
* Permit duration which is determined by the time-span of the project and designed to provide the time needed to achieve biological goals and address biological uncertainty.

Mitigation Measure 3.5-2e, as presented in Table ES-1 on page ES-28 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-2e: Conduct Protocol-Level Surveys for Burrowing Owl, Implement Avoidance Measures, and Compensate for Loss of Occupied Burrows**

If it is determined through implementation of Mitigation Measure 3.5-1a that habitat suitable for burrowing owl is present within a project site, the following measures shall be implemented prior to and during construction of a particular project under the 2021 LRDP:

* A qualified biologist will conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of habitat suitable for the species identified during the reconnaissance-level survey (e.g., ruderal grassland, successional grassland, scrub habitat with sparse shrub cover) on and within 1,500 feet of the project site. Surveys will be conducted before the start of project activities and in accordance with Appendix D of the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFW 2012, or most current version) (CDFW Staff Report).
* If no occupied burrows are found, the qualified biologist will submit a report documenting the survey methods and results to UC Santa Cruz, and no further mitigation will be required.
* If an active burrow is found within 1,500 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), UC Santa Cruz shall establish and maintain a minimum protection buffer of ~~100~~ 165 feet around the occupied burrow throughout construction. The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not disturb burrowing owl use of the burrow because of particular site features or other buffering measures. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of the CDFW Staff Report. Burrowing owls will not be excluded from occupied burrows until the project burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a compensatory habitat mitigation plan (see below).
* If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a protective buffer at a minimum of ~~100~~ 650 feet unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer may be adjusted depending on the time of year and level of disturbance as outlined in the CDFW Staff Report. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not adversely affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW Staff Report.
* If burrowing owls are evicted from burrows and the burrows are destroyed by implementation of project activities, UC Santa Cruz will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW Staff Report, which states that permanent impacts on nesting, occupied and satellite burrows, and burrowing owl habitat (i.e., grassland habitat with suitable burrows) will be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. UC Santa Cruz will retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:
* Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species throughout its range.
* If feasible, mitigation lands will be provided adjacent or proximate to the project site so that displaced owls can relocate with reduced risk of injury or mortality. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient habitat to support displaced owls that may be preserved in perpetuity.
* If habitat suitable for burrowing owl is not available for conservation adjacent or proximate to the project site, mitigation lands can be secured off-site and will aim to consolidate and enlarge conservation areas outside of planned development areas and within foraging distance of other conservation lands. Mitigation may be also accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. Alternative mitigation sites and acreages may also be determined in consultation with CDFW.
* If burrowing owl habitat mitigation is completed through permittee-responsible conservation lands, the mitigation plan will include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures (e.g., measures required if performance standards and success criteria are not met). Success will be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the CDFW Staff Report, will include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Mitigation Measure 3.5-2g, as presented in Table ES-1 on page ES-32 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-2g: Limit Human Disturbance of Cave Ecosystems**

* UC Santa Cruz shall continue to limit visitation of caves on campus and discourage activities by members of the public that could jeopardize the physical integrity, condition, or scientific value of the caves, through exclusion of access to the caves with bat-friendly fencing (i.e., fencing that allows unimpeded ingress and egress by bats), appropriate signage and educational literature, Campus Natural Reserve website information, or other appropriate measures.

Mitigation Measure 3.5-2h, as presented in Table ES-1 on page ES-32 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-2h: Conduct Focused Surveys for Monarch Overwintering Colonies and Implement Avoidance Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that a monarch overwintering colony or suitable overwintering habitat is present within a particular project site, the following measures shall be implemented:

* To minimize the potential for loss of monarch overwintering colonies, project activities that include vegetation removal within suitable overwintering habitat (e.g., coniferous forest, eucalyptus forest) will be conducted from April through September to avoid the overwintering season (October through March), if feasible. If project activities are conducted outside of the overwintering season, no further mitigation will be required.
* Within 14 days before the onset of project activities that include vegetation removal between October 1st and March 31st, a qualified biologist familiar with monarchs and monarch overwintering habitat will conduct focused surveys for monarch colonies within habitat suitable for the species in the project site and will identify any colonies found within the project site.
* Monarch overwintering colonies that are identified within a project site will be demarcated with flagging or high-visibility construction fencing to prevent removal of the stand of trees containing the overwintering colony and encroachment by heavy machinery, vehicles, or personnel. Monarch overwintering colonies shall be protected throughout the duration of their presence within a project site. ~~Removal of the tree or stand of trees that contains the overwintering colony will not occur until the monarchs have left the area, as determined by a qualified biologist.~~
* If modification or removal of a stand ~~that contains an~~ where overwintering monarchs have been identified ~~overwintering colony~~ is required for project implementation, and the project cannot be redesigned to avoid modification or removal of the stand, ~~vegetation management purposes,~~ then UC Santa Cruz will prepare and implement a site-specific plan for the stand with the goal of maintaining habitat function for the monarch overwintering colony, following ~~feasible~~ recommendations from *Protecting California’s Butterfly Groves Management Guidelines for Monarch Butterfly Overwintering Habitat* (Xerces 2017). Examples of management strategies that could be considered include:
* remove or trim hazard trees;
* selectively remove or trim of trees to create a heterogeneous habitat that provides access to sunlight and shade for monarchs;
* maintain suitable wind protection in the stand; and
* replace removed trees with native trees in strategic locations to provide additional wind protection.

Mitigation Measure 3.5-2k, as presented in Table ES-1 on page ES-36 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-2k: Conduct Focused Noninvasive Surveys for Mountain Lion Dens and Implement Avoidance Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that den habitat potentially suitable for mountain lion is present within a particular project site (e.g., caves, other large natural cavities, thickets) or signs of mountain lion activities are observed (e.g., tracks, scat, carcasses or bones of prey species), the following measures shall be implemented to avoid take of mountain lions or destruction of den habitat:

* Within ~~at least~~ 30 days before commencement of project activities, a qualified wildlife biologist with familiarity with mountain lion and experience using survey methods for the species will conduct focused surveys of habitat suitable for the species within the project site to identify any potential mountain lion dens. Potential mountain lion dens will include caves, large natural cavities within rocky areas, or thickets deemed appropriate for use by mountain lions based on size and other characteristics (e.g., proximity to human development, surrounding habitat). The qualified wildlife biologist will also survey for signs of mountain lion (e.g., tracks, scat, prey items) in the vicinity of the cave, cavity, or thicket to help determine whether the den may be occupied by mountain lions. If the start of project activities lapses and more than 30 days pass since the survey was completed, an additional survey shall be conducted.
* If no potential dens are found, the qualified biologist will submit a report summarizing the results of the survey to UC Santa Cruz, and no further mitigation will be required.
* If potential dens are found, further investigation will be required to determine if the den is being used by a mountain lion or another carnivore species (e.g., coyote [*Canis latrans*], bobcat [*Lynx rufus*], gray fox [*Urocyon cinreoargenteus*]). Survey methods will include the use of trail cameras, track plates, hair snares, or other noninvasive methods. Surveys using these noninvasive methods will be conducted for three days and three nights to determine whether the den is occupied by mountain lions.
* If the den is determined to be unoccupied by any carnivore species, the qualified biologist will submit a report summarizing the results of the survey to UC Santa Cruz, and no further mitigation will be required.
* If the den is determined to be unoccupied by mountain lion, but is occupied by another carnivore species, the den will not be disturbed while the young of any species are dependent on the den for shelter.
* If the den is determined to be occupied by mountain lion, a no-disturbance buffer of at least 2,000 feet will be established around the occupied den within which no project activities will occur, and UC Santa Cruz will notify and consult with CDFW to identify additional adequate seasonal restrictions and/or no disturbance buffers to avoid disturbance, injury, or mortality of mountain lion.

Mitigation Measure 3.5-5a, as presented in Table ES-1 on page ES-46 of the Draft EIR is amended to state:

**Mitigation Measures 3.5-5a: Utilize Wildlife-Friendly Building and Fencing Designs**

The following measures shall be implemented during the early planning stages of projects under the 2021 LRDP:

* Buildings and other permanent structures that would be constructed during implementation of projects under the 2021 LRDP shall be designed to minimize impacts on wildlife, including disruption to wildlife movement, bird strikes, and wildlife entanglement.
* Building design shall utilize guidelines regarding building height, materials, external lighting, and landscaping provided in the American Bird Conservancy’s “Bird Friendly Building Design” (American Bird Conservancy 2015) or other appropriate resources (e.g., International Dark Sky Association). UC Santa Cruz shall require review of the design plans by a qualified biologist, who will determine whether the plans are sufficient to reduce the likelihood of bird strikes or recommend additional measures.
* Fencing associated with new development under the 2021 LRDP will utilize wildlife-friendly fencing design to minimize the risk of entanglement or impalement of wildlife. UC Santa Cruz will require the review of fencing design by a qualified biologist prior to installation. The fencing design shall meet, but not be limited to the following standards:
* Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale, snag, or entrap a leaping animal (e.g., wrought iron fencing with spikes).
* Allow wildlife to jump over easily without injury. Typically, fences should be no more than 40 inches high on flat ground to allow adult deer to jump over. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass.
* Allow smaller wildlife to pass under easily without injury or entrapment.

The fifth bullet of Mitigation Measure 3.5-7 on page ES-48 of the Draft EIR is amended to state:

As noted in Mitigation Measures 3.5-2a and 3.5-2i~~h~~, UC Santa Cruz may elect to pursue a comprehensive HCP, which shall be accomplished either by amending the Ranch View Terrace HCP or by incorporating and replacing the existing Ranch View Terrace HCP.

The third sentence of the impact summary for Impact 3.10-2 on page ES-58 has been amended to state:

Compliance with the CGP requires ~~a)~~ development of a Storm Water Pollution Prevention Plan (SWPPP) for projects disturbing 1 acre or more and~~, or b) preparation of an Erosion and Sediment Control Plan for projects less than 1 acre in accordance with~~ the Campus Standards Handbook requires preparation of an Erosion Control and Sediment Control Plan for projects less than 1 acre. Compliance with the CGP and the Campus Standards Handbook would ~~and the Storm Water Management Program to~~ minimize erosion and sedimentation during construction.

Mitigation Measure 3.10-5b, as presented in Table ES-1 on page ES-59 of the Draft EIR is amended to state:

**Mitigation Measure 3.10-5b: On-Going Groundwater Level and Spring Flow Monitoring**

If the existing well WSW#1 or a new groundwater well is used for extraction, UC Santa Cruz shall perform monitoring of water levels within that well and any other campus wells completed in the karst aquifer on a a~~n annual~~ continuous basis when groundwater pumping occurs. UC Santa Cruz shall also conduct, at a minimum, monthly ~~equivalent~~ flow monitoring of those springs in the vicinity of the LRDP area shown to be connected to the well via a dye tracing study or other applicable testing method for the duration of groundwater pumping to determine whether there is any long-term decline in water levels or spring discharge. Monitoring of the springs shall also include an assessment of surface water resources (i.e., habitats, plant species, and wildlife species) for a distance of 500 feet downgradient from the daylighting of connected springs at least 30 days prior to and after groundwater pumping to determine if there are any adverse changes (i.e., reduction in ordinary high water mark, changes in plant or wildlife species assemblages such that a species is no longer present, or reduction in plant cover) in the condition of these resources that may be directly attributed to changes in spring discharge as a result of groundwater pumping.

If monitoring of water levels and spring flows indicates that UC Santa Cruz extraction of groundwater is contributing to a net deficit in aquifer volume, as indicated by a substantial decrease in average base flow water levels in any monitored wells or a substantial reduction of base flows in monitored springs, the campus will terminate or reduce its use of groundwater from the aquifer. A substantial decrease shall constitute observations of a continual decreasing trend in base groundwater water levels over a 3-5 year period ~~that includes both wetter and drier years~~ coupled with a decrease in spring base flow conditions, beyond the standard deviation for any given spring, for a corresponding ~~rainfall season~~water year type. The average base water levels and base flows in springs will be defined through a statistical analysis of historic data~~, with consideration of associated seasonal rainfall~~ grouped by water year types. As new monitoring data becomes available, UC Santa Cruz will continually update the statistical analysis.

The impact summary for Impact 3.13-1, beginning on page ES-66 of the Draft EIR, is amended to remove an extra space as follows:

Implementation of the 2021 LRDP would allow physical development to accommodate projected increases in student enrollment, UC Santa Cruz faculty/staff, non-UC employees, and on-campus faculty/staff families/dependents, up to the levels anticipated when the campus was founded. To account for projected increases in the total on-campus population, the 2021 LRDP would provide additional housing on the main residential campus and potentially at the Westside Research Park. Up to 28,000 students (baseline plus project) would be accommodated by the plan, and this is consistent with regional growth projections. The 2021 LRDP sets aside an adequate amount of land for housing to accommodate 100 percent of the increase in student enrollment above 19,500 and for 25 percent of the increase in the number of employees, based on demand. Existing data on vacancy rates, as well as planned development nearby, suggest that housing is generally available or planned to be available within the county and city of Santa Cruz to accommodate the additional students, faculty/staff, and non-UC employees for whom on campus housing would not be accommodated~~.~~ However, other data, such as affordability, suggest a tighter housing market. Further, due to the recent (summer 2020) loss of homes associated with the CZU Lightning Complex fire, the availability of housing has tightened. Therefore, the total on-campus population increase accommodated by the 2021 LRDP may directly or indirectly induce substantial housing demand in the region. This impact would be significant.

Mitigation Measure 3.16-2, beginning on page ES-69, has been amended to include the full text of the mitigation measure, as provided in Section 3.16, “Transportation” of the Draft EIR and amended through responses to comments:

Performance Standard

The TDM Program is intended to reduce the total daily VMT per capita to 15 percent below the baseline campus average and the employment VMT per employee to 15 percent below the countywide average. To accurately monitor performance, the TDM Program will develop specific VMT thresholds (i.e., VMT per capita and VMT per employee) and new baseline conditions to measure VMT thresholds against, based on the same methodology and data sources proposed for the monitoring component of the TDM program by which UC Santa Cruz may adaptively manage campus VMT. For example, if 10 percent of UC Santa Cruz employees were to work remotely, the overall target VMT and VMT per employee would be achieved (i.e., a 2-percent reduction in overall VMT). The VMT metrics presented in this chapter were developed using the SCC Travel Model, while the annual monitoring would occur using data collection. Based on current technologies, the campus’ VMT performance could be most effectively monitored by using hose counts to measure the number of trips and anonymous cell phone data, which is “big data” that aggregates trip data using cellphones and navigation divides, to determine trip lengths. Since current technologies, including anonymous cell phone data, do not allow the tracking of employment trip lengths separately from the trip lengths generated by other campus uses (i.e., residential trips), the TDM Program shall develop a performance standard for the employment VMT threshold that is a weighted average of VMT generated by campus commuters and other campus users.

TDM Program Elements

A reduction in daily trips and VMT could be achieved through a significantly enhanced and robust TDM program. For the campus, the TDM program includes both campus features proposed as part of the 2021 LRDP and additional programmatic TDM elements that would support employment (faculty, staff, and student) trip reductions, as outlined below, such as employee housing, additional transit, and parking management tools. The campus would have the flexibility to manage implementation of TDM measures as long as the campus is meeting the VMT performance standards. If the campus is not meeting its performance standard, it would need to evaluate the effectiveness of TDM program and implement additional TDM elements to achieve the performance standards. Potential TDM measures may include, but are not limited to:

Implementation Level 1

* Work with appropriate agencies to implement an intelligent transportation system (ITS) program for the Campus Transit system to provide real-time vehicle location and time-to-arrival information at major on-campus shuttle bus stops.
* Encourage SCMTD to implement ITS program for campus routes to provide real-time vehicle location and time-to-arrival information at major SCMTD bus stops on- and off-campus (*project is currently in development with delivery planned for 2021*).
* Continue to expand Commuter Vanpool program.
* Expand Bike Shuttle hours of operations, routes and increase frequency of service, as needed.
* Improve transit service between Coastal Science Campus, Westside Research Park, and the main residential campus.
* Work with local agencies to provide additional secure bike parking and/or “bike stations” at or near off-campus transit stops.
* Where feasible, implement a 4-day/10-hour or 9-day/80-hour work schedule option for staff.
* Where feasible, promote increased use of telecommuting options for students, staff, and faculty.
* Replace monthly/annual parking fee with “pay at exit” use-based, daily or other alternative, dynamic payment mechanisms and parking fee policies that encourage off-peak travel.

Implementation Level 2

* Implement reduced on-campus parking fees for arrivals and departures occurring during off-peak hours, to better manage existing and reduce the need for new parking.
* Work with local agencies to implement a series of off-campus bike circulation improvements (bike boulevards, secure bike parking at major transit stops, etc.).
* Work with appropriate agencies to identify and develop a Westside Santa Cruz multi-modal hub, to connect Westside shuttle service with expanded automobile and bike parking and (ultimately) regional access via the adjoining rail right-of-way.
* Work with appropriate agencies to identify and develop remote Park & Ride facilities with transit service.
* Explore opportunities to construct new student/staff housing along off-campus transit corridors, including the RTC mass transit rail-trail corridor.

Potential VMT Reduction by Program Measure

**Employee Housing** – The 2021 LRDP identifies sites with capacity to house as many as 25 percent of new employees, based on demand associated with the 2021 LRDP. Employee housing would be predominantly located near the main entrance to the campus at Bay and High Streets and at Westside Research Park to make trips to services such as grocery stores and schools as convenient as possible for employees and their families. Inclusion of support uses such as child-care, small park spaces, and community-use rooms located on-campus could also help reduce the number of trips taken by employees. The California Air Pollution Control Officers Association (CAPCOA) conducted a study to quantify greenhouse gas (GHG) mitigation measures, which also assess how certain policies/actions can reduce VMT, and subsequently reduce GHG. Per CAPCOA, land use/location measures could reduce VMT by up to 5 percent for a suburban development.

**Telecommuting** - Continue to allow and encourage employees to telecommute when possible. Specifically, shift work schedules such that travel occurs outside of peak congestion periods so that employees do not drive longer routes to avoid traffic or providing opportunities for employees to work from home one or a few days a week can reduce travel to the campus. While schedule shifts would still result in commute trips to campus, they could encourage use of transit by moving trips to times of day when buses are less crowded and/or allow commuters to travel outside of peak commute periods where people may choose longer routes to avoid traffic. Telecommuting is an easy and low-cost way to reduce VMT and GHG. Per CAPCOA, alternative work schedules and telecommuting could reduce work VMT by up to 5.5 percent.

**Additional Transit** - Add express service from major regional destinations or provide fair share contribution to regional mass transit improvements. Add select long-distance bus service to/from campus. Per CAPCOA, transit system improvements could reduce VMT by up to 10 percent, which is also consistent with the campus’ Sustainability Plan.

**TDM Program Expansion** - Expand TDM programs and prioritize investments in transportation programs before constructing on-campus parking facilities, such as implementing multimodal transit hubs and working with partner agencies to increase transit and active transportation connectivity to the campus. Provide additional subsidies for transit use by commuters. Provide additional subsidized commuter vanpool routes to locations with concentrated employee residences, real-time ride matching, and reserved carpool and vanpool parking spaces. Per CAPCOA, a commute trip reduction program could reduce work VMT anywhere from 1 percent to 21 percent, depending on if it is voluntary or required.

**Parking Management Tools** - Improve parking management and enforcement system. Establish “no net new commuter parking” and other parking management or eligibility policies. Per CAPCOA, parking policy/pricing could reduce VMT by up to 20 percent.

Each of the TDM strategies can be combined with others to increase the effectiveness of vehicle trip and VMT reduction; however, the interaction between the various strategies is complex. Generally, with each additional measure implemented the incremental benefit of vehicle trip and VMT reduction may be less than the benefit that measure would have if it was considered on its own.[[1]](#footnote-2) Thus, overall, the TDM measures could reduce VMT by up to an additional 15 percent, given the land use context and anticipated effectiveness of the TDM measures.

Annual Monitoring Program

Starting in the next full academic year after adoption and initiation of a TDM Program implementation, including establishment of baseline data, UC Santa Cruz shall conduct cordon counts at the two campus entrances for at least two weeks, on the fourth week of fall and spring quarters, and other methods to quantify mode choice and trip length, to determine whether the campus is achieving a 15 percent reduction in the per capita VMT over baseline to a maximum of 7.7 VMT per capita. A big data service could be used, to estimate the VMT generated by the campus during the same academic year as the cordon count data collected or other methods such as a mandatory employee travel survey. As noted earlier, the VMT generated by employees cannot be measured separately, so a ratio will be applied to estimate the VMT generated by employees, if big data is only used.

An annual monitoring report shall be developed to describe: (a) specific steps taken to implement the TDM program; (b) results of the annual cordon counts and other data collected, including the methodology used to calculate VMT; (c) findings regarding whether the campus has met the VMT performance standard; and (d) an outline of additional TDM measures (i.e., a corrective action plan) to be implemented in subsequent years should the VMT performance standard of at least 15 percent below baseline VMT levels is not reached.

Beginning on page ES-72, the impact summary for Impact 3.18-2 has been amended to correct a type as follows:

**Impact 3.18-2: Wildfire Risk Associated with New Development and Land Use Patterns**Implementation of the 2021 LRDP would place new development within the north campus, and along the margins of existing development on the central and lower campus. The UC Santa Cruz EOP outlines evacuation procedures for building emergencies and campus-wide emergencies, ~~f~~and the UC Santa Cruz OES also maintains an ongoing schedule of inspections for all buildings to ensure that fire hazards are mitigated and also conducts plan reviews and inspections of building construction and renovation activities. However, in the absence of an adopted Vegetation Management Plan, the wildfire risk associated with placing new development in close proximity to an HFHSZ and proposed changes in land use under the 2021 LRDP would be significant.

The fifth bullet of Mitigation Measure 3.18-2 on page ES-73 has been amended as follows:

* best management practices implemented to avoid and/or minimize impacts associated with soil erosion, biological resources, and water quality, including the use of fire resistant/drought tolerant landscaping within 100 feet of new/modified structures within high or very high fire hazard zones; and

## Chapter 2, Project Description

The fourth bullet on page 2-9 has been amended as follows:

* Recognize, to the extent feasible, UC Santa Cruz and regional histories within the campus, including protecting tribal cultural resources and maintaining the integrity of existing historic structures and enhancing the Cowell Lime Works Historic District as a campus gateway.

The discussion of the Natural Space land use designation on page 2-19 has been amended to state:

**The principal use of the Natural Space designation is to maintain the landscape in its natural state, including the Great Meadow and existing ravines and drainages throughout the campus.**

**Supporting uses could include carefully sited paths, roads, infrastructure, and unobtrusive research uses which do not impinge on overall character.**

Approximately 513 acres are designated Natural Space in the proposed 2021 LRDP, an increase of about 10 acres compared to the 2005 LRDP (where it was designated Protected Landscape). The purpose of the Natural Space designation is to maintain special campus landscapes for their scenic value and maintain special vegetation and wildlife continuity zones that are intrinsic to the campus’s identity. Natural Space will continue to be managed by Grounds. In specified areas of Natural Space used for long term research projects, including sections of the Great Meadow, the area will be managed in consultation with the UCSC Campus Natural Reserve.

The last paragraph describing the Campus Natural Reserve on page 2-19 has been amended as follows:

The Campus Natural Reserve would continue to be managed in consultation with the Campus Natural Reserve Committee ~~and, where there are common borders, the UC Santa Cruz Arboretum~~. One area of the Campus Natural Reserve, the Lower Moore Creek area adjacent to the Arboretum, will be jointly managed by the UCSC Campus Natural Reserve and the Arboretum and includes a California regional native plant garden. The Campus Natural Reserve is located primarily in the North Campus and on the west side of the campus.

The following sentence has been added to the second to last paragraph on page 2-25 of the Draft EIR:

In addition, similar pedestrian improvements along Empire Grade may occur in cooperation with the County/City of Santa Cruz and in connection with other improvements to alternative transportation infrastructure.

The last paragraph on page 2-25 of the Draft EIR is revised as follows:

Additional trail improvements could include improved connections ~~ng~~ between the Spring Trail and ~~to~~ Spring Street within the LRDP area. ~~, and~~ The Spring Trail also provides pedestrian connection to Highway 9. Trail corridors that provide access to campus research areas could be limited to pedestrians only, such as Red Hill Road gravel fire road in the north campus.

## Section 3.1, Aesthetics

The listing of 2021 LRDP Physical Planning Principles, beginning on page 3.1-36 of the Draft EIR, has been moved to correctly follow the subheading and introductory information, as follows:

2021 LRDP Physical Planning Principles

In addition, the 2021 LRDP Physical Planning Principles, which are described below, articulate the manner in which future development under the 2021 LRDP would be planned, designed, constructed, and maintained.

A. The Campus Land – Respect and Resiliency

1. Preserve the integrity of campus landscapes. Buildings shall respond to the varied natural environments -- meadow, ecotone (forest edge), and forest – with architecture that is sensitive to the natural setting.

2. Respect major natural features. Maintain continuity of wildlife habitats, surface drainage flows, and compatibility of landscaping with surrounding native plant communities.

3. Minimize disturbance to open space. Retain for research and for its aesthetic values, as well as to honor the character and cultures of this incomparable site chosen for UC Santa Cruz.

4. Integrate planning for long-term resilience. To the extent possible, include climate adaptive strategies in all development to manage potential long-term and short-term challenges to the campus buildings and infrastructure. Foster conservation and maintenance of the land resource.

5. Integrate the natural and built environment. In forested areas, buildings should not protrude above the surrounding tree canopy; in visually sensitive areas, interruption of prime viewsheds and viewpoints will be minimized.

B. Academic Core Infill and Expansion – Growth from Within

1. Grow from within. Focus growth in previously developed areas of the academic core, including infill buildings and opportunities to densify, to minimize impacts on the natural environment

2. Maintain adjacencies with existing development. Continue compact expansion north of the Academic Core to facilitate connections to new neighboring colleges and student housing.

3. Sensitively site buildings to protect scenic viewsheds. Extend clustered development south of the Academic Core, maintaining the existing pattern of lower density development to minimize visibility of new buildings and maintain view corridors from existing buildings.

4. Maintain an open space network within the academic core. Provide spaces for contemplation, reflection and wellness.

5. Build sustainably and efficiently. Maximize investment in the land by considering long-term life cycle costs and increased building height, where feasible.

C. Campus Life and Housing – The Expanded Ring

1. Continue the pattern of colleges and student housing around the periphery. Optimize access to learning, research, and student support destinations by locating colleges and housing as close to the academic core as possible.

2. Cluster non-college student housing in infill locations near or adjoining existing colleges. Support the diverse student body with a variety of housing types, located with convenient access to academic and student support services.

3. Distribute recreational opportunities close to student housing. Complement concentrated college athletic facilities at the Athletics and Recreation area by promoting a diverse array of other opportunities for wellness and exercise throughout the campus.

4. Enrich the quality of campus life. Provide a variety of public services and student support spaces to help meet basic needs and allow students to thrive.

5. Provide supportive living / learning communities. Continue to balance the context of a major research university with the more intimate scale in the residential colleges.

D. Integrated Transportation – Walkable Core

1. Consolidate parking at the periphery of the academic core. Serve with frequent, direct transit service, and enhanced walking and biking pathways directly connecting to the academic core

2. Activate the core. Limit routine vehicular traffic flow from internal roadways to prioritize pedestrian connectivity and promote a safe pedestrian environment

3. Prioritize efficient transit access and routes. Extend Meyer Drive to create an inner campus loop and interconnected roadway network for improved access

4. Create active building frontages at ground level. Enhance the visual and experiential quality of the pedestrian and connect interior programs visually with exterior surroundings.

5. Generate dynamic public gathering spaces. Provide gathering spaces shared between buildings and at entries for increased public activity and to foster dynamic interactions between students, faculty and staff.

E. Pedestrian Mobility – Web of Pathways

1. Extend the pattern of east-west pedestrian paths. Provide convenient and direct access from new housing at the periphery to academic and social destinations in the core.

2. Improve existing pathways to reinforce walkability. Designate and prioritize select pedestrian corridors between key destinations throughout campus.

3. Strive to provide equal access throughout campus. Remove barriers through physical and programmatic improvements.

4. Expand comprehensive program of Travel Demand Management (TDM) strategies. Continue to expand options and incentives for alternative circulation modes, such as walking and bicycling.

5. Manage service road access with public circulation. Promote use of service roads to safely accommodate bicycle and pedestrian circulation. Avoid pedestrian and vehicular conflicts where possible and route deliveries and loading docks away from building entries and gathering spaces.

F. Campus and Community – Culture and Connectivity

1. Protect historic cultural resources. Maintain the historical integrity of the Cowell Lime Works Historic District and other cultural resources through rehabilitation of structures while embracing opportunities for the area to more actively contribute to campus and community life.

2. Protect prehistoric, archaeological and tribal cultural resources. In recognition of the history of Indigenous peoples and their relationship to their traditional homeland, partner with the Amah Mutsun Tribal Band in designing land stewardship practices.

3. Cultivate public programs as community resources. Continue investments in programs serving both the campus and the Santa Cruz communities.

4. Expand employee housing near campus entries. Cluster development to share resources and infrastructure and locate with ease of access to city destinations and amenities.

5. Ensure continued collaboration and communication with the greater community. Work together to sustain economic, social and physical health for the region by identifying shared strategies that address common goals.

ISSUES NOT EVALUATED FURTHER

Result in Damage to Scenic Resources within a State Scenic Highway

There are no officially designated State highways in Santa Cruz County. The closest State-designated highway includes segments of California SR-1 located in Monterey County, which is approximately 30 miles south of the main residential campus. Given the distance to the main residential campus, views of the LRDP area are not visible from designated segments of SR-1. Therefore, potential effects of the 2021 LRDP on scenic resources within a State scenic highway are not addressed further.

~~A. The Campus Land – Respect and Resiliency~~

~~1. Preserve the integrity of campus landscapes. Buildings shall respond to the varied natural environments -- meadow, ecotone (forest edge), and forest – with architecture that is sensitive to the natural setting.~~

~~2. Respect major natural features. Maintain continuity of wildlife habitats, surface drainage flows, and compatibility of landscaping with surrounding native plant communities.~~

~~3. Minimize disturbance to open space. Retain for research and for its aesthetic values, as well as to honor the character and cultures of this incomparable site chosen for UC Santa Cruz.~~

~~4. Integrate planning for long-term resilience. To the extent possible, include climate adaptive strategies in all development to manage potential long-term and short-term challenges to the campus buildings and infrastructure. Foster conservation and maintenance of the land resource.~~

~~5. Integrate the natural and built environment. In forested areas, buildings should not protrude above the surrounding tree canopy; in visually sensitive areas, interruption of prime viewsheds and viewpoints will be minimized.~~

~~B. Academic Core Infill and Expansion – Growth from Within~~

~~1. Grow from within. Focus growth in previously developed areas of the academic core, including infill buildings and opportunities to densify, to minimize impacts on the natural environment~~

~~2. Maintain adjacencies with existing development. Continue compact expansion north of the Academic Core to facilitate connections to new neighboring colleges and student housing.~~

~~3. Sensitively site buildings to protect scenic viewsheds. Extend clustered development south of the Academic Core, maintaining the existing pattern of lower density development to minimize visibility of new buildings and maintain view corridors from existing buildings.~~

~~4. Maintain an open space network within the academic core. Provide spaces for contemplation, reflection and wellness.~~

~~5. Build sustainably and efficiently. Maximize investment in the land by considering long-term life cycle costs and increased building height, where feasible.~~

~~C. Campus Life and Housing – The Expanded Ring~~

~~1. Continue the pattern of colleges and student housing around the periphery. Optimize access to learning, research, and student support destinations by locating colleges and housing as close to the academic core as possible.~~

~~2. Cluster non-college student housing in infill locations near or adjoining existing colleges. Support the diverse student body with a variety of housing types, located with convenient access to academic and student support services.~~

~~3. Distribute recreational opportunities close to student housing. Complement concentrated college athletic facilities at the Athletics and Recreation area by promoting a diverse array of other opportunities for wellness and exercise throughout the campus.~~

~~4. Enrich the quality of campus life. Provide a variety of public services and student support spaces to help meet basic needs and allow students to thrive.~~

~~5. Provide supportive living / learning communities. Continue to balance the context of a major research university with the more intimate scale in the residential colleges.~~

~~D. Integrated Transportation – Walkable Core~~

~~1. Consolidate parking at the periphery of the academic core. Serve with frequent, direct transit service, and enhanced walking and biking pathways directly connecting to the academic core~~

~~2. Activate the core. Limit routine vehicular traffic flow from internal roadways to prioritize pedestrian connectivity and promote a safe pedestrian environment~~

~~3. Prioritize efficient transit access and routes. Extend Meyer Drive to create an inner campus loop and interconnected roadway network for improved access~~

~~4. Create active building frontages at ground level. Enhance the visual and experiential quality of the pedestrian and connect interior programs visually with exterior surroundings.~~

~~5. Generate dynamic public gathering spaces. Provide gathering spaces shared between buildings and at entries for increased public activity and to foster dynamic interactions between students, faculty and staff.~~

~~E. Pedestrian Mobility – Web of Pathways~~

~~1. Extend the pattern of east-west pedestrian paths. Provide convenient and direct access from new housing at the periphery to academic and social destinations in the core.~~

~~2. Improve existing pathways to reinforce walkability. Designate and prioritize select pedestrian corridors between key destinations throughout campus.~~

~~3. Strive to provide equal access throughout campus. Remove barriers through physical and programmatic improvements.~~

~~4. Expand comprehensive program of Travel Demand Management (TDM) strategies. Continue to expand options and incentives for alternative circulation modes, such as walking and bicycling.~~

~~5. Manage service road access with public circulation. Promote use of service roads to safely accommodate bicycle and pedestrian circulation. Avoid pedestrian and vehicular conflicts where possible and route deliveries and loading docks away from building entries and gathering spaces.~~

~~F. Campus and Community – Culture and Connectivity~~

~~1. Protect historic cultural resources. Maintain the historical integrity of the Cowell Lime Works Historic District and other cultural resources through rehabilitation of structures while embracing opportunities for the area to more actively contribute to campus and community life.~~

~~2. Protect prehistoric, archaeological and tribal cultural resources. In recognition of the history of Indigenous peoples and their relationship to their traditional homeland, partner with the Amah Mutsun Tribal Band in designing land stewardship practices.~~

~~3. Cultivate public programs as community resources. Continue investments in programs serving both the campus and the Santa Cruz communities.~~

~~4. Expand employee housing near campus entries. Cluster development to share resources and infrastructure and locate with ease of access to city destinations and amenities.~~

~~5. Ensure continued collaboration and communication with the greater community. Work together to sustain economic, social and physical health for the region by identifying shared strategies that address common goals.~~

The sixth and seventh sentences of the first paragraph on page 3.1-44 of the Draft EIR are amended to state:

Land use changes proposed at the Westside Research Park would also occur within a developed area of the city and would be consistent with surrounding uses, which include commercial, industrial, community, and multi-family residential uses. While new development in these areas may change the visual quality, required compliance with UC Santa Cruz design standards (i.e., Physical Design Framework and Campus Standards Handbook) would ~~these changes are more likely to be perceived as an improvement, rather than an adverse impact, by~~ provide~~ing~~ for a continued ~~a more~~ congruous visual condition, consistent with existing development. ~~a higher-education institution.~~

Page 3.1-42 has been amended as follows:

**Mitigation Measure 3.4-4a: Protect Cowell Lime Works Historic District**

*(Refer to Section 3.4, “Archaeological, Historical, and Tribal Cultural Resources”)*

Significance after Mitigation

The Cowell Lime Works Historic District Management Plan is being refined to identify opportunities to further improve the district for use as a campus and community amenity including adaptive reuse and rehabilitation of existing structures that preserves the spatial and historic character relationships in the historic district. Implementation of Mitigation Measures 3.4-4a in Section 3.4, “Archaeological, Historical, and Tribal Cultural Resources,” would require UC Santa Cruz to implement specific design considerations and conduct any development within or proximate to the Cowell Lime Work Historic District in a manner compatible with the historic aspect of the historic district until such time as the Cowell Lime Works Historic District Management Plan is adopted. Future projects located ~~adjacent to~~ within the Cowell Lime Works Historic District would be evaluated for consistency with the visual design guidelines included in the Cowell Lime Works Historic District Management Plan. In addition, future development proposed proximate to the historic district would be required to comply with the UC Santa Cruz Design Review Process to ensure that design is ~~consistent with or~~ complementary to and does not interfere with the historic aspect of the historic District and its buildings with respect to scale, massing, architectural style, and materials, such that the rural historic visual character of the district is maintained. As a result, implementation of the 2021 LRDP would not result in damage or substantial adverse changes in the visual quality of the historic district, and impacts would be less than significant.

Page 3.1-44 has been amended as follows:

**Mitigation Measure 3.1-3a: Require Setback Distance from Empire Grade**

UC Santa Cruz shall require that development located north of the Arboretum and Botanic Garden entrance under the 2021 LRDP, which could be seen from Empire Grade, include a minimum setback of 200 feet from Empire Grade. If establishment of a 200-foot buffer is not feasible, a vegetated barrier or screen that prevents a direct line of site between a resource and developed structures shall be provided. Vegetation shall be native to California and selected to match existing vegetation located nearby.

**Mitigation Measure 3.1-3b: Implement Design Measures for Protection of Views Along Empire Grade**

Development within 500 feet of Empire Grade and west of the Santa Cruz city limits and the Arboretum and Botanic Garden within the UC Santa Cruz main residential campus shall be subject to review by the Campus Design Advisory Board to ensure that design of new facilities~~is consistent with or complimentary to other nearby campus development with respect to development scale, massing, and materials.~~ shall be visually unobtrusive and not unduly interfere with existing views. Review of future development by the Campus Design Advisory Board shall occur upon initial selection of sites. Design shall comply with standards set forth in the UC Santa Cruz Campus Standards Handbook and be generally consistent with the Physical Design Framework and Physical Planning Principles and Guidelines in the 2021 LRDP.

## Section 3.3, Air Quality

The first bullet on page 3.3-3 of the Draft EIR is amended to state:

* Part One, “One National Program” (84 FR 51310) revokes a waiver granted by EPA to the State of California under Section 209 of the CCA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of greenhouse gas (GHG) reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, restricting the ability of CARB to enforce more stringent GHG emission standards for new vehicles and set zero emission vehicle mandates in California. As of this writing, EMFAC2017 is CARB’s most recent version of the EMFAC model series and considers effects of known policy implementation and economic forecasts, such as the implementation of the CAFE standards and Advanced Clean Cars program.

Table 3.3-3 on page 3.3-12 of the Draft EIR is revised as follows:

Table 3.3-3 Ambient Air Quality Standards and Attainment Designations for North Central Coast Air Basin

| Pollutant | Averaging Time | California Standards2 Primary3 | California Standards2 Attainment Status4 | National Standards1 Primary3 | National Standards1 Attainment Status6 |
| --- | --- | --- | --- | --- | --- |
| Ozone | 1-hour | 0.09 ppm (180 μg/m3) | ~~N~~NT | – | U/A |
|  | 8-hour | 0.070 ppm (137 μg/m3) |  | 0.070 ppm (137 μg/m3) |  |
| Carbon Monoxide (CO) | 1-hour | 20 ppm (23 mg/m3) | A | 35 ppm (40 mg/m3) | U/A |
|  | 8-hour | 9 ppm (10 mg/m3) |  | 9 ppm (10 mg/m3) |  |
|  | 8-hour (Lake Tahoe) | 6 ppm (7 mg/m3) |  | – |  |
| Nitrogen Dioxide (NO2) | Annual Arithmetic Mean | 0.030 ppm (57 μg/m3) | A | 0.053 ppm (100 μg/m3) | U/A |
|  | 1-hour | 0.18 ppm (339 μg/m3) |  | 0.100 ppm |  |
| Sulfur Dioxide (SO2) | Annual Arithmetic Mean | – | A | 0.030 ppm (80 μg/m3) | U/A |
|  | 24-hour | 0.04 ppm (105 μg/m3) |  | 0.14 ppm (365 μg/m3) |  |
|  | 3-hour | – |  | 0.5 ppm (1300 μg/m3)5 |  |
|  | 1-hour | 0.25 ppm (655 μg/m3) |  | 0.075 ppm |  |
| Respirable Particulate Matter (PM10) | Annual Arithmetic Mean | 20 μg/m3 | N | – | U |
|  | 24-hour | 50 μg/m3 |  | 150 μg/m3 |  |
| Fine Particulate Matter (PM2.5) | Annual Arithmetic Mean | 12 μg/m3 | A | 12.0 μg/m3 | U/A |
|  | 24-hour | – |  | 35 μg/m3 |  |
| Lead7 | 30-day Average | 1.5 μg/m3 | A | – | – |
|  | Calendar Quarter | – |  | 1.5 μg/m3 | U/A |
|  | Rolling 3-Month Avg | – |  | 0.15 μg/m3 | U/A |
| Sulfates | 24-hour | 25 μg/m3 | A |  | |
| Hydrogen Sulfide | 1-hour | 0.03 ppm (42 μg/m3) | U |  | |
| Vinyl Chloride7 | 24-hour | 0.01 ppm (26 μg/m3) | Not Available | No National  Standards | |
| Visibility-Reducing Particle Matter | 8-hour | Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more | U |  | |

Notes: μg/m3 = micrograms per cubic meter; ppm = parts per million; EPA=U.S. Environmental Protection Agency; CAAQS=California Ambient Air Quality Standards; CCAA=California Clean Air Act; CARB=California Air Resources Board

1 National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM10 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The PM2.5 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current federal policies.

2 California standards for ozone, CO (except in the Lake Tahoe Basin), SO2 (1‑ and 24-hour), NO2, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

3 Concentration expressed first in units in which it was promulgated [i.e., ppm or μg/m3]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas. Secondary national standards are also available from EPA.

4 Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.

Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area. Non-attainment designations for ozone are classified as marginal, serious, severe, or extreme depending on the magnitude of the highest 8-Hour ozone design value at a monitoring site in a non-attainment area.

Nonattainment/Transitional (NT): is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.

5 Secondary Standard

6 Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

Maintenance (M): any area previously designated nonattainment pursuant to the CAAA of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under Section 175A of the CAA, as amended.

7 CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2018; EPA 2017; data compiled by Ascent Environmental in 2020.

Mitigation Measure 3.3-1, as presented on page 3.3-23 of the Draft EIR, is clarified to state:

**Mitigation Measure 3.3-1: Reduce Construction-Generated Emissions of NOX**

Per contract specification requirements, UC Santa Cruz shall require that the contractor(s) develop and implement a plan demonstrating that the off-road equipment used on-site to construct 2021 LRDP projects would achieve a fleet-wide average 45 percent reduction in NOX exhaust emissions, compared to uncontrolled aggregate statewide emission rates for similar equipment. One feasible plan to achieve this reduction would include the following:

* At least 80 percent of diesel-powered off-road equipment operating on the project site for more than two days continuously shall be equipped with engines meeting US EPA emissions standards for Tier 3 engines or equivalent, and use of Tier 4 engines shall be encouraged;
* Use of renewable diesel or other zero emissions alternative (e.g., electric) construction equipment to the degree available and feasible;
* Plan construction projects such that multiple project components (i.e., bridge ~~construction~~ or roadway construction) will not occur on the same days ~~as other construction activities~~; and
* Alternatively, if UC Santa Cruz can demonstrate through preparation of an air quality assessment report prepared by an air quality specialist that large or contemporaneous 2021 LRDP construction projects would not exceed MBARD thresholds, then the above mitigation requirements may be waived.

Mitigation Measure 3.3-2, as presented on page 3.3-27 of the Draft EIR, is clarified to state:

**Mitigation Measure 3.3-2: Reduce Operational Emissions of ROG and PM10 from All Sources**

The majority of ROG emissions are a result of aerosolized and evaporation of consumer products, which include cleaning solutions, personal care products, and pesticides. The calculation of ROG emissions from consumer products was based on the ability to control personal products over the use of consumer products, such as personal care products and household cleaners used off-campus. However, UC Santa Cruz is responsible for facility-related purchases, such as commercial cleaning and sanitizing solutions. Additional measures should also be taken to reduce ROG emissions from other sectors, such as mobile sources, landscaping equipment, and architectural coatings.

As such, UC Santa Cruz shall make every effort to reduce ROG emissions generated under the 2021 LRDP. With respect to the new construction and operations that would occur under the 2021 LRDP, UC Santa Cruz shall implement the following measures for on-campus activities:

* Use zero or low-VOC consumer products and cleaning supplies that exceed CARB's consumer product VOC standards (as defined in CCR Title 17, Division 3, Chapter 1, Subchapter 8.5, Articles 1 through 5), such as those using electrolyzed water, where available.
* Use zero-VOC architectural coatings with a VOC content no greater than 5 grams per liter.
* Increase the level of zero emission landscaping equipment over time, such as electric lawnmowers, leaf blowers, and chainsaws, ~~on campus such that~~ to attain 95-100 percent of zero emission landscaping equipment ~~is used~~ use on campus.
* Choose zero emission vehicles for all new light-duty fleet purchases.
* Choose zero or low emission vehicles for all new heavy-duty fleet purchases, where available and feasible.
* Encourage the use of zero emission vehicles by installing electric vehicle charging stations in parking facilities.
* Reduce campus vehicle speed limits to the extent feasible and install traffic calming or signal coordination to reduce the intensity of vehicle braking and acceleration.

The reference to a transportation mitigation measure on page 3.3-27 of the Draft EIR is corrected to show:

**Mitigation Measure 3.16-2~~1~~: Implement Transportation Demand Management Program and Monitoring**

*(Refer to Section 3.16, “Transportation”)*

The last paragraph on page 3.3-29 of the Draft EIR is amended to provide the percentage exceedance of thresholds, as follows:

While such modeling may be warranted when considering ~~extremely large~~ projects that exceed thresholds by multiples, they are of questionable value, and are, in fact, often misleading when considering projects such as the 2021 LRDP, which only exceeds the significance standard by 11 percent ~~a very small margin~~. Further, while dispersion modeling of project-generated PM may be conducted to evaluate resulting ground-level concentrations, localized impacts of directly-emitted PM do not always equate to local PM concentrations due to the transport of emissions. Therefore, it is simply not possible, based on current modeling technologies, to model specific health impacts of this exceedance with a reasonable degree of scientific certainty, and doing so would not provide reliable, credible informational value to decisionmakers or the public.

The first paragraph of Impact 3.3-3, beginning on page 3.3-30 of the Draft EIR, is revised as follows:

Santa Cruz County is in an area of nonattainment-transitional for ozone and non-attainment for PM10 with respect to the CAAQS. Because of this, MBARD is required to develop an air quality plan to achieve and maintain the state ozone standard by the earliest practicable date. As a means of reducing regional ambient ozone concentrations, MBARD sets daily and annual significance thresholds for emissions of ozone precursors ROG and NOX, as specified in the AQMP.

## Section 3.4, Archaeological, Historical, and Tribal Cultural Resources

The fourth paragraph on page 3.4-12 of the Draft EIR is amended to state:

The remaining five sites are recorded as lithic scatters (scattered chipped stone tool manufacture debris), several with Monterey-banded chert: CA-SCR-94/P-44-00098, CA-SCR-142/P-44-000145, CA-SCR-143/P-44-000146, CA-SCR-180/P-44-000182, and CA-SCR-181/P-44-000183. The last site, CA-SCR-181/P-44-000183, was not relocated during a 2005 archaeological survey. In general, the boundaries of these sites are not well defined, it has been difficult to accurately relocate these sites in subsequent surveys, and it is unclear whether the deposits have subsurface components. These eight sites have been assumed eligible for listing in the CRHR for management and preservation purposes until their significance can be documented through archaeological testing.

The first sentence on page 3.4-14 of the Draft EIR is revised as follows:

As shown in Table 3.4-1, only one Tribe requested consultation with UC Santa Cruz. ~~To date, no specific tribal cultural resources have been identified.~~ The Amah Mutsun Tribal Band has identified the eight prehistoric archaeological sites on the UC Santa Cruz main residential campus as tribal cultural resources. This includes the three habitation sites (CA-SCR-3/P-44-000011; CA-SCR-160/P-44-000163; and CA-SCR-4/P-44-00012), five lithic scatter sites (CA-SCR-94/P-44-00098; CA-SCR-142/P-44-000145; CA-SCR-143/P-44-000146; CA-SCR-180/P-44-000182; and CA-SCR-181/P-44-000183).

The second to last paragraph on page 3.4-18 of the Draft EIR is amended to state:

Eight prehistoric archaeological sites have been recorded on the main campus. None has been formally evaluated for listing in the CRHR. Three habitation sites have the potential to yield important information and may be eligible for listing in the CRHR. The remaining five sites are recorded as lithic scatters. These eight sites have been assumed eligible for listing in the CRHR, however for management and preservation purposes until their significance can be documented through archaeological testing.

Mitigation Measure 3.4-1 on pages 3.4-19 and 3.4-20 of the Draft EIR is amended as follows:

**Mitigation Measure 3.4-1: Identify and Protect Unknown Archaeological Resources**

As early as possible in the project planning process for individual projects under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for archaeological resources. UC Santa Cruz shall determine the potential for the proposed project to result in cultural resource impacts, based on the extent of ground disturbance and site modifications anticipated for the proposed project. UC Santa Cruz shall also review confidential resource records to determine whether complete intensive archaeological survey utilizing current techniques and practices, including consultation with a culturally-affiliated Native American tribe, has been performed on the site and whether any previously recorded cultural resources are present. UC Santa Cruz shall implement the following steps to identify and protect archaeological resources that may be present in the project’s area of effects:

1. For project sites that have not been subject to a prior complete intensive archaeological survey, UC Santa Cruz shall ensure that a complete intensive surface survey is conducted by a qualified archaeologist, who meets the Secretary of the Interior’s Professional Qualification Standards in Archaeology, once the area of ground disturbance has been identified and prior to soil disturbing activities. Additionally, UC Santa Cruz shall notify the Amah Mutsun Tribal Band of the area not subject to an intensive survey and a tribal representative shall be invited to participate. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System. In the event of a find within the area of potential effects, UC Santa Cruz shall consult with a qualified archaeologist to design and conduct an archaeological subsurface investigation and/or a construction monitoring plan of the project site to ascertain the extent of the deposit relative to the project’s area of potential effects, to ensure that impacts to potential buried resources are avoided. If the qualified archaeologist determines that the archaeological material is Native American in origin and the qualified archaeologist assigned to the surveying and monitoring process is not an authorized representative of the Amah Mutsun Tribal Band, UC Santa Cruz and/or archaeologist shall ~~notify~~consult with the Amah Mutsun Tribal Band in the process of designing a survey and monitoring program ~~the appropriate Native American tribe and extend an invitation for monitoring~~.
2. Where native soils will be disturbed, UC Santa Cruz shall require contractor crews to attend an informal training session provided by UC Santa Cruz prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify UC Santa Cruz if any are found. In the event of a discovery, UC Santa Cruz shall implement item (4), below.
3. If it is determined that ~~the~~ ~~resource~~ a known archaeological site extends into the project’s area of potential effects, UC Santa Cruz shall ensure that the ~~resource~~ site is evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines Section 15064.4. This evaluation may require additional research, including subsurface testing, or avoidance measures, as described in item (5) below. If the archaeological resources is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of evaluating the significance and eligibility of the resource. If the resource does not qualify, or if no resource is present within the project’s area of effect, this will be reported in the environmental document and no further mitigation will be required unless there is a discovery during construction.
4. If an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. UC Santa Cruz shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. If the archeological resource is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of planning a survey program and evaluating the significance and eligibility of the resource. Mitigation Measure 3.4-1(2) and (3) shall also be implemented.
5. If archaeological material within the project’s area of effects is determined to qualify as a historical resource or a unique archaeological resource (as defined by CEQA), UC Santa Cruz shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or ~~other means~~ more substantial modifications where feasible that will permit avoidance or substantial preservation in place of the resource. If the archeological resource is determined to be Native American in origin, and the qualified archaeologist performing the evaluation is not an authorized representative of the Amah Mutsun Tribal Band, the archaeologist shall consult and partner with the Amah Mutsun Tribal Band in the process of planning a survey program and evaluating the significance and eligibility of the resource. If avoidance or substantial preservation in place is not possible, UC Santa Cruz shall implement Mitigation Measure 3.4-1(6).
6. If avoidance or preservation in place is not possible for an archaeological site that has been determined to meet CEQA significance criteria, before the property is excavated, damaged, or destroyed, UC Santa Cruz shall retain a qualified archaeologist who meets the Secretary of the Interior’s Professional Qualification Standards in Archaeology. UC Santa Cruz is aware that the Amah Mutsun Tribal Band (AMTB) maintains a staff of registered professional archaeologists and tribal monitors who engage in cultural resource management through the tribe’s nonprofit organization, the Amah Mutsun Land Trust (AMLT). When selecting a qualified archaeologist for work that relates to archaeological resources on campus lands that are determined to be Native American in origin, UC Santa Cruz will include AMTB/AMLT in notifications regarding forthcoming opportunities and contracts. The qualified archaeologist, in consultation with UC Santa Cruz and Native American tribes as applicable, shall prepare a research design, and plan and conduct archaeological data recovery and monitoring that will capture those categories of data for which the site is significant. UC Santa Cruz shall also ensure that appropriate technical analyses are performed, and a full written report prepared and filed with the California Historical Resources Information System; UC Santa Cruz shall also provide for the permanent curation of recovered materials.

Impact 3.4-2, beginning on page 3.4-20 of the Draft EIR is revised as follows:

Impact 3.4-2: Substantial Adverse Change in the Significance of a Tribal Cultural Resource

Future development associated with the 2021 LRDP would involve land development activities that could cause a substantial adverse change in the significance of a tribal cultural resource. ~~Although no specific tribal cultural resources have been identified, there are~~ The eight prehistoric archaeological sites that currently exist on the main residential campus have been identified as tribal cultural resources, and ground-disturbing construction activities could unearth previously unrecorded resources. This impact would be **potentially significant**.

As described previously, UC Santa Cruz sent notification letters to six tribes February 22, 2020 per PRC 21080.3.1 (b)(1). UC Santa Cruz had a verbal communication with Mr. Valentin Lopez, Chairperson of the Amah Mutsun Tribal Band. ~~Chairman Lopez did not identify any specific resources they would consider eligible to be tribal cultural resources but requested consultation with UC Santa Cruz.~~ The Amah Mutsun Tribal Band identified the eight prehistoric archaeological sites on the UC Santa Cruz main residential campus as tribal cultural resources.

~~Although no tribal cultural resources, as defined in PRC Section 21074, have been documented on the main residential campus or the Westside Research Park,~~ Additionally, the campus is located in a region where significant resources have been documented. The NAHC Sacred Lands database search revealed that Native American cultural sites (i.e., sites that have either not been evaluated or do not meet the definition of a tribal cultural resource under PRC Section 21074) have been previously documented within both the UC Santa Cruz main residential campus and the Westside Research Park site. While none of the envisioned development areas are located on sites of known prehistoric archaeological materials, there remains a potential that unrecorded prehistoric archaeological resources that may meet the definition of tribal cultural resources could be unearthed or otherwise discovered during ground-disturbing construction activities. Therefore, this impact would be **potentially significant**.

Beginning on page 3.4-22, Mitigation Measure 3.4-4a has been clarified as follows:

**Mitigation Measure 3.4-4a: Protect Cowell Lime Works Historic District**

During project-specific environmental review of development under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for historic buildings and structures as early as possible. If the project is located within or adjacent to the Cowell Lime Works Historic District, UC Santa Cruz shall take the following measures into account in project design to preserve the historic visual quality of the historic district:

* ~~New buildings or structures within 500 feet of the district boundaries shall be subject to design review by the Design Advisory Board, to ensure that design is compatible with the historic aspect of the district and its buildings with respect to scale, massing, and materials, such that the rural historic visual character of the district is maintained.~~
* To the greatest extent feasible, a buffer of at least 200 feet shall be maintained between the boundaries of the Cowell Lime Works Historic District and new building development that would be visible against the backdrop of historic buildings from significant campus viewpoints.
* Any development, including new buildings, structures, access improvements, within a~~the~~ 500-foot buffer or within the district boundaries shall be evaluated by an architectural historian prior to implementation and conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).
* New buildings or structures within 500 feet of the district boundaries shall additionally be subject to design review by the Design Advisory Board, to ensure that design does not interfere with the historic aspect of the district and its buildings with respect to scale, massing, and materials, such that the rural historic visual character of the district is maintained.

Mitigation Measure 3.4-4b, on page 3.4-23 of the Draft EIR is amended to state:

**Mitigation Measure 3.4-4b: Protect the Potential Campus Core Discontiguous Historic District**

During project-specific environmental review of development under the 2021 LRDP, UC Santa Cruz shall define the project’s area of effect for historic buildings and structures as early as possible. For projects affecting any building identified as a potential contributor to the potential Campus Core discontiguous historic district, UC Santa Cruz shall implement the following procedures:

* For all buildings located within the potential Campus Core discontiguous historic district, projects involving interior alterations or routine maintenance work do not need review by an architectural historian.
* For minor exterior repairs that do not alter the visual appearance of the building-such as caused by water damage-to buildings that could be contributors to the potential Campus Core discontiguous historic district, if the repairs meet the “Secretary of the Interior's Standards for the Treatment of Historic Properties,” then review by an architectural historian is not required. Buildings that contribute to the potential Campus Core discontiguous historic district are Classroom Unit 1, Cowell College, Cowell Student Health Center (original construction), Crown College, East Field House, Hahn Student Services, Jack Baskin Engineering Building, Kerr Hall, Kresge College, McHenry Library, Merrill College, Nat Sci 2 Annex, Nat Sci 2 Main Building, Porter College, Stevenson College, Student Music East-KZSC Radio Station, Theater Arts, Thimann Laboratories, Thimann Lecture Hall, Thimann Receiving Building, and the University House.
* For larger exterior repairs, building additions, or demolition of buildings that could be contributors to the potential Campus Core discontiguous historic district, UC Santa Cruz shall retain a qualified architectural historian to determine if the building, or group of buildings, could be contributors ~~to the potential historic district~~. If large repairs, alterations, or demolitions are proposed at Cowell, Crown, Merrill, Porter, or Stevenson colleges, those groups of buildings shall be evaluated for their potential to comprise separate, individual sub-districts. (Note: Kresge College is not included in this group because Kresge College has been previously evaluated at a district level; due to lack of integrity, the college is not eligible for listing on the National Register of Historic Places [NRHP] or California Register of Historical Resources [CRHR.])
* The qualified architectural historian shall record the buildings on the appropriate California Department of Parks and Recreation DPR 523 forms and evaluate the buildings against NRHP and CRHR significance criteria. If the building or group of buildings does not meet the CEQA criteria for a historical resource, no further mitigation is required. If the buildings qualify as a historic resource, the architectural historian and UC Santa Cruz shall consult to consider measures that would enable the project to avoid direct or indirect impacts to the potential Campus Core discontiguous historic district or contributing building.

If the project cannot avoid modifications to the building, UC Santa Cruz shall ensure that documentation and treatment shall be carried out by a qualified architectural historian, as follows:

a) If the building or structure can be preserved on-site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).

b) If a significant historic building or structure is proposed for major alteration or renovation, or to be moved and/or demolished, UC Santa Cruz shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited in the McHenry Library Special Collections, and with the California Historical Resources Information System. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site-specific and comparative archival research, and oral history collection as appropriate.

c) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (b) and, when it is physically and financially feasible, it shall be moved and preserved or reused.

d) If, in the opinion of the qualified architectural historian, the nature and significance of the building is such that its demolition or destruction cannot be fully mitigated through documentation, UC Santa Cruz shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications, where feasible, to the proposed project that would limit the degree of modification or allow the structure to be preserved intact. These could include project redesign, relocation, or abandonment. If no such measures are feasible, the historical building shall be documented as described in item (b).

* For new infill construction within the potential historic district that does not involve building demolition:

a) Infill projects outside Cowell, Crown, Merrill, Porter, or Stevenson colleges would not affect the potential college sub-districts or the potential Campus Core discontiguous historic district, and do not need review by an architectural historian; and

b) Infill projects within Cowell, Crown, Merrill, Porter, or Stevenson College will require review by an architectural historian for elements such as form, massing, and scale, to ensure visual compatibility with the college, and the review shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).

## Section 3.5, Biological Resources

The description of Coastal Prairie provided in Section 3.5.2, “Environmental Setting” on page 3.5-11 of the Draft EIR is amended as follows:

Coastal Prairie

The LRDP area contains approximately 107.9 acres of coastal prairie habitat, which is considered a sensitive natural community (Figure 3.5-2, Table 3.5-1). This habitat is present within portions of north and lower campus. Coastal prairie habitat is similar to other grassland habitat within the LRDP area, but with greater incidence of native grass species, including California oat grass and western panic grass (*Panicum acuminatum*). Coastal prairie habitat also supports a diverse assemblage of native forbs, including coyote thistle (*Eryngium armatum*), wild hyacinth (*Triteleia hyacinthina*), dwarf brodiaea (*Brodiaea terrestris*), and yampah (*Perideridia kelloggii*). Due to the coarse scale of vegetation mapping, some areas of the LRDP area mapped as grassland as shown in Figure 3.5-2, may meet the alliance requirements to be classified as coastal prairie.

Coastal prairie habitat in the southwest corner (west of Empire Grade) of the lower campus portion of the LRDP area and in the Marshall Fields complex in north campus is characterized by Mima mound habitat. Mima mounds are hillocks typically found in grassland habitat, the origin of which has been historically debated. Recent modelling studies support the “fossorial rodent hypothesis,” which suggests that Mima mounds are built by burrowing mammals (e.g., pocket gophers) over time to provide refuge from seasonally saturated soils or that they are the result of a combination of the biotic factors and abiotic factors, such as vegetation/erosion interactions (Cramer and Barger 2014, Gabet et al. 2014).

The last row of Table 3.5-3 on page 3.5-21 of the Draft EIR is revised as follows:

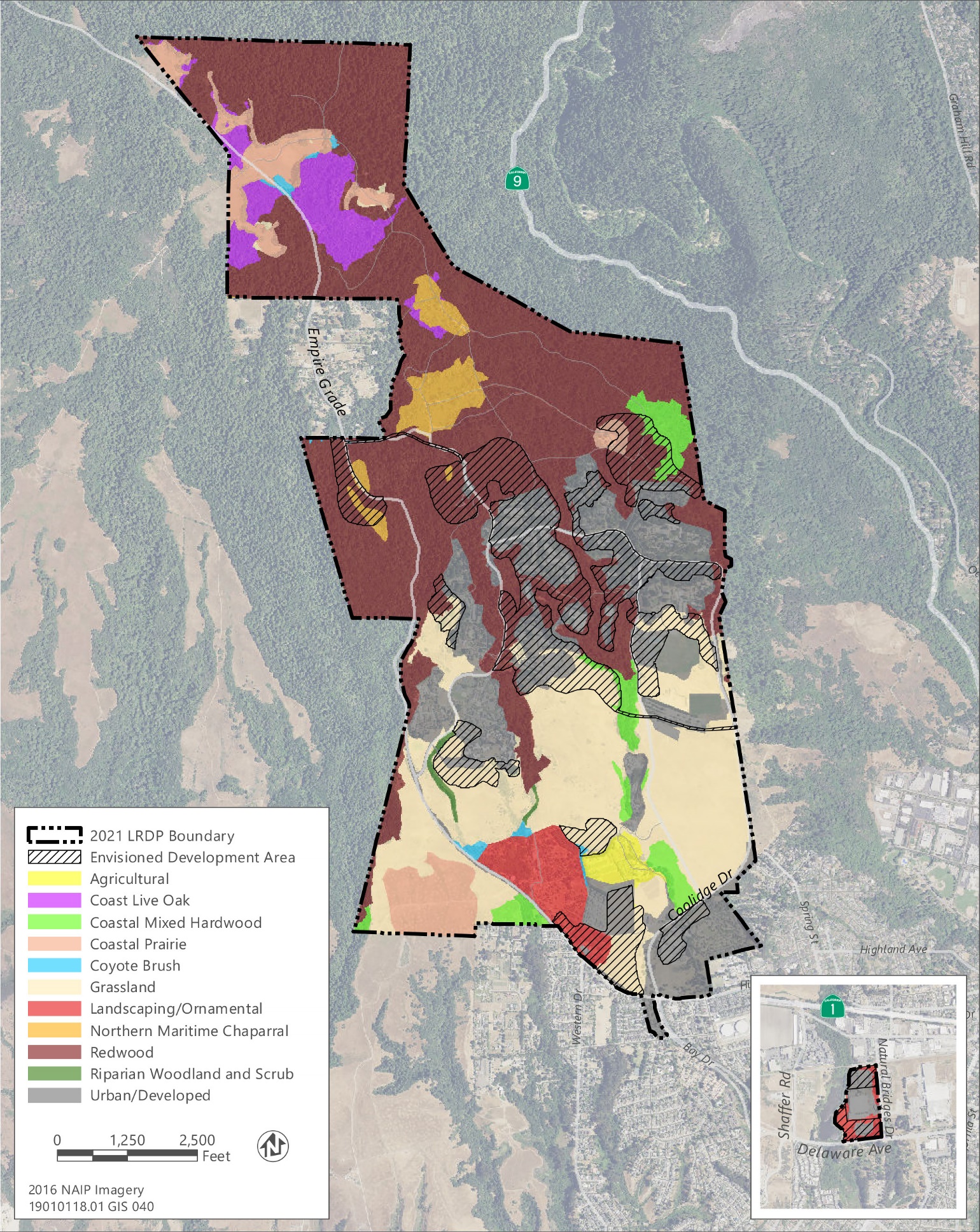
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bank swallow  *Riparia riparia* | – | ST | Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. | *Not expected to occur.* There is one known historic (1950) occurrence of bank swallow approximately 1 mile east of the LRDP area, potentially associated with the San Lorenzo River (CNDDB 2020). However, bank swallows are considered extirpated from Santa Cruz County (Remsen 1978). |

The first paragraph on page 3.5-35 of the Draft EIR is revised as follows:

Invasive Plant Species, Noxious Weeds, and Plant Pathogens

An invasive plant is one that is not native to a region, but rather is introduced, and tends to crowd out native vegetation and thereby adversely affect the wildlife that feeds on it. There are many invasive plant species in Santa Cruz County, and they occur throughout several different habitat types (Calflora 2020). Noxious weeds are plants that injure or cause damage to crops, livestock, or other agriculture and are designated by the US Department of Agriculture in accordance with the Plant Protection Act of 2000. Aggressive noxious weeds such as Scotch broom (*Cytisus scoparius*) and French broom (*Genista monspessulana*) can invade grasslands and exclude native grassland species. Invasive plant species such as English ivy (*Hedera helix*), Acacia (*Acacia* spp.), blue gum (*Eucalyptus globulus*), Pampas grass (*Cortaderia jubata*), giant reed (*Arundo donax*), and Himalayan blackberry (*Rubus armeniacus*) can invade forest or riparian habitats and exclude native understory species. Additionally, plant pathogens in the genus *Phytophthora*, including sudden oak death (*Phytophthora ramorum*) and *Phytophthora tentaculata*, pose a threat to native plant species. Sudden oak death ~~which is caused by the pathogen~~ *~~Phytophthora ramorum~~*~~,~~ is a forest disease that results in widespread dieback of oak trees in California and Oregon forests. Sudden oak death has been documented in many trees in Santa Cruz County, including one tree within the LRDP area (California Oak Mortality Task Force 2019).

Figure 3.5-6 on page 3.5-37 of the Draft EIR was amended to remove depiction of a North Loop Road that is not part of the 2021 LRDP.



Source: data downloaded from the Bay Area Open Space Council in 2019; adapted by Ascent Environmental in 2020

[REVISED] Figure 3.5-6 Envisioned Development Areas Overlay on Vegetation Communities in the LRDP Area

Mitigation Measure 3.5-1a, as presented on page 3.5-39 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-1a: Conduct Project-Level Biological Reconnaissance Sensitive Species and Habitats Survey**

During the early planning stages of projects under the 2021 LRDP, the following measure shall apply:

* A data review and biological reconnaissance survey will be conducted within a particular project site by a qualified biologist prior to project activities (e.g., ground disturbance, vegetation removal, staging, construction) and will be conducted no more than one year prior to project implementation. The qualified biologist must be familiar with the life histories and ecology of species in Santa Cruz County and must have experience conducting field surveys of relevant species or resources, including protocol-level surveys for individual species, if applicable. The data reviewed will include the biological resources setting, species tables, and habitat information in this EIR. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDB, CNPS Inventory of Rare and Endangered Plants of California, consultation with appropriate campus experts (e.g. Campus Natural Reserve Manager) to obtain information on biological resources that may not be captured in other databases, relevant Biogeographic Information and Observation System (BIOS) queries, and relevant general and regional plans. BIOS is a web-based system that enables the management and visualization of biogeographic data collected by CDFW and partner organizations.
* The qualified biologist will assess the habitat suitability of the project site for all special-status plant and wildlife species as well as sensitive habitats identified as having potential to occur in the LRDP area (refer to Section 3.5.2, "Environmental Setting"), and will identify any wildlife nursery sites (e.g., heron rookeries, bat maternity roosts, monarch butterfly overwintering colonies, deer fawning areas) within the LRDP area and potential ESHAs within project sites that fall within the coastal zone. The qualified biologist will also conduct a preliminary delineation of sensitive habitats (e.g., wetlands, streams, seeps, sensitive natural communities, ESHAs) within the project site. The biologist will provide a report to UC Santa Cruz with evidence to support a conclusion as to whether special-status species and sensitive habitats are present or are likely to occur within the project site.
* If the reconnaissance survey identifies no potential for special-status plant, wildlife species, or sensitive habitats to occur, UC Santa Cruz will not be required to apply any additional mitigation measures under Impact 3.5-1 through 3.5-4.
* If the qualified biologist determines that there is potential for special-status species or sensitive habitats to be present within the project site, the appropriate biological mitigation measures, identified herein shall be implemented.

Mitigation Measure 3.5-1b, as presented on page 3.9-40 of the Draft EIR is amended to state:

**Mitigation Measure 3.5-1b: Conduct Special-Status Plant Surveys and Implement Avoidance Measures and Mitigation**

If it is determined through implementation of Mitigation Measure 3.5-1a that habitat suitable for special-status plant species is present within a particular project site, the following measures shall be implemented:

* Prior to implementation of project activities and during the blooming period for the special-status plant species with potential to occur in a particular project site, as determined during implementation of Mitigation Measure 3.5-1a, a qualified botanist will conduct protocol-level surveys for special-status plants within the project site following survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts on Special-Status Native Plant Populations and Natural Communities* (CDFW 2018 or most recent version). The qualified botanist will: 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the Santa Cruz region, including special-status plants and sensitive natural communities, 3) have experience conducting floristic botanical field surveys as described in CDFW 2018, 4) be familiar with the *California Manual of Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and 5) be familiar with federal and state statutes and regulations related to plants and plant collecting.
* If special-status plants are not found, the botanist will document the findings in a report to UC Santa Cruz, and no further mitigation will be required.
* If special-status plant species are found, the plant will be avoided completely, if feasible (i.e., project objectives can still be met). This may include establishing a no-disturbance buffer around the plants and demarcation of this buffer by a qualified biologist or botanist using flagging or high-visibility construction fencing. The size of the buffer will be determined by the qualified biologist or botanist and will be large enough to avoid direct or indirect impacts on the plant

The first paragraph of Impact 3.5-2, beginning on page 3.5-42 of the Draft EIR is revised as follows:

Table 3.5-3 provides a list of the special-status wildlife species that may occur or are known to occur within the LRDP area. Nineteen special-status wildlife species have been previously documented in the LRDP area: California giant salamander (*Dicamptodon ensatus*), California red-legged frog, foothill yellow-legged frog (*Rana boylii*), Santa Cruz black salamander (*Aneides niger*), southwestern pond turtle (*Actinemys pallida*), Bryant’s savannah sparrow (*Passerculus sandwichensis alaudinus*), burrowing owl (*Athene cunicularia*), olive-sided flycatcher (*Contopus cooperi*), white-tailed kite (*Elanus leucurus*), Dolloff cave spider (*Meta dolloff*), Empire Cave amphipod (*Stygobromus imperialis*), Empire Cave pseudoscorpion (*Fissilicreagris imperialis*), MacKenzie’s Cave amphipod (*Stygobromus mackenziei*), monarch butterfly - California overwintering population (*Danaus plexippus* pop. 1), Santa Cruz telemid spider (*Telema* sp.), Ohlone tiger beetle, American badger (*Taxidea taxus*), mountain lion (*Puma concolor*), and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), (Jones, pers. comm., 2020, CNDDB 2020, UC Santa Cruz 2005a, Santa Cruz Puma Project 2020).

The discussion of California red-legged frog on pages 3.5-43 and 3.5-44 of the Draft EIR has been amended to state:

California Red-Legged Frog

California red-legged frog is listed as threatened under ESA and is a CDFW species of special concern. California red-legged frog occurs along the Coast Ranges from Mendocino County south to Los Angeles County, and in portions of the Sierra Nevada and Cascade Ranges (CDFW 2008). This species is most abundant within the inner Coast Ranges from Point Reyes, Marin County to southern Santa Barbara County, and within eastern Contra Costa and Alameda Counties (Thomson et al. 2016). Habitat suitable for California red-legged frog is typically characterized by aquatic breeding area (e.g., pools within streams and creeks, ponds, marshes, stock ponds) within a matrix of riparian and upland refugia and dispersal habitat (USFWS 2002b). Adult frogs are nearly always associated with permanent bodies of water (Amphibiaweb 2020). During rainy weather, California red-legged frogs may move overland through upland habitat; however, in general, the species is rarely observed far from water (USFWS 2002b).

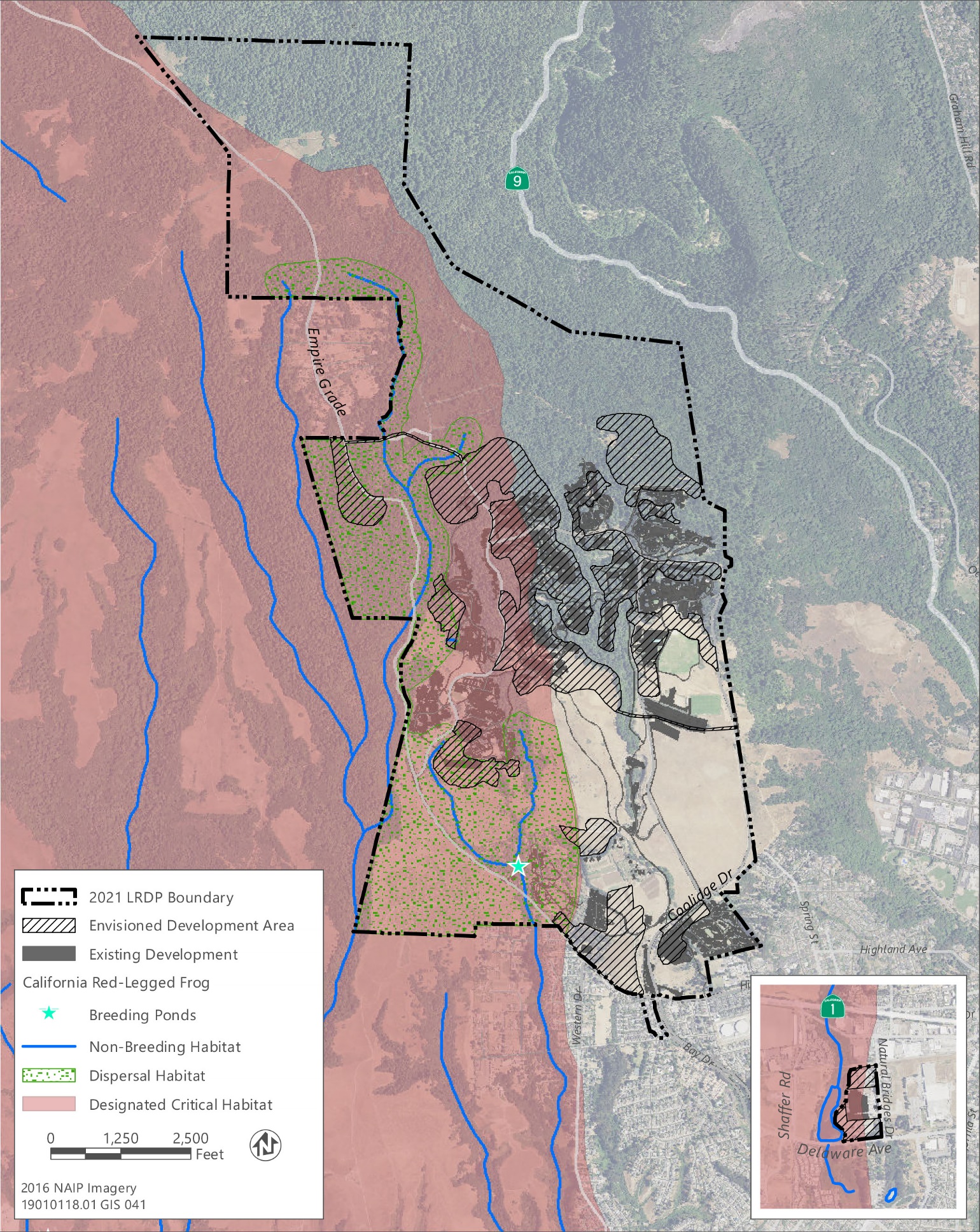
California red-legged frog is known to occur within numerous locations in the southwestern portion of the LRDP area (e.g., within Moore Creek), and is known to breed in the Arboretum Pond (Biosearch Environmental Consulting 2020, CNDDB 2020). No other breeding habitat is known within the LRDP area (Biosearch Environmental Consulting 2020). There are several known occurrences of California red-legged frog within 1 mile of the LRDP area, and the nearest breeding pond outside of the LRDP area is in Upper Dairy Gulch at the Wilder Sand Quarry, approximately 1.2 miles southwest of the LRDP area (Biosearch Environmental Consulting 2020).

Adult and juvenile California red-legged frogs are known to travel through upland habitat (e.g., riparian, woodland, grassland) to move between breeding and nonbreeding sites (e.g., other ponds, deep pools in streams, moist and cool riparian understory, burrows) for access to upland refugia and foraging habitat, or to disperse to new breeding locations. The LRDP area contains upland refugia and dispersal habitat potentially suitable for the species within grasslands, coastal prairie, redwood forest, coastal mixed hardwood, coast oak woodland, northern maritime and shrub, riparian woodland and scrub, and some urban/developed and landscaped areas that contain ruderal grassland (Biosearch Environmental Consulting 2020). Additionally, the LRDP area contains approximately 970 acres of federally designated critical habitat for California red-legged frog (Figure 3.5-4).

Studies have demonstrated that California red-legged frogs remain very close to breeding ponds during the nonbreeding season and typically do not move more than approximately 500 feet into upland refugia habitats (Bulger et al. 2003; Fellers and Kleeman 2007). All known California red-legged frog observations on the UC Santa Cruz campus have been within 300 feet of aquatic habitats (Biosearch Environmental Consulting 2020). However, during migration to other suitable ponds in the region, California red-legged frogs may ~~travel~~ disperse long distances from aquatic habitat (i.e., greater than 1,600 feet) and typically travel in straight lines irrespective of vegetation types and have been documented to move over 1.7 miles between aquatic habitat sites (Bulger et al. 2003). California red-legged frogs breeding within the Arboretum Pond are expected to migrate to aquatic habitat suitable for the species within and outside of the LRDP area because the Arboretum Pond is not perennial (Biosearch Environmental Consulting 2020). California red-legged frog migratory and dispersal movements from the Arboretum Pond to other aquatic habitats are expected to be primarily along Moore Creek both upstream and downstream, and overland to the southwest, west or northwest to aquatic habitats in the Wilder Creek watershed (Biosearch Environmental Consulting 2020, Figure 3.5-7). Movements to the east of the Arboretum pond are not as likely to occur ~~likely would not occur~~ due to the lack of aquatic habitat suitable for California red-legged frog in Jordan Gulch, the City of Santa Cruz, and the lower San Lorenzo River watershed, and the presence of developed areas which would likely impede movement (Biosearch Environmental Consulting 2020, Figure 3.5-7). Additionally, developed areas of the UC Santa Cruz campus contain numerous potential barriers to overland movements (e.g., buildings, retaining walls, decorative walls, parking lots, roads, paths), and while frogs may be able to cross roads, paths, and parking lots, the cumulative barriers and hazards presented by developed areas reduce the likelihood that California red-legged frogs would be present within these areas (Biosearch Environmental Consulting 2020).

Development of new land uses (e.g., buildings, impervious surfaces) under the 2021 LRDP is not planned within the UC Santa Cruz Arboretum and Botanic Garden, or within 500 feet of the Arboretum Pond, so project implementation is not expected to result in loss of breeding habitat for California red-legged frogs or impacts on individual California red-legged frogs while breeding in the Arboretum Pond. However, 2021 LRDP development is planned within grassland, redwood, and northern maritime chaparral habitats north and northwest of the Arboretum Pond near Empire Grade in lower and central campus, in areas that are likely used by California red-legged frogs for upland migration, dispersal, and refuge (Figure 3.5-6, Figure 3.5-7). Implementation of projects under the 2021 LRDP would include ground disturbance, vegetation removal, and land development in several habitats that may provide upland refugia and dispersal habitat suitable for California red-legged frog as described above (Table 3.5-4). These activities could result in loss of or injury to California red-legged frogs if present within upland refugia ~~migration~~ or dispersal habitat within the project site, as well as loss of habitat for the species. This would be a **potentially significant** impact.

Figure 3.5-7 on page 3.5-45 of the Draft EIR was amended to include long-distance dispersal habitat and to remove depiction of a North Loop Road that is not part of the 2021 LRDP.



Source: Data received from Biosearch Environmental Consulting in 2020

[REVISED] Figure 3.5-7 Envisioned Development Areas Overlay of California Red-Legged Frog Potential Sensitive Habitat in the LRDP Area

Mitigation Measure 3.5-2a on pages 3.5-46 and 3.5-47 of the Draft EIR is revised as follows:

**Mitigation Measure 3.5-2a: Conduct Site-Specific Habitat Suitability Analysis for California Red-Legged Frog, Obtain Incidental Take Authorization through Consultation with USFWS, Implement Minimization Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that aquatic or upland habitat determined to be suitable for California red-legged frog migration, dispersal, foraging, or refuge is present within a particular project site ~~(Biosearch Environmental Consulting 2020, Figure 3.5-7)~~, the following measures shall be implemented during the planning stages for each individual project under the 2021 LRDP:

* A qualified biologist will conduct a site-specific habitat suitability verification analysis to confirm the likelihood of the species to be present. To be qualified, the biologist will: 1) be knowledgeable in California red-legged frog life history and ecology, 2) be able to correctly identify California red-legged frogs and habitats, 3) have experience conducting field surveys of relevant resources, 4) be knowledgeable about state and federal laws regarding the protection of special-status species, and 5) have experience using CDFW’s CNDDB. The habitat assessment will include, but will not be limited to:
* Identification or verification of the vegetation communities present in the project site.
* Consideration of known occurrences within the LRDP area;
* Description of the project, including proposed project construction activities;
* Analysis of the type and likelihood of impacts on California red-legged frog as a result of project implementation; and
* Potential project modifications or additional measures that may avoid and minimize mortality, injury, and disturbance of California red-legged frog and habitat.
* Results of the site-specific habitat suitability verification analysis will be submitted to UC Santa Cruz for review and consideration.
* Based on the results of the site-specific habitat suitability verification analysis, a qualified biologist will determine if any of the following would occur: injury or mortality of California red-legged frog; or disturbance of individuals or adverse effects on California red-legged frog breeding, upland refugia, or dispersal habitat.
* If a qualified biologist determines that the individual project would have no substantial adverse effect on red-legged frog or its habitat and would not result in any injury or mortality, implementation of that individual project may proceed.
* For those areas where adverse modification of critical habitat or disturbance, injury, or mortality of California red-legged frog cannot be avoided, UC Santa Cruz shall, in consultation with USFWS, implement impact minimization for construction-related impacts (e.g., installation of exclusion fencing around the project construction site) and compensatory actions for habitat impacts, including purchase of credits at a conservation bank or creation of additional habitat at a minimum 1:1 mitigation ratio, as well as adaptive management strategies to ensure long-term conservation of mitigation lands. No actions that could adversely affect California red-legged frog will be allowed if adverse effects would result, unless consultation with USFWS is completed and additional measures are implemented.

To the extent the project may result in “take” of the species, UC Santa Cruz ~~may~~shall pursue incidental take coverage by either pursuing consultation and biological opinion under Section 7 of the federal ESA (where there is some federal nexus) or by developing an HCP, which would require authorization by USFWS under Section 10 of the ESA. Such an HCP could provide long-term conservation and incidental take coverage for species listed under ESA with potential to occur in the LRDP area: California red-legged frog and Ohlone tiger beetle. Typically, HCPs include the following:

* Measures that UC Santa Cruz will undertake to monitor, minimize, and mitigate for such impacts, the funding available to implement such measures, and the procedures to deal with unforeseen or extraordinary circumstances.
* Alternative actions to the taking analyzed by UC Santa Cruz, and the reasons why the alternatives were not adopted.
* Biological goals and objectives, which would define the expected biological outcome for each species covered by the HCP.
* Adaptive management, which includes methods for addressing uncertainty and also monitoring and feedback to biological goals and objectives.
* Monitoring for compliance, effectiveness, and effects.
* Permit duration which is determined by the time-span of the project and designed to provide the time needed to achieve biological goals and address biological uncertainty.

Mitigation Measure 3.5-2e on pages 3.5-51 and 3.5-52 of the Draft EIR is revised as follows:

**Mitigation Measure 3.5-2e: Conduct Protocol-Level Surveys for Burrowing Owl, Implement Avoidance Measures, and Compensate for Loss of Occupied Burrows**

If it is determined through implementation of Mitigation Measure 3.5-1a that habitat suitable for burrowing owl is present within a project site, the following measures shall be implemented prior to and during construction of a particular project under the 2021 LRDP:

* A qualified biologist will conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of habitat suitable for the species identified during the reconnaissance-level survey (e.g., ruderal grassland, successional grassland, scrub habitat with sparse shrub cover) on and within 1,500 feet of the project site. Surveys will be conducted before the start of project activities and in accordance with Appendix D of the *CDFW Staff Report on Burrowing Owl Mitigation* (CDFW 2012, or most current version) (CDFW Staff Report).
* If no occupied burrows are found, the qualified biologist will submit a report documenting the survey methods and results to UC Santa Cruz, and no further mitigation will be required.
* If an active burrow is found within 1,500 feet of pending construction activities that would occur during the nonbreeding season (September 1 through January 31), UC Santa Cruz shall establish and maintain a minimum protection buffer of ~~100~~ 165 feet around the occupied burrow throughout construction. The protection buffer may be adjusted if, in consultation with CDFW, a qualified biologist determines that an alternative buffer will not disturb burrowing owl use of the burrow because of particular site features or other buffering measures. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of the CDFW Staff Report. Burrowing owls will not be excluded from occupied burrows until the project burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a compensatory habitat mitigation plan (see below).
* If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a protective buffer at a minimum of ~~100~~ 650 feet unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer may be adjusted depending on the time of year and level of disturbance as outlined in the CDFW Staff Report. The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented so that burrowing owls are not adversely affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW Staff Report.
* If burrowing owls are evicted from burrows and the burrows are destroyed by implementation of project activities, UC Santa Cruz will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW Staff Report, which states that permanent impacts on nesting, occupied and satellite burrows, and burrowing owl habitat (i.e., grassland habitat with suitable burrows) will be mitigated such that habitat acreage and number of burrows are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. UC Santa Cruz will retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:
* Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species throughout its range.
* If feasible, mitigation lands will be provided adjacent or proximate to the project site so that displaced owls can relocate with reduced risk of injury or mortality. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient habitat to support displaced owls that may be preserved in perpetuity.
* If habitat suitable for burrowing owl is not available for conservation adjacent or proximate to the project site, mitigation lands can be secured off-site and will aim to consolidate and enlarge conservation areas outside of planned development areas and within foraging distance of other conservation lands. Mitigation may be also accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. Alternative mitigation sites and acreages may also be determined in consultation with CDFW.
* If burrowing owl habitat mitigation is completed through permittee-responsible conservation lands, the mitigation plan will include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures (e.g., measures required if performance standards and success criteria are not met). Success will be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the CDFW Staff Report, will include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Mitigation Measure 3.5-2g on page 3.5-55 of the Draft EIR is revised as follows:

**Mitigation Measure 3.5-2g: Limit Human Disturbance of Cave Ecosystems**

* UC Santa Cruz shall continue to limit visitation of caves on campus and discourage activities by members of the public that could jeopardize the physical integrity, condition, or scientific value of the caves, through exclusion of access to the caves with bat-friendly fencing (i.e., fencing that allows unimpeded ingress and egress by bats), appropriate signage and educational literature, Campus Natural Reserve website information, or other appropriate measures.

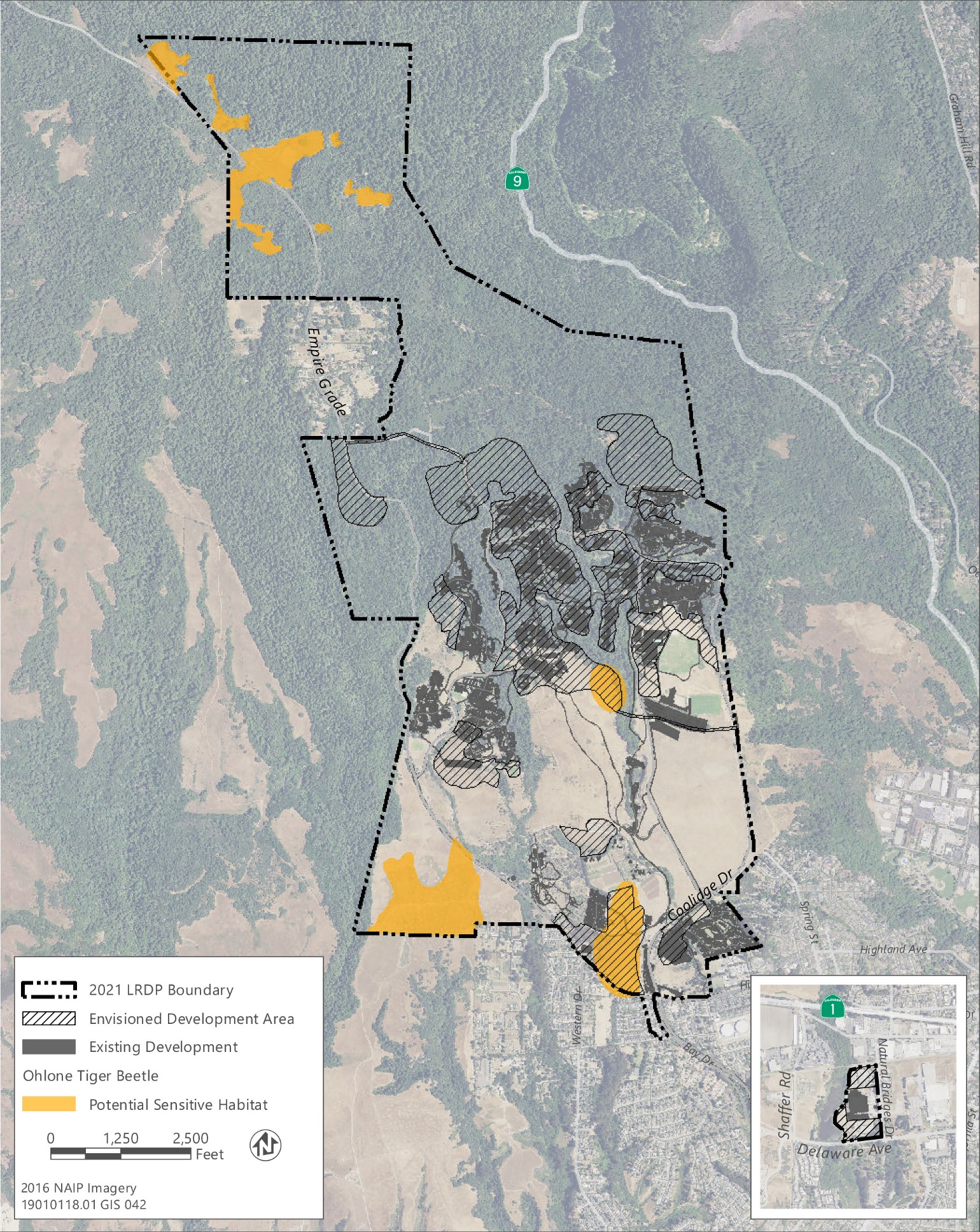
Mitigation Measure 3.5-2h on page 3.5-56 of the Draft EIR is revised as follows:

**Mitigation Measure 3.5-2h: Conduct Focused Surveys for Monarch Overwintering Colonies and Implement Avoidance Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that a monarch overwintering colony or suitable overwintering habitat is present within a particular project site, the following measures shall be implemented:

* To minimize the potential for loss of monarch overwintering colonies, project activities that include vegetation removal within suitable overwintering habitat (e.g., coniferous forest, eucalyptus forest) will be conducted from April through September to avoid the overwintering season (October through March), if feasible. If project activities are conducted outside of the overwintering season, no further mitigation will be required.
* Within 14 days before the onset of project activities that include vegetation removal between October 1st and March 31st, a qualified biologist familiar with monarchs and monarch overwintering habitat will conduct focused surveys for monarch colonies within habitat suitable for the species in the project site and will identify any colonies found within the project site.
* Monarch overwintering colonies that are identified within a project site will be demarcated with flagging or high-visibility construction fencing to prevent removal of the stand of trees containing the overwintering colony and encroachment by heavy machinery, vehicles, or personnel. Monarch overwintering colonies shall be protected throughout the duration of their presence within a project site. ~~Removal of the tree or stand of trees that contains the overwintering colony will not occur until the monarchs have left the area, as determined by a qualified biologist.~~
* If modification or removal of a stand ~~that contains an~~ where overwintering monarchs have been identified ~~overwintering colony~~ is required for project implementation, and the project cannot be redesigned to avoid modification or removal of the stand, ~~vegetation management purposes,~~ then UC Santa Cruz will prepare and implement a site-specific plan for the stand with the goal of maintaining habitat function for the monarch overwintering colony, following ~~feasible~~ recommendations from *Protecting California’s Butterfly Groves Management Guidelines for Monarch Butterfly Overwintering Habitat* (Xerces 2017). Examples of management strategies that could be considered include:
* remove or trim hazard trees;
* selectively remove or trim of trees to create a heterogeneous habitat that provides access to sunlight and shade for monarchs;
* maintain suitable wind protection in the stand; and
* replace removed trees with native trees in strategic locations to provide additional wind protection.

Figure 3.5-8 on page 3.5-57 of the Draft EIR was amended to remove depiction of a North Loop Road that is not part of the 2021 LRDP.



Source: Data received from Richard A. Arnold, Ph.D. in 2020

[REVISED] Figure 3.5-8 Envisioned Development Areas Overlay of Ohlone Tiger Beetle Potential Sensitive Habitat in the LRDP Area

Mitigation Measure 3.5-2k on page 3.5-61 of the Draft EIR is revised as follows:

**Mitigation Measure 3.5-2k: Conduct Focused Noninvasive Surveys for Mountain Lion Dens and Implement Avoidance Measures**

If it is determined through implementation of Mitigation Measure 3.5-1a that den habitat potentially suitable for mountain lion is present within a particular project site (e.g., caves, other large natural cavities, thickets) or signs of mountain lion activities are observed (e.g., tracks, scat, carcasses or bones of prey species), the following measures shall be implemented to avoid take of mountain lions or destruction of den habitat:

* Within ~~at least~~ 30 days before commencement of project activities, a qualified wildlife biologist with familiarity with mountain lion and experience using survey methods for the species will conduct focused surveys of habitat suitable for the species within the project site to identify any potential mountain lion dens. Potential mountain lion dens will include caves, large natural cavities within rocky areas, or thickets deemed appropriate for use by mountain lions based on size and other characteristics (e.g., proximity to human development, surrounding habitat). The qualified wildlife biologist will also survey for signs of mountain lion (e.g., tracks, scat, prey items) in the vicinity of the cave, cavity, or thicket to help determine whether the den may be occupied by mountain lions. If the start of project activities lapses and more than 30 days pass since the survey was completed, an additional survey shall be conducted.
* If no potential dens are found, the qualified biologist will submit a report summarizing the results of the survey to UC Santa Cruz, and no further mitigation will be required.
* If potential dens are found, further investigation will be required to determine if the den is being used by a mountain lion or another carnivore species (e.g., coyote [*Canis latrans*], bobcat [*Lynx rufus*], gray fox [*Urocyon cinreoargenteus*]). Survey methods will include the use of trail cameras, track plates, hair snares, or other noninvasive methods. Surveys using these noninvasive methods will be conducted for three days and three nights to determine whether the den is occupied by mountain lions.
* If the den is determined to be unoccupied by any carnivore species, the qualified biologist will submit a report summarizing the results of the survey to UC Santa Cruz, and no further mitigation will be required.
* If the den is determined to be unoccupied by mountain lion, but is occupied by another carnivore species, the den will not be disturbed while the young of any species are dependent on the den for shelter.
* If the den is determined to be occupied by mountain lion, a no-disturbance buffer of at least 2,000 feet will be established around the occupied den within which no project activities will occur, and UC Santa Cruz will notify and consult with CDFW to identify additional adequate seasonal restrictions and/or no disturbance buffers to avoid disturbance, injury, or mortality of mountain lion.

Mitigation Measure 3.5-5a on page 3.5-72 of the Draft EIR is revised as follows:

**Mitigation Measures 3.5-5a: Utilize Wildlife-Friendly Building and Fencing Designs**

The following measures shall be implemented during the early planning stages of projects under the 2021 LRDP:

* Buildings and other permanent structures that would be constructed during implementation of projects under the 2021 LRDP shall be designed to minimize impacts on wildlife, including disruption to wildlife movement, bird strikes, and wildlife entanglement.
* Building design shall utilize guidelines regarding building height, materials, external lighting, and landscaping provided in the American Bird Conservancy’s “Bird Friendly Building Design” (American Bird Conservancy 2015) or other appropriate resources (e.g., International Dark Sky Association). UC Santa Cruz shall require review of the design plans by a qualified biologist, who will determine whether the plans are sufficient to reduce the likelihood of bird strikes or recommend additional measures.
* Fencing associated with new development under the 2021 LRDP will utilize wildlife-friendly fencing design to minimize the risk of entanglement or impalement of wildlife. UC Santa Cruz will require the review of fencing design by a qualified biologist prior to installation. The fencing design shall meet, but not be limited to the following standards:
* Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale, snag, or entrap a leaping animal (e.g., wrought iron fencing with spikes).
* Allow wildlife to jump over easily without injury. Typically, fences should be no more than 40 inches high on flat ground to allow adult deer to jump over. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass.
* Allow smaller wildlife to pass under easily without injury or entrapment.

The fifth bullet of Mitigation Measure 3.5-7 on page 3.5-74 is revised as follows:

* As noted in Mitigation Measures 3.5-2a and 3.5-2i~~h~~, UC Santa Cruz may elect to pursue a comprehensive HCP, which shall be accomplished either by amending the Ranch View Terrace HCP or by incorporating and replacing the existing Ranch View Terrace HCP.

## Section 3.6, Energy

The final paragraph of Section 3.6.3 on page 3.6-12 of the Draft EIR is revised as follows:

~~The Campus~~ Up to 4 megawatts (MW) of on-campus solar photovoltaic electricity generation, producing an estimated 5,718 MWh/year assuming a yield of 1,448 kWh/kWdc, is also being considered for the Campus under the CES (UC Santa Cruz 2017). UC Santa Cruz is also in the process of installing the aforementioned, on-site (2.1 MW) solar array above the East Remote parking lot. Solar arrays would also be installed on the campus as part of the Student Housing West project to provide some of the electricity needed in the new housing. Though solar facilities may be installed on campus as part of the 2021 LRDP, it is conservatively assumed that those facilities would not be operated as part of the analysis in this section.

Table 3.6-5 on page 3.6-15 of the Draft EIR is revised as follows:

Table 3.6-5 Per-Capita Annual Energy Consumption with 2021 LRDP Implementation Compared to Existing Conditions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Annual Energy Metrics | 2019 Existing | 2040 Net Increase  (with 2021 LRDP) | | Percent Change | |
| Building Electricity Use (kWh) | 48,479,557 | 32,282,652 | | ~~NA~~ 67% | |
| Building Natural Gas Use (therms) | 4,954,650 | | 873,967 | | ~~NA~~ 18% | |
| Transportation Gasoline Use (gal)1 | 2,580,660 | | 980,939 | | ~~NA~~ 38% | |
| Total MMBTU2 | 983,050 | | 320,033 | | ~~NA~~ 33% | |
| Population | 22,344 | | 12,830 | | ~~NA~~ 57% | |
| kWh per capita | 2,170 | 2,516 | | 16% | |
| therms per capita | 222 | 68 | | -69% | |
| Gasoline gallons per capita | 115 | 76 | | -34% | |
| MMBTU per capita | 44 | 25 | | -43% | |

Notes: gal = gallons; kWh = kilowatt hours; MMBTU = million British thermal units; NA = not applicable

1 Includes both fleet and non-fleet mobile fuel use.

2 Excludes transportation-related diesel, natural gas, and electricity use.

Source: Data provided by Ascent Environmental, Inc. in 2020

## Section 3.8, Greenhouse Gas Emissions and Climate Change

The discussion of the Association of Monterey Bay Area Governments on page 3.8-12 of the Draft EIR is revised as follows:

Association of Monterey Bay Area Governments

The Association of Monterey Bay Area Governments (AMBAG) serves as the MPO for Monterey, San Benito and Santa Cruz Counties. In accordance with SB 375, AMBAG has prepared a Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) that integrates land use and transportation planning at a regional level to achieve GHG emission reduction targets from passenger vehicles. The most recent MTP/SCS is Moving Forward Monterey Bay 2040, which was adopted in June 2018. CARB set a target for the Monterey Bay Area of 5 percent reduction from 2005 per capita GHG emissions for the year 2035 ~~2030~~. The MTP/SCS demonstrates the region’s ability to exceed the GHG emission reduction target set forth by CARB through transportation investments, strategic land use development, and performance measures (AMBAG 2018).

## Section 3.10, Hydrology and Water Quality

The first sentence of the fourth paragraph on page 3.10-11 of the Draft EIR is revised as follows:

The head of the Moore Creek East Fork is located just west of University House and drains the central and south portion of campus from Meyer Drive south to the Arboretum Dam~~, as shown in Figure 3.10-1~~.

The last sentence of the third paragraph on page 3.10-24 has been amended to state:

Aquifer analysis indicated the well is completed in a ~~highly permeable~~high yielding area of the karst aquifer, with the ability to provide a sustained pumping rate of 100 gpm without dewatering the well, or creating any pumping drawdown at identified spring locations over 2000 feet away (Johnson and Weber & Associates 1989).

The last sentence of the first full paragraph on page 3.10-25 has been amended to state:

The study concluded that WSW#1 is hydraulically connected to major portions of the karst aquifer and ~~that groundwater can be extracted from well WSW#1 without substantially reducing the flow rates of any individual spring in the area~~therefore, if pumped, is unlikely to substantially affect the discharge of any individual spring or springs.

The first full paragraph on page 3.10-26 of the Draft EIR has been revised as follows:

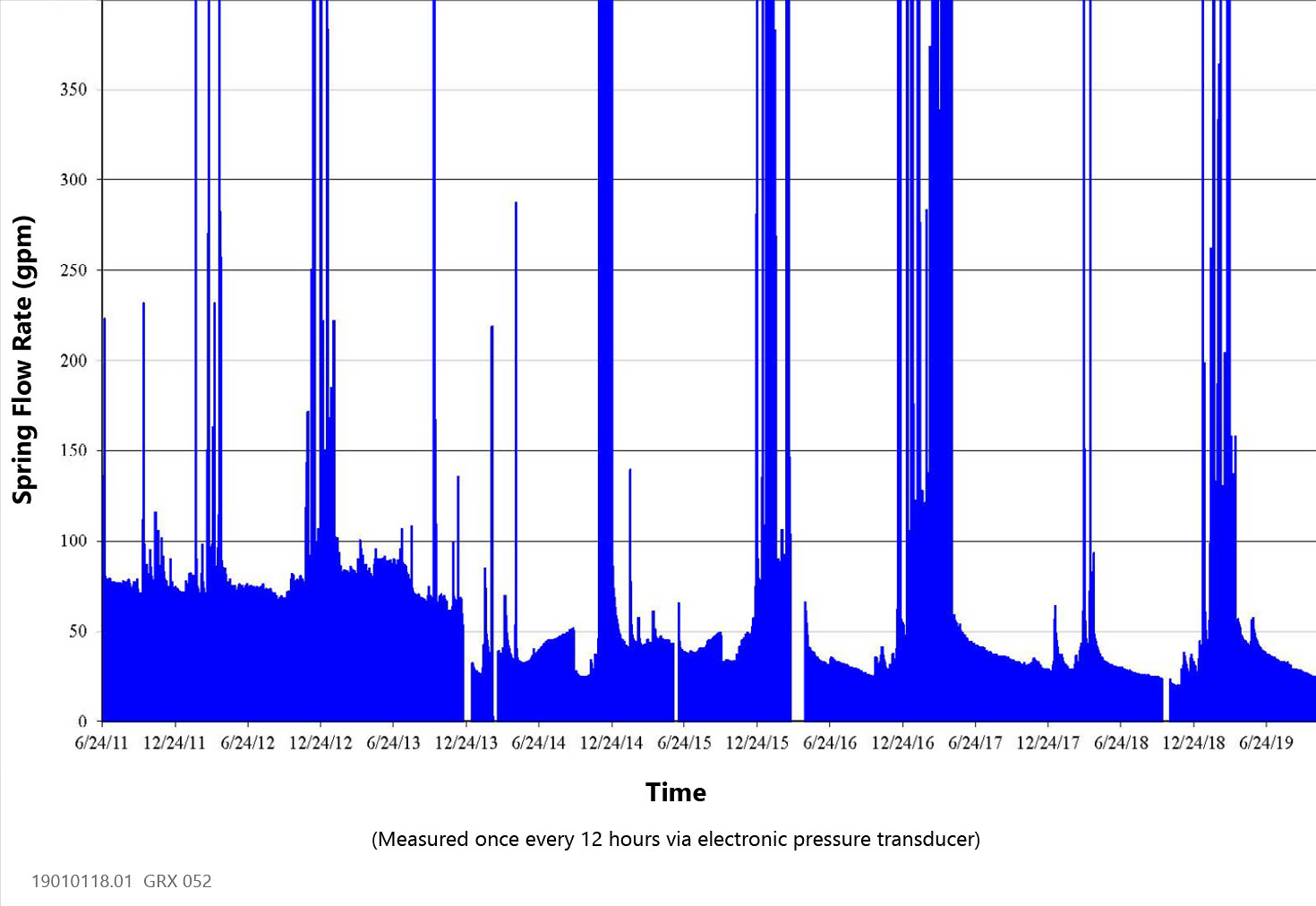
Thirteen recognized springs, seeps or spring fed streams that are linked to the karst aquifer have been mapped to outcrop on- and off-campus. Monthly to semi-annual monitoring of flows from these surface water locations has been conducted by UC Santa Cruz since 1984; currently, nine are being monitored for flow monthly. In 2011, UC Santa Cruz obtained permission from the City of Santa Cruz Water Department (Water Department) to access and retrofit an existing weir that has been used by the Water Department to measure Bay Street Spring flow rates since 1980. The weir is housed inside a manhole on Water Department property just east of Bay Street, adjacent to, and upstream of the Bay Street Spring monitoring station that had been monitored since 1984. The weir was retrofitted with a stilling well and an electronic pressure transducer was installed and secured to the inside of the stilling well. The transducer is calibrated to record the height of water flowing over the 90 degree V-notch weir once every 12 hours in order to obtain high resolution spring flow monitoring data. A histogram of the continuous monitoring data that has been collected since June 2011 is shown on Figure 3.10-6. The high-resolution spring flow data confirms an almost immediate response to individual precipitation events and a strong seasonal trend of increased flow through the wet season, followed by a slow and steady period of reduced flow through the rest of the year during the drier months to base flow levels. Base flows are generally higher during wetter years and lower during the drier years. Construction related to the Bay Street Reservoir Replacement Project in 2013 (located ~500 feet north of the weir manhole) periodically and briefly affected observed spring flow at the weir manhole location due to brief diversions of the sub-drain system that delivers the spring water to this location. Following a mid-December 2013 diversion of the sub-drain system that was conducted in connection with the Bay Street Reservoir Replacement Project flows at the weir manhole dropped by more than half of the historic base flow rate (i.e., from about 65 gpm to less than 30 gpm). This is observed on Figure 3.10-6. It is suspected that when the sub-drain was plugged for downstream retrofitting the backpressure likely ruptured the historic piping resulting in upstream flow loss to the subsurface. All data collected following this incident appears to be erroneous with respect to the long-term record; however, strong seasonal trends are still observed.

In addition, groundwater levels are measured in three wells that are completed in the karst aquifer in lower Jordan Gulch. The monitoring locations are shown on Figure 3.10-5. Because wet season measurements are influenced by the amount and timing of rainfall, there is more variation in wet season measurements. The dry season measurements represent base flow conditions and are therefore more suitable for year-to-year comparisons. The monitoring has indicated that development activities on campus have not created a measurable increase or decrease in flow rates at any of the springs and streams monitored, and have not affected groundwater elevations in on–campus monitoring wells (Weber, Hayes and Associates 2019a). A statistical summary of the monitoring data gathered by UC Santa Cruz since 1984 that is grouped by water year type, including average, maximum, minimum spring flows and standard deviation for spring or spring fed stream discharge data, and water surface elevations for the monitoring wells is presented in Table 3.10-5. Table G1-1 in Appendix G presents a summary of all monitoring data since 1984.

Continuous Water Level Monitoring

In August 2007, UC Santa Cruz installed dedicated electronic pressure transducers in wells WSW#1, MW-1A, and MW-1B, see Figure 3.10-5). The transducers are programmed to record water level data once every 12 hours to obtain high-resolution data of seasonal water level fluctuations in these wells. These transducers continue to record water levels to date. Hydrographs of water level fluctuations from wells WSW#1, MW-1A, and MW-1B along with superimposed monthly precipitation data are shown on Figure 3.10-7. The high-resolution data set confirms a strong seasonal trend of rapid groundwater recharge and water level rise after the start of winter rainfall followed by a slow and steady period of groundwater decline through the rest of the year during the drier months. Water levels in wells WSW#1 and MW-1A fluctuate in tandem, with nearly identical response to aquifer recharge and drainage. Seasonal water level rise observed in these wells since 2007 has ranged from approximately 43 feet during the wettest period monitored (i.e., ~36.5 inches of precipitation between December and March of the 2016-2017 water year) to approximately 2.5 feet during the 2013-2014 water year when only approximately 14 inches of precipitation was recorded for the entire water year. Data collected from well MW-1B indicates a similar recharge pattern as that observed in nearby wells WSW#1 and MW-1A, yet on a much smaller scale and with a time lag (i.e., observed to be on the order of a few days to several weeks). As noted in the Campus Wells Section, MW-1B is evidently completed in a separate hydraulic fracture regime, and shows a distinctly higher water level (i.e., 40 to 50 feet higher), and no pumping influence from pumping in WSW#1 in 1989 or 2007. Groundwater elevations are generally higher during wetter years and lower during the drier years. Most notably, during both wetter and drier years, dry season base water levels observed for wells WSW#1 and MW-1A have only varied by approximately 10 feet, with the base level following the driest years ever recorded in California state history being the lowest observed for the continuous water level monitoring data set. This relatively small fluctuation in base water levels from wetter years to several consecutive years of drought suggests a significant aquifer storage capacity in this area of the karst.

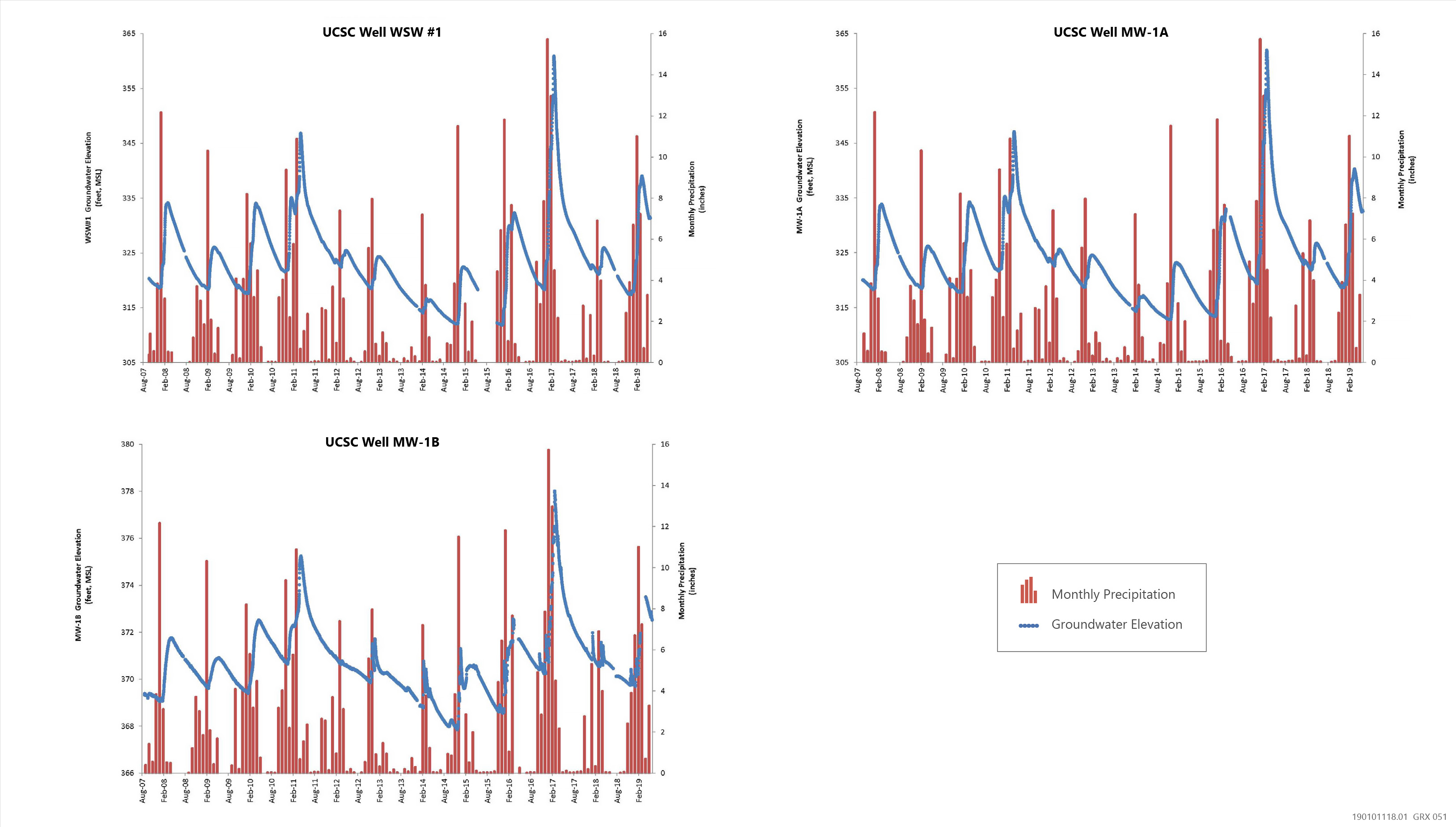
Figures 3.10-6 and 3.10-7 have been added to this section, prior to the presentation of Table 3.10-5 on page 3.10-27 of the Draft EIR.



Source: Data provided by 2NDNATURE in 2021.

Figure 3.10-6 Bay Street Spring Flow Data

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Source: Data provided by 2NDNATURE in 2021.

Figure 3.10-7 Temporal Water Level Fluctuation and Monthly Precipitation Data for On-Campus Wells

Table 3.10-5 on page 3.10-27 of the Draft EIR has been amended to include additional data regarding spring and stream flow rates.

Table 3.10-5 Statistical Summary of Spring and Stream Flow Rates and Groundwater Elevation

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ~~Location~~ | ~~Bay Street Spring~~ | ~~West Lake Outlet~~ | ~~Messiah Lutheran Spring~~ | ~~Kalkar Spring Quarry~~ | ~~High-Longview Spring~~ | ~~Wagner Grove Seep~~ | ~~Harvey West Seep~~ | ~~Pogonip Creek System~~ | ~~Pogonip Spring #1~~ | ~~Pogonip Spring #2~~ | ~~Upper Cave Gulch~~ | ~~Lower Cave Gulch~~ | ~~Wilder Creek Spring~~ | ~~Moore Creek Spring~~ |  | ~~MW-1A~~ | ~~MW-1B~~ | ~~WSW 1~~ |
| ~~Surface Elevation~~ | ~~235 ft MSL~~ | ~~255 ft MSL~~ | ~~255 ft MSL~~ | ~~310 ft MSL~~ | ~~250 ft MSL~~ | ~~200 ft MSL~~ | ~~110 ft MSL~~ | ~~150 ft MSL~~ | ~~435 ft MSL~~ | ~~500 ft MSL~~ | ~~540 ft MSL~~ | ~~330 ft MSL~~ | ~~330 ft MSL~~ | ~~410 ft MSL~~ |  | ~~424.84 (TOC, ft MSL)~~ | ~~418.69 (TOC, ft MSL)~~ | ~~416.41 (TOC, ft MSL)~~ |
| ~~Statistical Summary (Per Monitoring Event)~~ |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ~~Total Q gpm~~ | ~~Average~~ | ~~Average~~ | ~~Average~~ |
| ~~Flow Rate~~ |  |  |  |  |  |  | ~~gpm~~ |  |  |  |  |  |  |  |  | ~~ft MSL~~ | ~~ft MSL~~ | ~~ft MSL~~ |
| ~~Average~~ | ~~110.55~~ | ~~66.44~~ | ~~50.57~~ | ~~160.97~~ | ~~23.05~~ | ~~7.75~~ | ~~13.6~~ | ~~221.75~~ | ~~58.29~~ | ~~13.04~~ | ~~46.45~~ | ~~63.26~~ | ~~450.65~~ | ~~4.32~~ | ~~1,290.7~~ | ~~320.85~~ | ~~368.21~~ | ~~326.44~~ |
| ~~Std Dev (average only)~~ | ~~37.09~~ | ~~86.27~~ | ~~28.68~~ | ~~252.47~~ | ~~22.95~~ | ~~42.07~~ | ~~37.87~~ | ~~108.65~~ | ~~97.61~~ | ~~15.84~~ | ~~173.86~~ | ~~188.75~~ | ~~697.14~~ | ~~6.05~~ |  | ~~9.18~~ | ~~6.08~~ | ~~8.62~~ |
| ~~Maximum~~ | ~~230.89~~ | ~~451.14~~ | ~~236.62~~ | ~~1865.512~~ | ~~116~~ | ~~298.3~~ | ~~181.57~~ | ~~719.58~~ | ~~761.5~~ | ~~64.61~~ | ~~1239.94~~ | ~~1357.45~~ | ~~4944.03~~ | ~~29.2~~ | ~~NA~~ | ~~356.23~~ | ~~376.44~~ | ~~369.12~~ |
| ~~Minimum~~ | ~~21~~ | ~~0~~ | ~~3.6~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~0~~ | ~~80.27~~ | ~~2.8~~ | ~~1.23~~ | ~~0~~ | ~~1.9~~ | ~~7.73~~ | ~~0~~ | ~~NA~~ | ~~308.13~~ | ~~321.12~~ | ~~311.78~~ |
| ~~June-October Average~~ | ~~93.71~~ | ~~18.57~~ | ~~36.74~~ | ~~82.22~~ | ~~7.02~~ | ~~0~~ | ~~2.36~~ | ~~201.87~~ | ~~32.24~~ | ~~5.73~~ | ~~3.32~~ | ~~10.57~~ | ~~141.90~~ | ~~1.99~~ | ~~638.29~~ | ~~318.79~~ | ~~368.89~~ | ~~324.44~~ |
| **~~Annual Flow~~** |  |  |  |  |  |  | **~~acre-feet/ year~~** |  |  |  |  |  |  |  | **~~Total Q acre-feet/ year~~** | **~~NA~~** | **~~NA~~** | **~~NA~~** |
| ~~Average~~ | ~~178.31~~ | ~~107.16~~ | ~~81.57~~ | ~~259.65~~ | ~~37.18~~ | ~~12.50~~ | ~~21.93~~ | ~~357.68~~ | ~~94.02~~ | ~~21.04~~ | ~~74.93~~ | ~~102.04~~ | ~~726.91~~ | ~~6.97~~ | ~~2,081.91~~ | ~~NA~~ | ~~NA~~ | ~~NA~~ |

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Surface Elevation | 235 ft MSL | 255 ft MSL | 255 ft MSL | 310 ft MSL | 250 ft MSL | 200 ft MSL | 110 ft MSL | 150 ft MSL | 435 ft MSL | 500 ft MSL | 540 ft MSL | 330 ft MSL | 330 ft MSL | 410 ft MSL |  | 424.84  (TOC, ft MSL) | 418.69  (TOC, ft MSL) | 416.41  (TOC, ft MSL) |

Statistical Summary (Per Monitoring Event in Very Dry Years, < 23.5 in/yr precipitation)

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flow Rate |  |  |  |  |  |  |  | gpm |  |  |  |  |  |  | Total Q gpm | Ave. ft MSL | Ave. ft MSL | Ave. ft MSL |
| Average | 116.1 | 25.3 | 40.9 | 52.0 | 1.3 | 0 | 0.7 | 196.4 | 47.7 | 10.2 | 0 | 10.6 | 214.6 | 1.3 | 716.9 | 315.6 | 368.3 | 314.2 |
| Std Dev (average only) | 33.6 | 27.4 | 14.5 | 49.5 | 0.6 | 0 | 0.5 | 105.7 | 52.9 | 8.7 | 0 | 8.0 | 176.4 | 0.8 | NA | 5.6 | 1.1 | 2.0 |
| Maximum | 147.1 | 95.7 | 58.7 | 158.0 | 1.9 | 0 | 1.0 | 398.7 | 152.0 | 22.1 | 0 | 21.9 | 500.0 | 2.0 | NA | 327.0 | 370.4 | 316.2 |
| Minimum | 21.0 | 0.0 | 3.6 | 0.0 | 0.8 | 0 | 0.0 | 113.1 | 10.0 | 2.2 | 0 | 5.0 | 28.7 | 0 | NA | 310.5 | 367.3 | 312.1 |
| Dry Season Average (June-Sept.) | 104.3 | 8.8 | 31.0 | 26.8 | 0.8 | 0 | 0.5 | 162.1 | 17.8 | 3.1 | 0 | 5.0 | 102.0 | 1.0 | 463.1 | 313.5 | 367.8 | 312.1 |
| Annual Flow |  |  |  |  |  |  |  | acre-feet/year |  |  |  |  |  |  | Total Q acre-feet/ year | NA | NA | NA |
| Average | 187.2 | 40.7 | 65.9 | 83.9 | 2.1 | 0 | 1.1 | 316.8 | 76.9 | 16.4 | 0 | 17.2 | 346.1 | 2.0 | 1156.4 | NA | NA | NA |
| Surface Elevation | 235 ft MSL | 255 ft MSL | 255 ft MSL | 310 ft MSL | 250 ft MSL | 200 ft MSL | 110 ft MSL | 150 ft MSL | 435 ft MSL | 500 ft MSL | 540 ft MSL | 330 ft MSL | 330 ft MSL | 410 ft MSL |  | 424.84  (TOC, ft MSL) | 418.69  (TOC, ft MSL) | 416.41  (TOC, ft MSL) |

Statistical Summary (Per Monitoring Event in Dry Years, 23.5 - 33.2 in/yr precipitation)

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flow Rate |  |  |  |  |  |  |  | gpm |  |  |  |  |  |  | Total Q gpm | Ave. ft MSL | Ave. ft MSL | Ave. ft MSL |
| Average | 117.4 | 39.6 | 48.1 | 80.2 | 27.0 | 0 | 3.4 | 191.0 | 24.7 | 7.8 | 9.1 | 6.9 | 274.5 | 3.6 | 833.3 | 315.6 | 366.3 | 324.3 |
| Std Dev (average only) | 32.3 | 39.3 | 17.2 | 58.5 | 18.0 | 0 | 5.3 | 46.3 | 40.0 | 8.6 | 8.5 | 3.1 | 417.3 | 7.7 | NA | 4.8 | 8.8 | 9.0 |
| Maximum | 180.0 | 175.9 | 108.2 | 245.8 | 70.4 | 0 | 18.8 | 390.7 | 201.0 | 40.0 | 23.5 | 12.6 | 2617.0 | 25.0 | NA | 323.2 | 370.4 | 369.1 |
| Minimum | 23.0 | 0.0 | 12.0 | 0.0 | 0.0 | 0 | 0.8 | 114.5 | 2.8 | 1.2 | 1.0 | 1.9 | 7.7 | 0.0 | NA | 308.1 | 321.1 | 313.0 |
| Dry Season Average (June-Sept.) | 95.3 | 7.1 | 34.5 | 50.2 | 11.6 | 0 | 0.9 | 184.5 | 15.3 | 6.1 | 2.6 | 5.9 | 93.7 | 0.2 | 508.0 | 315.3 | 368.3 | 322.7 |
| Annual Flow |  |  |  |  |  |  |  | acre-feet/year |  |  |  |  |  |  | Total Q acre-feet/ year | NA | NA | NA |
| Average | 189.31 | 63.87 | 77.61 | 129.44 | 43.54 | 0 | 5.49 | 308.05 | 39.91 | 12.64 | 14.65 | 11.18 | 442.73 | 5.74 | 1344.15 | NA | NA | NA |
| Surface Elevation | 235 ft MSL | 255 ft MSL | 255 ft MSL | 310 ft MSL | 250 ft MSL | 200 ft MSL | 110 ft MSL | 150 ft MSL | 435 ft MSL | 500 ft MSL | 540 ft MSL | 330 ft MSL | 330 ft MSL | 410 ft MSL |  | 424.84  (TOC, ft MSL) | 418.69  (TOC, ft MSL) | 416.41  (TOC, ft MSL) |

Statistical Summary (Per Monitoring Event in Normal Years, 33.2 - 51.1 in/yr precipitation)

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flow Rate |  |  |  |  |  |  |  | gpm |  |  |  |  |  |  | Total Q gpm | Ave. ft MSL | Ave. ft MSL | Ave. ft MSL |
| Average | 112.0 | 76.0 | 48.5 | 170.7 | 20.0 | 11.6 | 11.4 | 212.9 | 37.4 | 8.1 | 9.9 | 34.0 | 438.5 | 2.7 | 1,193.6 | 321.7 | 367.6 | 328.0 |
| Std Dev (average only) | 33.8 | 80.0 | 26.1 | 192.2 | 34.0 | 57.3 | 30.1 | 93.3 | 58.3 | 10.0 | 24.7 | 53.9 | 582.8 | 1.9 | NA | 7.4 | 5.7 | 7.0 |
| Maximum | 192.3 | 309.5 | 155.6 | 1110.6 | 116.0 | 298.3 | 157.9 | 559.5 | 329.0 | 48.7 | 117.9 | 175.0 | 3040.6 | 7.5 | NA | 340.5 | 372.7 | 339.0 |
| Minimum | 36.0 | 0.0 | 7.8 | 0.0 | 0.0 | 0.0 | 0.8 | 92.1 | 2.9 | 1.2 | 0.0 | 2.6 | 21.3 | 0.0 | NA | 310.7 | 336.8 | 311.8 |
| Dry Season Average (June-Sept.) | 88.0 | 21.9 | 38.1 | 120.9 | 0.0 | 0.0 | 3.1 | 189.4 | 20.4 | 4.3 | 0.9 | 13.5 | 186.0 | 1.5 | 687.9 | 320.8 | 368.9 | 328.3 |
| Annual Flow |  |  |  |  |  |  |  | acre-feet/year |  |  |  |  |  |  | Total Q acre-feet/ year | NA | NA | NA |
| Average | 180.7 | 122.6 | 78.2 | 275.4 | 32.2 | 18.7 | 18.4 | 343.4 | 60.4 | 13.1 | 16.0 | 54.8 | 707.3 | 4.3 | 1925.3 | NA | NA | NA |
| Surface Elevation | 235 ft MSL | 255 ft MSL | 255 ft MSL | 310 ft MSL | 250 ft MSL | 200 ft MSL | 110 ft MSL | 150 ft MSL | 435 ft MSL | 500 ft MSL | 540 ft MSL | 330 ft MSL | 330 ft MSL | 410 ft MSL |  | 424.84  (TOC, ft MSL) | 418.69  (TOC, ft MSL) | 416.41  (TOC, ft MSL) |

Statistical Summary (Per Monitoring Event in Wet Years, 51.1 - 71.0 in/yr precipitation)

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flow Rate |  |  |  |  |  |  |  | gpm |  |  |  |  |  |  | Total Q gpm | Ave. ft MSL | Ave. ft MSL | Ave. ft MSL |
| Average | 131.4 | 190.0 | 71.8 | 440.0 | -- | 12.1 | 40.0 | 288.4 | 72.1 | 25.6 | 173.3 | 225.1 | 1054.8 | 8.5 | 2733.1 | 328.9 | 371.4 | 329.3 |
| Std Dev (average only) | 47.7 | 128.0 | 29.4 | 294.5 | -- | 34.6 | 68.6 | 133.5 | 61.9 | 19.4 | 361.8 | 388.5 | 1266.6 | 6.8 | NA | 6.6 | 1.3 | 8.5 |
| Maximum | 230.9 | 406.8 | 135.4 | 971.5 | -- | 115.7 | 181.6 | 574.7 | 233.5 | 64.6 | 1239.9 | 1357.5 | 4944.0 | 20.0 | NA | 340.0 | 373.1 | 344.6 |
| Minimum | 70.0 | 16.7 | 30.0 | 123.4 | -- | 0.0 | 1.0 | 80.3 | 11.6 | 5.5 | 0.0 | 3.4 | 132.3 | 0.5 | NA | 319.9 | 369.5 | 316.4 |
| Dry Season Average (June-Sept.) | 94.3 | 59.8 | 52.5 | 159.0 | -- | 0.0 | 1.5 | 303.3 | 38.8 | 9.9 | 0.0 | 27.0 | 212.8 | 1.2 | 960.1 | 327.2 | 371.1 | 327.3 |
| Annual Flow |  |  |  |  |  |  |  | acre-feet/year |  |  |  |  |  |  | Total Q acre-feet/ year | NA | NA | NA |
| Average | 212.0 | 306.5 | 115.7 | 709.7 | -- | 19.6 | 64.5 | 465.2 | 116.2 | 41.3 | 279.5 | 363.0 | 1701.5 | 13.7 | 4408.5 | NA | NA | NA |
| Surface Elevation | 235 ft MSL | 255 ft MSL | 255 ft MSL | 310 ft MSL | 250 ft MSL | 200 ft MSL | 110 ft MSL | 150 ft MSL | 435 ft MSL | 500 ft MSL | 540 ft MSL | 330 ft MSL | 330 ft MSL | 410 ft MSL |  | 424.84  (TOC, ft MSL) | 418.69  (TOC, ft MSL) | 416.41  (TOC, ft MSL) |

Statistical Summary (Per Monitoring Event in Very Wet Years, > 71.0 in/yr precipitation)

| **Location** | **Bay Street Spring** | **West Lake Outlet** | **Messiah Lutheran Spring** | **Kalkar Spring Quarry** | **High-Longview Spring** | **Wagner Grove Seep** | **Harvey West Seep** | **Pogonip Creek System** | **Pogonip Spring #1** | **Pogonip Spring #2** | **Upper Cave Gulch** | **Lower Cave Gulch** | **Wilder Creek Spring** | **Moore Creek Spring** |  | **MW-1A** | **MW-1B** | **WSW 1** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flow Rate |  |  |  |  |  |  |  | gpm |  |  |  |  |  |  | Total Q gpm | Ave. ft MSL | Ave. ft MSL | Ave. ft MSL |
| Average | 84.2 | 197.3 | 105.2 | 875.8 | -- | 3.9 | 9.4 | 365.3 | 271.3 | 30.1 | 189.6 | 126.8 | 992.4 | 10.6 | 3262.0 |  | 338.3 |  |
| Std Dev (average only) | 29.5 | 181.4 | 78.3 | 762.7 | -- | 3.9 | 4.4 | 187.3 | 290.1 | 24.7 | 189.6 | 121.0 | 785.6 | 11.1 | NA |  | 13.0 | #DIV/0! |
| Maximum | 116.0 | 451.1 | 236.6 | 1865.5 | -- | 7.8 | 13.8 | 646.9 | 761.5 | 59.0 | 379.3 | 247.8 | 1991.6 | 29.2 | NA |  | 356.2 |  |
| Minimum | 36.0 | 23.1 | 30.0 | 111.8 | -- | 0.0 | 5.0 | 155.6 | 24.0 | 1.2 | 0.0 | 5.9 | 156.7 | 0.0 | NA |  | 324.1 |  |
| Dry Season Average (June-Sept.) | 36.0 | 27.7 | 81.0 | 155.4 | -- | 0.0 | 0.0 | 244.3 | 203.0 | 10.6 | 0.0 | 0.0 | 294.8 | 0.0 | 1052.8 |  | 327.8 | 326.6 |
| Annual Flow |  |  |  |  |  |  |  | acre-feet/year |  |  |  |  |  |  | Total Q acre-feet/ year | NA | NA | NA |
| Average | 135.9 | 318.2 | 169.8 | 1412.7 | -- | 6.3 | 15.2 | 589.2 | 437.6 | 48.6 | 305.9 | 204.6 | 1600.8 | 17.0 | 5261.6 | 10523.3 | NA |  |

Notes: gpm = gallons per minute, ft MSL = Feet above Mean Sea Level, TOC = Top of Casing elevation, NA = Not Applicable, Q = Discharge Flow

Source: UC Santa Cruz 2020.

The third sentence of the impact summary on page 3.10-30 for Impact 3.10-2 has been amended to state:

Compliance with the CGP requires ~~a)~~ development of a Storm Water Pollution Prevention Plan (SWPPP) for projects disturbing 1 acre or more and~~, or b) preparation of an Erosion and Sediment Control Plan for projects less than 1 acre in accordance with~~ the Campus Standards Handbook requires preparation of an Erosion Control and Sediment Control Plan for projects less than 1 acre. Compliance with the CGP and the Campus Standards Handbook would~~and the Storm Water Management Program to~~ minimize erosion and sedimentation during construction.

The second full paragraph on page 3.10-31 is amended to state:

For projects less than one acre, the Campus Standards Handbook requires preparation of an Erosion Control and Sediment Control Plan, which ensures that, as part of ~~The Construction Site Stormwater Runoff Control program elements that are included in the UC Santa Cruz Storm Water Management Program are designed to ensure that through~~ project specific analysis, appropriate BMPs are incorporated into the project. During construction, campus inspectors routinely inspect the project to confirm compliance with the project plans.

Mitigation Measure 3.10-5b on page 3.10-36 of the Draft EIR is revised as follows:

**Mitigation Measure 3.10-5b: On-Going Groundwater Level and Spring Flow Monitoring**

If the existing well WSW#1 or a new groundwater well is used for extraction, UC Santa Cruz shall perform monitoring of water levels within that well and any other campus wells completed in the karst aquifer on a~~n annual~~ a continuous basis when groundwater pumping occurs. UC Santa Cruz shall also conduct, at a minimum, monthly ~~equivalent~~ flow monitoring of those springs in the vicinity of the LRDP area shown to be connected to the well via a dye tracing study or other applicable testing method for the duration of groundwater pumping to determine whether there is any long-term decline in water levels or spring discharge. Monitoring of the springs shall also include an assessment of surface water resources (i.e., habitats, plant species, and wildlife species) for a distance of 500 feet downgradient from the daylighting of connected springs at least 30 days prior to and after groundwater pumping to determine if there are any changes or adverse effects in the condition of these resources that may be attributed to changes in spring discharge as a result of groundwater pumping.

If monitoring of water levels and spring flows indicates that UC Santa Cruz extraction of groundwater is contributing to a net deficit in aquifer volume, as indicated by a substantial decrease in average base flow water levels in any monitored wells or a substantial reduction of base flows in monitored springs, the campus will terminate or reduce its use of groundwater from the aquifer. A substantial decrease shall constitute observations of a continual decreasing trend in base groundwater water levels over a 3-5 year period ~~that includes both wetter and drier years~~ coupled with a decrease in spring base flow conditions, beyond the standard deviation for any given spring, for a corresponding ~~rainfall season~~water year type. The average base water levels and base flows in springs will be defined through a statistical analysis of historic data~~, with consideration of associated seasonal rainfall~~ grouped by water year types. As new monitoring data becomes available, UC Santa Cruz will continually update the statistical analysis.

## Section 3.13, Population and Housing

The first paragraph under the subheading “Growth Projections” on page 3.13-8 of the Draft EIR is revised as follows:

Growth Projections

AMBAG produced regional growth projections through 2040 for the entire AMBAG planning area as well as counties and incorporated cities within its jurisdiction. Table 3.13-8 identifies AMBAG’s growth projections for the City of Santa Cruz and Santa Cruz County. AMBAG projects that the city’s employment growth rate would increase as the population levels rise through 2040. The city is expected to have higher population, housing, and employment percentage growth rates than the county based on AMBAG projections. As shown in Table 3.13-8, employment, population, and housing within the city are anticipated to increase by approximately 20-30 percent between 2015 and 2040, while countywide (incorporated cities and unincorporated area) is anticipated to increase by approximately 10-20 percent between 2015 and 2040. The rate of growth seen recently in the city and county vary from ~~The~~ AMBAG growth projections. ~~contradict the trends seen recently in both the city and the county.~~ However, as shown in Table 3.13-5, substantial housing growth has been approved and is also newly proposed in the city, which would comport with a reversal of growth rates.

The impact summary for Impact 3.13-1, provided on page 3.13-10 of the Draft EIR, is amended to remove an extra space as follows:

Implementation of the 2021 LRDP would allow physical development to accommodate projected increases in student enrollment, UC Santa Cruz faculty/staff, non-UC employees, and on-campus faculty/staff families/dependents, up to the levels anticipated when the campus was founded. To account for projected increases in the total on-campus population, the 2021 LRDP would provide additional housing on the main residential campus and potentially at the Westside Research Park. Up to 28,000 students (baseline plus project) would be accommodated by the plan, and this is consistent with regional growth projections. The 2021 LRDP sets aside an adequate amount of land for housing to accommodate 100 percent of the increase in student enrollment above 19,500 and for 25 percent of the increase in the number of employees, based on demand. Existing data on vacancy rates, as well as planned development nearby, suggest that housing is generally available or planned to be available within the county and city of Santa Cruz to accommodate the additional students, faculty/staff, and non-UC employees for whom on campus housing would not be accommodated. However, other data, such as affordability, suggest a tighter housing market. Further, due to the recent (summer 2020) loss of homes associated with the CZU Lightning Complex fire, the availability of housing has tightened. Therefore, the total on-campus population increase accommodated by the 2021 LRDP may directly or indirectly induce substantial housing demand in the region. This impact would be **significant**.

Table 3.13-11 on page 3.13-12 of the Draft EIR is revised as follows:

Table 3.13-11 Baseline and Projected On-Campus Housing Capacity and Demand

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | New Housing Under 2021 LRDP (Compared to 2018–2019) | Projected Housing Demand | Demand Not Provided on Campus | Would All of the Increased Housing Demand Be Accommodated On-Campus? |
| Student Housing (beds) | 8,5001 | 9,482 students | 982 beds | **No** |
| Employee Housing(homes) | 558 | 2,550 employees | 1,992 residences | **No** |
| **Totals** | **9,058** | **12,032** | **2,974 ~~12,032~~** |  |

Source: UC Santa Cruz 2020a

The fourth paragraph on page 3.13-12 is amended to clarify:

The 2021 LRDP would accommodate a projected increase in enrollment of 9,482 students between the 2018-2019 and 2040-2040 academic years. If it is assumed that all new students are also from outside the UC Santa Cruz commute, this would equate to a demand for 9,482 new beds (one bed per student). The project would add up to 8,500 beds. This would result in a demand for an additional 982 beds that would not be provided on campus.

The second to last paragraph on page 3.13-12 of the Draft EIR is revised as follows:

Moreover, an additional 558 housing units ~~2,550~~ for employees would be provided ~~with housing~~ on campus ~~for 558~~ ~~in~~ under the 2021 LRDP. Assuming all employees would be new residents, which is an overstatement, this would create a demand for an additional 1,992 residences, assuming each employee lives in their own residence. This is an oversimplification of potential demand, as it would be expected that some employees already live in the region, some may share residences with others, etc., but it would be speculative to specify more refined estimates of demand for residences over the next 20-year period.

## Section 3.14, Public Services

Impact 3.14-3, beginning on page 3.14-11 of the Draft EIR, is revised as follows:

Impact 3.14~~.~~-3: Impacts on School Facilities

The increase in campus population, particularly faculty and staff (who may have children) that is expected to occur under the 2021 LRDP could result in increased enrollment at area schools. However, adequate existing capacity coupled with projections of decreased enrollment in SCCS suggests that additional students can be accommodated in existing classrooms. No new facilities would be needed. Therefore, this impact would be **less than significant**.

Under the 2021 LRDP, the number of students and faculty/staff living on campus is anticipated to increase, which could contribute additional primary and secondary students to local school districts. The largest area of potential impact would be the SCCS, because housing would be provided on campus (within the SCCS boundaries) for 558 employees (faculty/staff). While housing would also be provided for students, the number of school-age children associated with enrolled college students is expected to be minimal given their typical age range. However, to be conservative, this Draft EIR assumes that the 140 units dedicated to on-campus student family housing would be occupied by newly enrolled students with children. Based on student generation rates established by SCCS, a new dwelling unit (for faculty/staff and existing student family housing units) would generate 0.273 students for grades K-6, and 0.207 students for grades 7-12 (City of Santa Cruz 2011). As noted above, student enrollment for SCCS schools is anticipated to decrease through the 2024-2025 academic school year.

A total of 558 new dwelling units for faculty and staff housing is expected to generate 153 students in grades K-6 and 116 students in grades 7-12. The existing 140 student family housing units would generate 38 students in grades K-6 and 30 students in grades 7-12. As shown in Table 3.14-1, SCCS schools have a combined available capacity to accommodate 922 students. Even if all children living in on-campus student family housing and ~~of~~ the roughly 1,650 faculty/staff not living on campus lived in the SCCS (resulting in 450 K-6 students and 341 grade 7-12 students), or a total of ~~1,055~~ 1,123 students, they would barely exceed the forecasted capacity of SCCS schools. Realistically, a sufficient percentage of faculty and staff would live outside the SCCS in more dispersed communities, that the capacity of SCCS schools is not expected to be exceeded. Further, SCCS has established procedures for interdistrict transfers to students who would otherwise attend a different district. SCCS existing schools have adequate capacity to serve existing enrollment levels in addition to enrollment generated by the 2021 LRDP. Some percentage of faculty/staff may reside in areas outside the SCCS. Based on the available information noted above, the nearby school districts have available capacity to accept new students and declining enrollment. Given that, only a fraction of the total 1,055 estimated students generated by employees associated with the 2021 LRDP would attend schools in these districts, it is expected that adequate capacity will be available to accommodate these students. Therefore, implementation of the 2021 LRDP would have a **less-than-significant** impacts on schools.

## Section 3.15, Recreation

The last paragraph on page 3.15-11 of the Draft EIR is revised as follows:

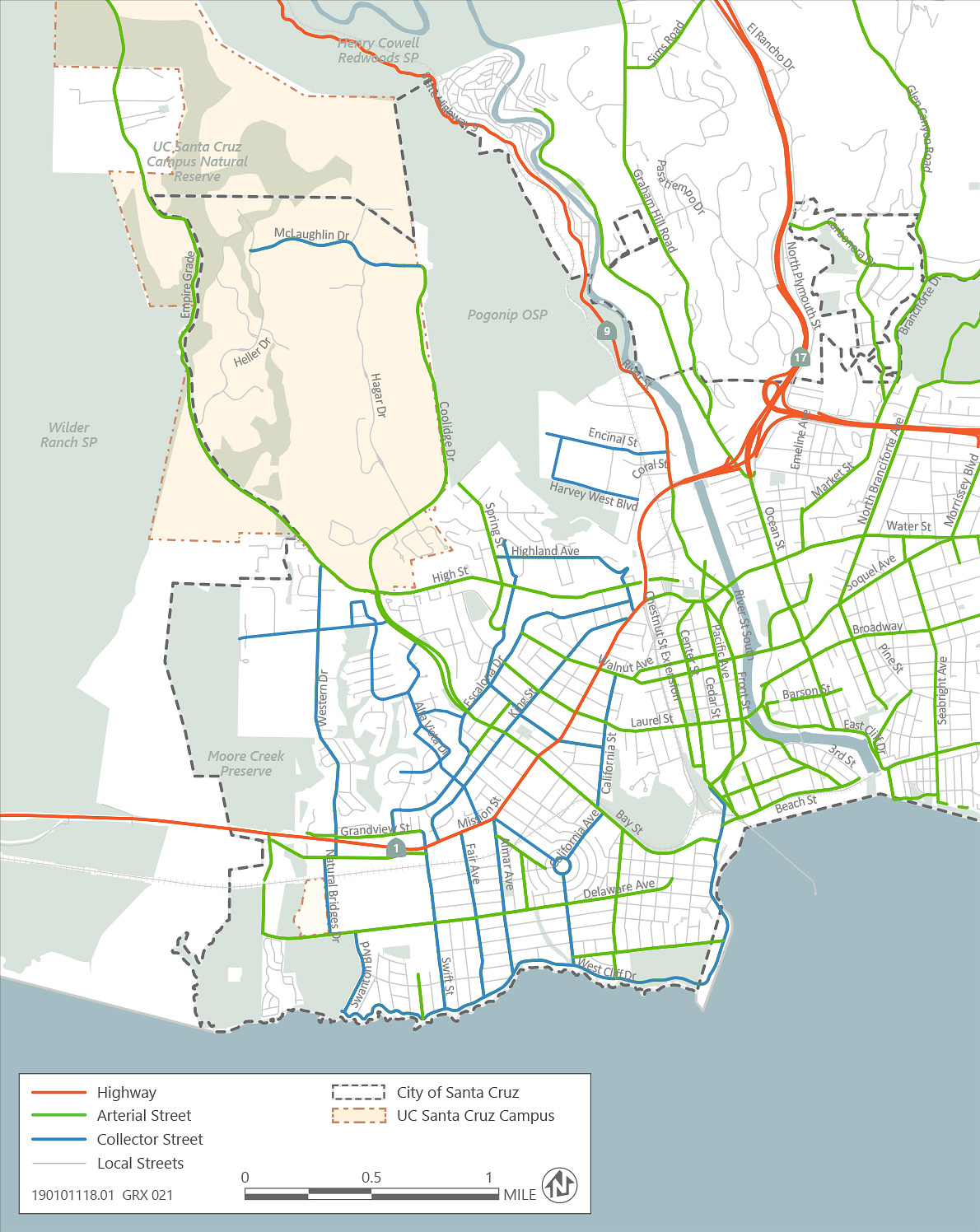
~~As shown on Figure 3.5-1, n~~New unpaved multi-use trail networks include east-west connections from Wilder Ranch State Park to Henry Cowell State Park and Pogonip City Park; and north-south trail networks through Moore Creek Preserve and the Great Meadow, connecting to the east-west trail network in the north campus. Additional trail improvements could include improved connections ~~ng~~ between the Spring Trail and ~~to~~ Spring Street within the LRDP area.~~, and Spring Box Trail to~~ The Spring Trail also provides pedestrian connection to Highway 9. Trail corridors that provide access to research areas would be limited to pedestrians only, such as Red Hill Road gravel fire road in the North Campus.

## Section 3.16, Transportation

The first paragraph on page 3.16-9 of the Draft EIR is revised as follows:

[…]in 2018. As part of the 2040 MTP/SCS, AMBAG worked closely with stakeholders to develop a new growth forecast and an updated multimodal transportation network with land use patterns and strategies based on reasonably available revenues. AMBAG developed the 2040 MTP/SCS in close coordination with its three regional transportation planning agencies (RTPAs). Each of the three counties in the Monterey Bay Area has a RTPA responsible for countywide transportation planning and implementation. The three RTPAs consist of the Transportation Agency for Monterey County, the Santa Cruz County RTC and the San Benito County Council of Governments. AMBAG also worked in close coordination with the region’s transit operators, local jurisdictions, Caltrans, the Monterey Bay Area Air Resources District, state and federal resource agencies, local agency formation commissions and other special purpose public agencies. The regional growth forecast expressed and included as part of the 2040 MTP/SCS identifies a growth in student enrollment by 2040 to between 27,000 and 28,000 FTE (AMBAG 2018). The MTP~~T~~/SCS also considers the UC Santa Cruz transit service to be a regionally significant local transit service (AMBAG 2018:2-10).

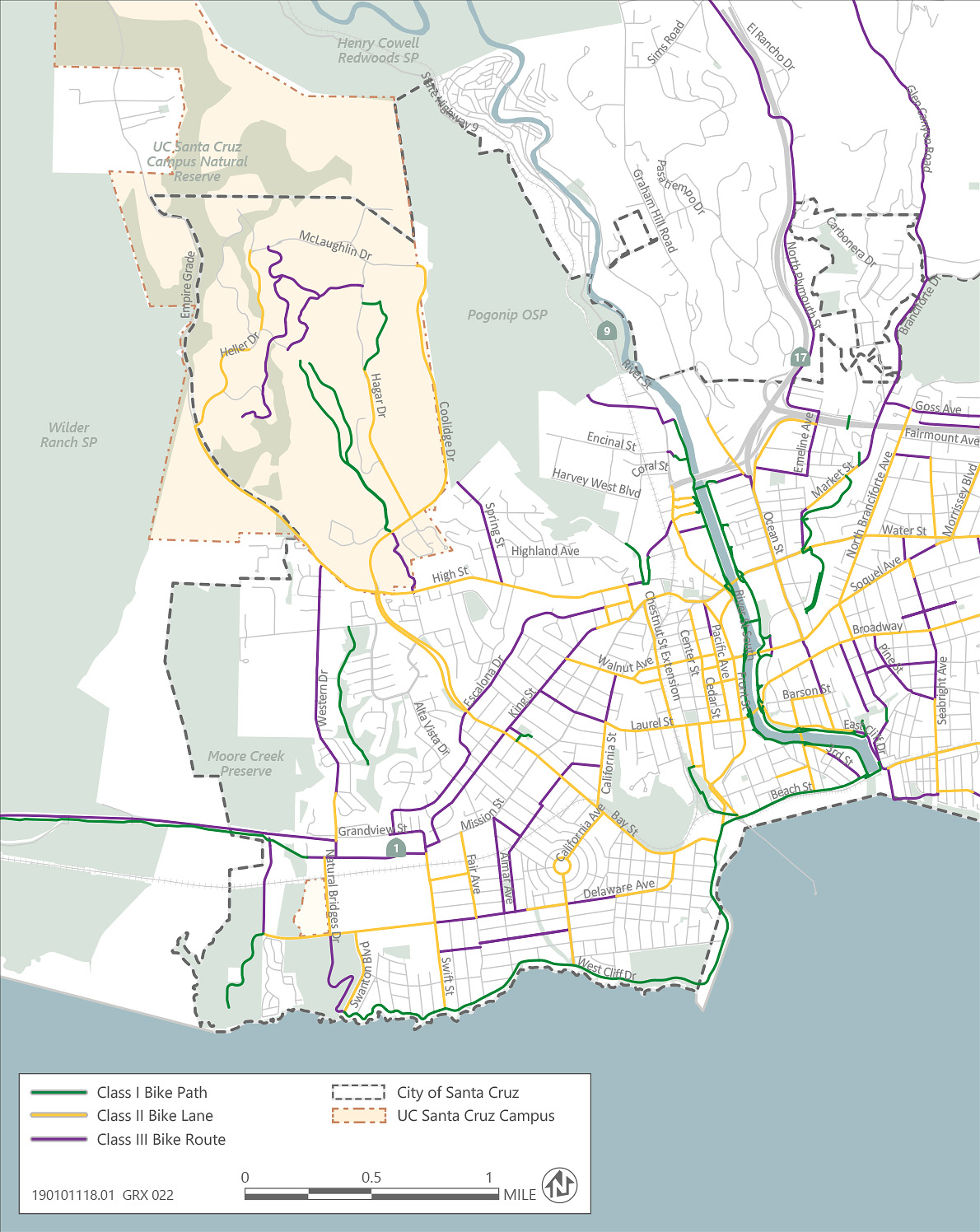
Figure 3.16-1 on page 3.16-10 of the Draft EIR was amended for clarity to remove unauthorized trails and fire roads within the LRDP area.



Source: City of Santa Cruz 2030 General Plan

[REVISED] Figure 3.16-1 Existing Circulation Roadway Network

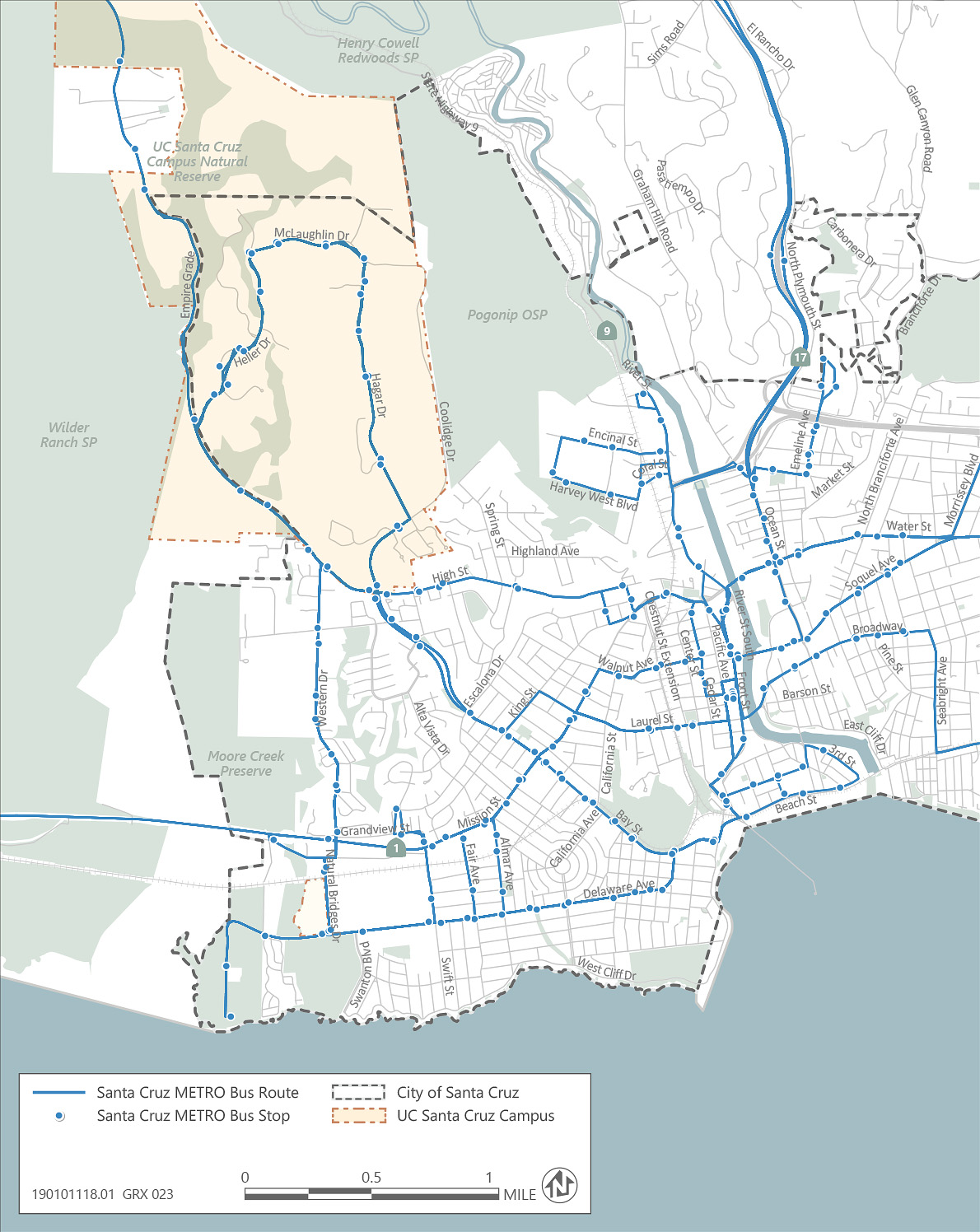
Figure 3.16-2 on page 3.16-14 of the Draft EIR was amended for clarity to remove unauthorized trails and fire roads within the LRDP area.



Source: City of Santa Cruz Active Transportation Plan

[REVISED] Figure 3.16-2 Existing Bicycle Circulation Network

Figure 3.16-3 on page 3.16-17 of the Draft EIR was amended for clarity to remove unauthorized trails and fire roads within the LRDP area.



Source: Santa Cruz METRO

[REVISED] Figure 3.16-3 Existing METRO Transit Routes to UC Santa Cruz (Pre-COVID-19)

The last paragraph on page 3.16-21 of the Draft EIR has been revised as follows:

TAPS plans, manages, maintains, and monitors the campus parking supply, excluding certain residential parking which is managed by Colleges, Housing, and Educational Services (CHES), to ensure existing parking capacity is utilized before additional parking is constructed and to ensure excess parking capacity does not encourage single-occupant vehicle use. Parking capacity is managed in an area-specific manner by parking permit type to maximize utilization and turnover.

Table 3.16-2 on page 3.16-22 of the Draft EIR has been amended to state:

Table 3.16-2 Existing Main Residential Campus and Westside Research Park Parking Supply by Parking Program Category

| Parking Program Categories | Parking Capacity |
| --- | --- |
| Accessible~~Disabled~~ | 159 |
| Medical | 77 |
| Visitor | 326 |
| Motorcycle | 306 |
| University | 99 |
| Reserved | 340 |
| Loading | 28 |
| Student Commuter | 1,399 |
| Faculty/Staff/Grad Commuter | 2,284 |
| On Campus Student Housing ~~(managed by CHES)~~ | 326 |
| On Campus Employee Housing ~~(managed by CHES)~~ | 473 |
| Total (without on campus housing) | 5,018 |
| Total (with on campus housing) | 5,817 |

Source: data received from UC Santa Cruz and adapted by Fehr & Peers in 2020.

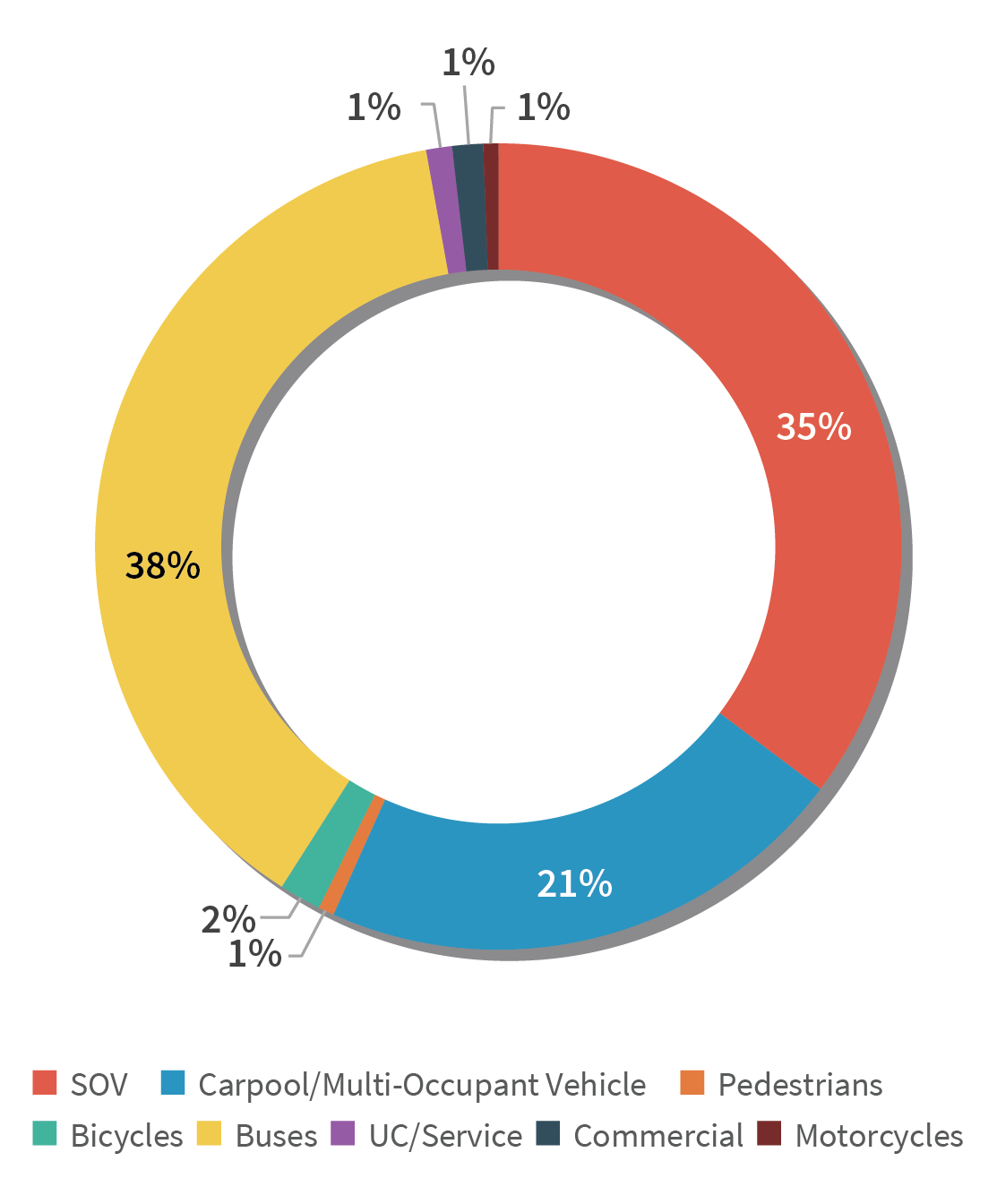
The second and third full paragraphs on page 3.16-23 of the Draft are revised to state:

In addition to the listed improvements, the RTC recently completed the Unified Corridor Investment Study to identify multimodal transportation investments that best utilize SR 1 and the Santa Cruz Branch Rail Line to serve the community’s transportation needs, which would benefit both the main residential campus and Westside Research Park by reducing the VMT for the two areas. The study recommends Bus ~~t Rapid Transit (BRT)/bus~~ on shoulder on Highway 1; mass transit (rail or BRT) on the rail corridor; multi-modal improvements on the Soquel Drive/Freedom Boulevard corridor). RTC is now working on a preferred alternative for the rail corridor as part of a Transit Corridor Alternative Analysis. UC Santa Cruz plans to integrate the planned mass transit and trail facilities into future mixed-used land uses at Westside Research Park.

The following projects have been identified in the City of Santa Cruz’s two-year Capital Improvement Program for the fiscal years 2019-2021 for near-term construction, contingent on receiving approval and funding:

* Downtown Intersection Improvements – addressing deficiencies at Pacific/Laurel, Front/Laurel, and Front/Soquel;
* Bay Street/High Street Intersection Improvements – Install protected left-turns on High Street or a roundabout to improve mobility; and,
* SR 1/SR 9 Intersection Improvements.

The legend of Figure 3.16-6 has been amended to clarify the designation of carpool as carpool/multi-occupant vehicle, as shown below:



Source: UC Santa Cruz Transportation and Parking Services, counts taken in May 2019.

Figure 3.16-6 UC Santa Cruz Spring 2019 Mode Share (by person-trips)

The third full paragraph on page 3.16-25 has been amended to reflect the final amount contributed to Santa Cruz Metropolitan Transit District (SCMTD) as follows:

Since 1972, UC Santa Cruz has maintained a service agreement with SCMTD that provides any registered student access to any regularly scheduled transit route operating within Santa Cruz County without paying a fare. In 1989, this agreement was extended to include any UC Santa Cruz faculty or staff member displaying a UC Santa Cruz Employee Metro Bus Pass. Historically, compensation models have varied, and have included both a per-rider methodology and flat-fee. Currently, SCMTD bills UC Santa Cruz based on a per-trip model, which is scalable based on the level of service purchased per month. UC Santa Cruz routes account for around 50 percent of the total SCMTD ridership countywide, with average daily ridership during the 2018-19 academic year averaging around 10,100 students and 270 faculty and staff. UC Santa Cruz’s payments to the SCMTD for 2019-2020 is around $3~~4.5~~ million. The UC Santa Cruz Student Bus Pass Program with SCMTD and the Campus Shuttle Program are funded from a self-assessed quarterly Student Transit Fee (for student ridership billings) and parking revenues/employee bus pass fee (for faculty and staff ridership billings).

The last paragraph on page 3.16-25 has been amended to state:

This program provides a commute alternative for faculty, staff, and students. TAPS operates approximately 14 vanpools originating from surrounding cities and towns, such as Aptos, Campbell, Monterey, San Jose/Bascom, South San Jose, Watsonville, and Castroville, with new routes to Los Gatos, Salinas/Prunedale, San Lorenzo Valley, and Scotts Valley ~~are~~ being developed. Demand is higher than available capacity, as evidenced by the waitlist. About a dozen parking spaces in heavily utilized parking areas have been reserved for vanpool drivers. As of 2018-2019, about 130 people participate in the UC Santa Cruz Vanpool Program.

The discussion of VMT metrics on pages 3.16-27 and 3.16-28 of the Draft EIR are revised as follows:

VMT Metrics

The OPR *Technical Advisory* sets forth guidance regarding metrics that may be calculated to evaluate VMT impacts from three types of land uses: residential, office, and retail. An institutional land use such as a university campus is not specifically addressed in the advisory. However, for purposes of this EIR, the campus is treated as a mixed-use development with its residential land uses corresponding to the residential land uses addressed in the advisory and its non-residential land uses corresponding to office use in the advisory.

With regard to metrics, the advisory recommends use of a total VMT per capita metric, which is estimated based on the total VMT generated by a project divided by the project’s total service population. For VMT purposes, service population is defined as the sum of all residents and employees. Thus, residents who are also workers are counted twice within the service population. For residential land uses, the advisory suggests a metric based on home-based vehicle trips, and for office uses, it suggests a metric based on only home-based work vehicle trips.

This EIR uses all three metrics to evaluate the project impact analysis:

1. total project generated VMT per service population,
2. home-based project generated VMT per campus resident student, faculty and staff (residential VMT), and
3. home-based project generated employment VMT per faculty, and staff (employee VMT).

Commuter students are accounted for in the total per service population VMT.[[2]](#footnote-3) These metrics are consistent with the OPR Technical Advisory and appropriate for use for the land use mix on the campus, which functions both as a workplace (for commuting faculty, staff and students) and as a residence (for on-campus student and faculty/staff residents).

Impact 3.16-1 on page 3.16-31 of Draft EIR is revised as follows:

While emergency access and evacuation capacity would be improved due to the proposed new entrance on Empire Grade, growth in typical daily vehicular travel demand would not be induced because ~~virtually all typical~~ some of the daily campus traffic ~~must~~ that currently passes through existing intersections to the south of the proposed new access point would use the new northern entrance to access existing and proposed development north of the campus core.

Impact 3.16-2, including Table 3.16-6, on pages 3.16-33 and 3.16-34 of the Draft EIR is revised as follows:

Impact 3.16-2: Conflict or Be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) Related to Vehicle Miles Traveled

Implementation of the 2021 LRDP would reduce total campus VMT per capita and residential VMT per campus resident compared to baseline conditions. Residential VMT per campus resident would be below the significance threshold of 15 percent below baseline VMT per campus resident. However, commuter VMT per worker would increase relative to baseline conditions and would not meet the significance threshold of 15 percent below baseline commuter VMT per employee. Therefore, this impact would be **significant**.

Total Campus VMT

Table 3.16-6 below summarizes the baseline and growth assumptions for the analysis scenarios and Table 3.16-7 presents the total daily VMT generated by the UC Santa Cruz main residential campus and Westside Research Park (i.e. “Total Campus” VMT). The total campus VMT per capita was calculated using the total number of people living, working, and attending school at UC Santa Cruz. This includes faculty/staff living on campus, their associated family members (i.e., spouse and child(ren), students living on campus, any associated family members for on-campus student residents, students living off campus, non-UC employees (e.g., vendors), and visitors to campus.

As shown in Table 3.16-~~6~~7, the implementation of the 2021 LRDP would result in a decrease in total campus VMT per capita from 9.1 to 7.9 miles, which represents a 13 percent reduction. The reduction in total campus VMT per capita is primarily related to the increase in available housing on campus which would reduce the number of per capita vehicular trips to and from the main residential campus. However, the project-generated total campus VMT per capita would marginally exceed the significance threshold of 7.7 miles (15 percent below 9.1 miles or 9.1 miles x (1.0 – 0.15) = 7.7 miles) and the project-generated total campus VMT per capita impact would be significant.

It should be noted that the UC Santa Cruz 2017-2022 Campus Sustainability Plan includes a goal to reduce commute VMT by five percent by 2022. While the results in Table 3.16-~~6~~ 7 ~~don’t~~do not measure VMT between the years 2017 and 2022, it does indicate that the proposed 2021 LRDP would support the goal.

Table 3.16-6 2021 LRDP Land Use Summary and Model Inputs Vehicle Trip and Total Vehicle Miles Traveled Summary

| Land Use/Campus Population | VMT Metric Applied1 | 2019 Baseline | 2019 Plus 2021 LRDP |
| --- | --- | --- | --- |
| ~~Land Use Summary~~ |  |  |  |
| Resident Students | Residential, Total Campus | 9,283 | 17,783 |
| Commuter Students | Total Campus | 9,235 | ~~8,058~~10,217 |
|  | **Total Enrollment** | **18,518** | **28,000** |
| Resident Faculty and Staff | Residential, Employment, and Total Campus | 270 | 828 |
| Commuter Faculty and Staff | Employment, Total Campus | 3,387 | 5,702 |
| Non-UC Santa Cruz Employees (Commuters) | Employment, Total Campus | 640 | 990 |
|  | **Total Employment** | **4,297** | **7,520** |
| Faculty and Staff Housing | Residential, Total Campus | 270 | 828 |
| Non-UC Employee Housing | Residential, Total Campus | 386 | 1,184 |
|  | **Total Faculty and Staff Household Population** | **656** | **2,012** |

1 VMT metric (residential VMT, employment VMT, or total campus VMT) in which each land use is accounted for.

Table 3.16-7 2021 LRDP Vehicle Trip and SB 743 Vehicle Miles Traveled Summary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ~~SB 743 VMT Estimates~~**Service Population** | **Land Use1** | **VMT Metric Applied2** | **Calculation** | **2019 Baseline** | **2019 Plus 2021 LRDP** | |
| Residents ~~(Resident students + Total Faculty and Staff Household Population)~~ | Resident Students + Total Faculty and Staff Household Population | Residential,  Total Campus | A | 9,939 | 19,795 | |
| ~~Employees (Total~~ Employees~~ment)~~ | Total Employment | Employment,  Total Campus | B | 4,297 | 7,520 | |
| Students | Total Enrollment | Total Campus | C | 18,518 | 28,000 | |
| **Total Service Population  (Residents + Employees + ~~Enrollment~~Students)3** | | | **D  (A + B + C)** | **32,754** | | **55,315** | |
| **Total Campus Vehicle Trips (from SCC Travel Model)** | | | **E** | **28,900** | | **44,700** | |
| **Average Trip Length in miles~~)~~ (from SCC Travel Model)** | | | **F** | **10.3** | | **9.8** | |
| **Total Campus Vehicle Miles Traveled (VMT) in miles (from SCC Travel Model)~~2~~3** | | | **G (E x F)** | **298,000** | | **439,000** | |
| **Total Campus VMT per Capita in miles\*** | | | **H (G/D)** | **9.1** | | **7.9** | |
| **VMT per Capita Threshold (15 percent below existing)** | | | **2019 Baseline H x (1.00-0.15)** | **7.7 miles** | | | |

1 Land use/campus population inputs from Table 3.16-6.

~~1~~2 VMT metric (residential VMT, employment VMT, or total campus VMT) in which each land use is accounted for.

3 Service population is defined as those populations generating residential and commute activity; thus, ~~R~~resident students are captured both under “Residents” and “Students,” because resident students generate both residential and commute trips.

~~2~~4 Total campus vehicle trips multiplied by average trip length (rounded to nearest thousand).

~~3~~5 Total campus VMT divided by total service population.

References to Table 3.16-7, beginning on page 3.16-34 have been amended to reflect new table numbering, as follows:

Residential VMT

The VMT per capita forecasts from the modified SCC Travel Model for the campus’ residential population under the 2021 LRDP are summarized in Table 3.16-8~~7~~, below.

Table 3.16-8~~7~~ 2021 LRDP Generated Residential and Employment VMT Per Capita

|  |  |  |  |
| --- | --- | --- | --- |
| VMT Metric | 2019 Countywide Average | 15% Below Countywide Average1 | UC Santa Cruz Campus 2019 plus 2021 LRDP |
| Residential VMT per Capita | 10.4 | 8.8 | 5.6 |
| Employment VMT per Capita | 10.5 | 8.9 | 12.5 |

Note: 15% below Countywide average is used for impact determination.

Source: Modified SCC Travel Model

As shown in Table 3.16-8~~7~~, campus development under the 2021 LRDP would generate 5.6 VMT per resident, which is below the significance threshold of 15 percent below the countywide average for residents (i.e., 8.8 VMT per resident). Thus, the impact related to the residential VMT per capita would be less than significant.

Employment VMT

The employment VMT per capita forecasts from the modified SCC Travel Model for resident and commuter faculty and staff (commuters) upon full implementation of the 2021 LRDP are summarized in Table 3.16-8~~7~~, above. As shown in Table 3.16-8~~7~~, with the implementation of the 2021 LRDP, faculty, staff and students living off campus would generate 12.5 VMT per worker, which is above the significance threshold of 15 percent below the countywide average for workers (i.e., 8.9 VMT per worker). Therefore, the 2021 LRDP would result in a significant impact related to the employment VMT.

Within Mitigation Measure 3.16-2, the first bullet under the subheading Implementation Level 2 on page 3.16-36 has been moved under the subheading for Implementation Level 1 as follows:

Implementation Level 1

* Replace monthly/annual parking fee with “pay at exit” use-based, daily or other alternative, dynamic payment mechanisms and parking fee policies that encourage off-peak travel.

…

Implementation Level 2

* ~~Replace monthly/annual parking fee with “pay at exit” use-based, daily or other alternative, dynamic payment mechanisms and parking fee policies that encourage off-peak travel.~~

## Chapter 3.17, Utilities and Service Systems

The fourth paragraph on page 3.17-3 of the Draft EIR is revised as follows:

On December 15, 2014, DWR announced its official “initial prioritization” of the state’s groundwater basins for purposes of complying with the SGMA, and this priority list became effective on January 1, 2015. The Soquel-Valley Groundwater Basin (Basin Number 3-01) was identified by DWR as one of 21 groundwater basins to be reclassified as critically overdrafted. In September 2015, the Soquel-Aptos Groundwater Management Committee was formed which includes representatives from the County of Santa Cruz, Central Water District, Soquel Creek Water District (SqCWD), the City of Santa Cruz, and private well owners. This group was superseded by the Santa Cruz Mid-County Groundwater Agency (MGA) in March of 2016, through a joint powers agreement to oversee management of the basin. ~~is a joint exercise of powers entity with interest in management of the Soquel-Aptos groundwater basin.~~

The fifth paragraph on page 3.17-3 of the Draft EIR is revised as follows:

The City of Santa Cruz receives a minor amount (5 percent) of drinking water from groundwater basins. The easterly area of the City is located within the Santa Cruz Mid-County Groundwater Basin ~~(which includes the Soquel-Valley Groundwater Basin)~~, and the westerly area is within the West Santa Cruz Terrace Basin~~Santa Margarita Groundwater Basin~~.

The third paragraph on page 3.17-9 of the Draft EIR is revised as follows:

The City of Santa Cruz relies on groundwater for 5 percent of its potable supply. ~~Two groundwater agencies serve the City of Santa Cruz, the Santa Cruz Mid-County Groundwater Agency and the Santa Margarita Groundwater Agency.~~ The City of Santa Cruz participates in groundwater sustainability planning for two Groundwater Sustainability Agencies—the Santa Cruz Mid-County Groundwater Agency and the Santa Margarita Groundwater Agency.

The fifth paragraph on page 3.17-9 has been amended as follows:

The Santa Margarita GSP~~, covering much of North Santa Cruz County including the westerly area of the City of Santa Cruz and UC Santa Cruz,~~ is currently in preparation, with a planned completion data of 2022~~.~~ (Santa Margarita Groundwater Agency 2020).

## Chapter 3.18, Wildfire

The discussion of the UC Santa Cruz Emergency Operations Plan on pages 3.18-5 and 3.18-6 of the Draft EIR is revised as follows:

Emergency Operations Plan

As noted above, UC Santa Cruz adopted its EOP in November 2016. The EOP establishes policies, procedures and an organizational structure for the preparedness, response, recovery and mitigation of disasters and events impacting the main campus and its satellite facilities. The plan also provides guidance to departments, units and activities within UC Santa Cruz with a general concept of potential emergency assignments before, during, and following emergency situations. The UC Santa Cruz EOP adopts the Standardized Emergency Management System (SEMS), an emergency management organizational structure used by emergency response agencies statewide to coordinate response to multi-jurisdictional or multi-agency incidents. By incorporated SEMS, UC Santa Cruz implements the same emergency response organization structure and terminology as other city, county, and state agencies. SEMS incorporates:

* The Incident Command System (ICS), a field-level emergency response system based on management by objectives;
* Multi-Agency Coordination, affected agencies working together to coordinate allocations of resources and emergency response activities;
* Mutual Aid, a system for obtaining additional emergency resources from non-affected jurisdictions;
* Operational Area Concept, a system for coordinating damage information, resource requests and emergency response; and
* National Incident Management System (NIMS), a system for coordinating federal resources and response.

The ICS is a foundation part of the SEMS; it provides an organizational structure that can grow rapidly in response to the requirements of an emergency. The structure identifies employee roles, activates certain positions needed to manage a particular incident or level of emergency, promotes unity of command, and establishes a unified command when multiple jurisdictions or agencies have incident response responsibilities. The UC Santa Cruz EOP also outlines evacuation procedures for building emergencies (Stage 1) and campus-wide emergencies (Stage 2). The procedures and actions that students, faculty, and staff should take during an evacuation are communicated by residential staff assigned to a college, building emergency coordinator in academic/administrative buildings, public address announcement from public safety vehicles, and the CruzAlert system. CruzAlert is the UC Santa Cruz emergency notification system used to quickly communicate information to the campus community during emergency situations (UC Santa Cruz 2016).

In May 2019, UC formed the Systemwide Air Quality Protocol Working Group to evaluate operational- and health-related issues and develop recommendations for how UC campuses should respond to various conditions and potential unhealthy air quality due to smoke from wildfire events. The working group compiled an air quality index (AQI) based decision matrix for wildfire smoke events, which was recommended for implementation at all UC campuses. As evidenced by procedures implemented as part of UC Santa Cruz’s response to the CZU Lightning Complex fire, UC Santa Cruz implements the decision matrix and stages the level and type of response/requirements, based on AQI values (UC Santa Cruz 2021).

On page 3.18-14, the impact summary for Impact 3.18-2 has been amended as follows to correct a typo:

Impact 3.18-2: Wildfire Risk Associated with New Development and Land Use Patterns

Implementation of the 2021 LRDP would place new development within the north campus, and along the margins of existing development on the central and lower campus. The UC Santa Cruz EOP outlines evacuation procedures for building emergencies and campus-wide emergencies, ~~f~~and the UC Santa Cruz OES also maintains an ongoing schedule of inspections for all buildings to ensure that fire hazards are mitigated and also conducts plan reviews and inspections of building construction and renovation activities. However, in the absence of an adopted Vegetation Management Plan, the wildfire risk associated with placing new development in close proximity to an HFHSZ and proposed changes in land use under the 2021 LRDP would be **significant**.

On page 3.18-17, Mitigation Measure 3.18-2 has been modified to state:

**Mitigation Measure 3.18-2: Prepare Campus-Wide Vegetation Management Plan**

Upon approval of the 2021 LRDP and certification of the EIR, UC Santa Cruz shall initiate preparation and, within 2 years, begin implementation of a campus-wide vegetation management plan. The campus-wide vegetation management plan shall identify fire hazard areas consistent with California Government Code Sections 51179 and 51182, and implement a policy framework for managing fuel loads and maintaining defensible space consistent with Public Resources Code Section 4291. Policies and implementation actions that shall be considered as part of the plan will include, but are not limited to:

* vegetation management techniques for fire hazard mitigation, including thinning, pruning, removing or otherwise altering vegetation to reduce the potential for ignitions and to modify potential fire behavior; different vegetation management techniques shall be identified, depending on vegetation type, location, condition, and configuration;
* Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead or dying vegetation), trimming of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the LRDP area;
* vegetation management and maintenance standards for dominant vegetation types in the LRDP area, specific recommendations for key wildfire risk areas, and the procedures for identifying and planning annual vegetation treatment operations;
* fuel management requirements, including clearing vegetation within 100 feet of structures, removing trees and branches that extend within 100 feet of a chimney/stovetop outlet, clearing roofs of vegetative debris, and maintaining vegetation adjacent to overhanging of a building;
* best management practices implemented to avoid and/or minimize impacts associated with soil erosion, biological resources, and water quality, including the use of fire resistant/drought tolerant landscaping within 100 feet of new/modified structures within high or very high fire hazard zones; and
* building construction requirements for new development located in HFHSZs, including fire- or flame-resistant roofing material, roof vent coverings/screens, exterior siding, skylights, windows, doors, and decks, consistent with California Fire Code Chapter 49.

As part of this effort, UC Santa Cruz shall also consider and incorporate actions/strategies included as part of the CAL FIRE California Vegetation Treatment Program.

## Chapter 4, Cumulative Impacts

Table 4-1 on pages 4-1 and 4-2 of the Draft EIR amended for consistency purposes to state:

Table 4-1 Geographic Scope of Cumulative Impacts

| Resource Issue | Geographic Area |
| --- | --- |
| Aesthetics | Local (LRDP area and surrounding public viewpoints) |
| Agriculture and Forestry Resources | Regional (Santa Cruz County) |
| Air Quality | Regional (North Central Coast Air Basin for pollutant emissions that have regional effects)  Local (immediate vicinity for pollutant emissions that are highly localized such as Carbon Monoxide) |
| Archaeological, Historical, and Tribal Cultural Resources | Historical Resources: Local (LRDP area and City of Santa Cruz)  Archaeological and Tribal Cultural Resources: Regional (historic lands of the Uypi people) |
| Biological Resources | Regional (Santa Cruz County) and local (LRDP area and immediately surrounding area) |
| Energy | Regional (Pacific Gas and Electric Company grid in Santa Cruz County) |
| Geology and Soils | Local (LRDP area) |
| Greenhouse Gas Emissions and Climate Change | Global |
| Hazards and Hazardous Materials | Local (LRDP area) |
| Hydrology and Water Quality | Regional (Santa Cruz County) and local (LRDP area) |
| Land Use and Planning | Local (LRDP area and immediately surrounding area) |
| Noise | Local (immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources) |
| Population and Housing | Regional (Santa Cruz County) and local (LRDP area and immediately surrounding area) |
| Public Services | Local service areas of service providers |
| Recreation | Regional (Santa Cruz County) and local (LRDP area) |
| Transportation | Regional (Santa Cruz County) and local (LRDP area and immediately surrounding area) |
| Utilities and Service Systems | Local service areas of utility providers |
| Wildfire | Regional (Santa Cruz County) and local (LRDP area and immediately surrounding area) |

The first paragraph under the subheading “Operational Emissions” on page 4-20 of the Draft EIR is revised as follows:

NCCAB is currently designated as a nonattainment-transitional area for ozone and non-attainment for PM10. As noted above, MBARD considers emissions of ROG and NOX (ozone precursors), and PM10 from an individual project that exceed the applicable mass emissions thresholds to be a substantial contribution to a cumulative impact on regional air quality.

The first paragraph on page 4-23 of the Draft EIR is revised to add the following:

The cumulative context for the cultural resources cumulative analysis considers the broad regional system of which the resources are a part. The cumulative context for archaeological resources, human remains, and tribal cultural resources is the former territory of the Ohlone tribelet, recorded in Mission Santa Cruz records as Uypi. The historic lands of the Uypi people have been affected by development since the arrival of the Portolá expedition in 1769. Division of the land into land grants was soon followed by limestone production and related commercial development through the 1800s. Development of the Uypi lands continued with agricultural growth, residential growth throughout the county and city of Santa Cruz, and the establishment of UC Santa Cruz in 1965. These activities have resulted in an existing significant adverse effect on tribal cultural resources. The cumulative context for historical resources is UC Santa Cruz and the city of Santa Cruz, where common patterns of historic-era settlement have occurred over roughly the past two centuries.

The last paragraph on page 4-23 of the Draft EIR is amended to state:

Future development associated with the 2021 LRDP would involve land development activities that could cause a substantial adverse change in the significance of a tribal cultural resource. ~~Although no specific tribal cultural resources, as defined in PRC Section 21074, have been documented on the main residential campus or the Westside Research Park, the campus is located in a region where significant resources have been recorded.~~ The Amah Mutsun Tribal Band identified the eight prehistoric archaeological sites on the UC Santa Cruz main residential campus as tribal cultural resources. Compliance with PRC Section 21080.3.2 and Section 21084.3 (a) would ensure that treatment and disposition of the tribal cultural occurs in a manner consistent with the California Native American Heritage Commission guidance. Further, implementation of Mitigation Measure 3.4-2 would require UC Santa Cruz to provide the culturally affiliated tribe the to monitor construction and by requiring appropriate and respectful treatment (i.e., proper care as determined through preparation and implementation of a treatment plan that is approved by the tribe) of artifacts if they are recovered. With compliance with existing regulations and implementation of Mitigation Measure 3.4~~1~~-2, development under the 2021 LRDP would not contribute to a cumulative loss of tribal cultural resources in the area, and as a result would not be cumulatively considerable.

Section 4.3.5, “Biological Resources” on pages 4-24 and 4-25 of the Draft EIR is revised as follows:

The context for cumulative impacts on biological resources is the LRDP area, the range of affected special-status species and sensitive habitats, as well as adjacent migration and movement corridors (e.g., natural habitat areas surrounding the LRDP area, the Pacific flyway for migratory birds) that are connected to the LRDP area.

Past, present, and future development projects have and likely will result in impacts on special-status plants, special-status wildlife, sensitive natural communities, riparian habitat, state or federally protected wetlands, wildlife movement corridors, and native wildlife nurseries. Most of the projects in Table 4-2 would be discretionary and subject to environmental review under CEQA or otherwise subject to regulations protective of biological resources (e.g., ESA, CESA, and California Fish and Game Code), and would be required to implement measures to avoid, reduce or compensate for adverse effects on sensitive natural resources. The existing cumulative impacts of these projects, activities, and disruptions to ecosystem and biophysical processes (e.g., climate change, invasive species invasions) on special-status species, sensitive natural communities, riparian habitat, state and federally protected wetlands, and wildlife movement corridors and nursery sites have been substantial, and are considered significant.

Additionally, as described in Section 3.18, “Wildfire,” the CZU Lightning Complex fire burned approximately 86,509 acres in Santa Cruz and San Mateo Counties in August and September 2020, including forested areas at Big Basin, Butano, and Henry Cowell State Parks (Figure 3.18.2; CAL FIRE 2020, Sempervirens Fund 2020). Wildfire is a natural process in ecosystems, including redwood forest ecosystems (Sempervirens Fund 2020). The impacts of high-intensity wildfires, like the CZU Lighting Complex fire, are complex and vary dependent on the species. Some plant species are likely killed during wildfires, while other plant species depend on fire for germination. Some wildlife species were capable of fleeing during the CZU Lighting Complex fire, while others (e.g., immobile young) likely perished. High-intensity wildfires can alter habitats such that they temporarily no longer provide the optimal attributes (e.g., canopy cover, understory complexity) for some wildlife species, while improving habitat for other wildlife species. Although wildfire is a natural process, the CZU Lighting Complex fire contributed to the existing significant cumulative impacts described above.

As analyzed and described in Section 3.5, “Biological Resources,” implementation of projects under the 2021 LRDP would result in several direct and indirect impacts related to the disturbance or loss of special-status plants, special-status wildlife and wildlife habitat, riparian habitat, sensitive natural communities, state or federally protected wetlands, wildlife movement corridors, wildlife nurseries, and conflicts with the provisions of the Ranch View Terrace HCP. Implementation of the 2021 LRDP, in combination with other past, present, and reasonably foreseeable projects that have resulted or would result in similar impacts, would contribute to the significant cumulative effects on these biological resources if left unmitigated.

The third paragraph on page 4-40 of the Draft EIR is revised as follows:

VEHICLE MILES TRAVELED

As noted in Section 3.16, “Transportation,” existing region-wide and project-generated VMT estimates were calculated using the SCC Travel Model. The model uses land use data and transportation network inputs, including highway, arterial, and transit systems, across the County to assign trips within the region’s transportation network and estimates of daily person trips and associated VMT. The model also estimates the travel that occurs between Santa Cruz County and surrounding counties even though these areas are not included within the model’s geographic boundary. The cumulative (year 2040) model also includes land use growth consistent with AMBAG based on adopted ~~growth~~ plans the municipalities within the county that are used to estimate future (i.e., cumulative) transportation conditions.

## Chapter 5, Other CEQA sections

The first paragraph on page 5-4 of the Draft EIR was revised as follows:

Forecasts concerning growth in Santa Cruz ~~c~~County provide a wide range of predictions. Per a recent report published by the California Department of Finance (DOF), the county of Santa Cruz (County) is anticipated to experience a minor decrease in population between 2020 and 2040 (117 fewer residents or 0.04 percent compared to DOF’s 2020 estimate of 273,999 residents) (DOF 2020), although countywide population would have minor fluctuations during that period, reaching a peak projected population of 276,168 in 2033. Other growth projections identify an increase in countywide population. The Association of Monterey Bay Area Governments (AMBAG) identifies a countywide increase of 25,734 residents or 9 percent over the same period (AMBAG 2018). Per AMBAG’s 2018 Regional Growth Forecast, approximately 8,000 of the projected increase in countywide population between 2020 and 2040 is associated with UC Santa Cruz. Based on projected increases in development within the County, including those listed in Table 4-1 of Chapter 4, “Cumulative Impacts,” the AMBAG projections may more accurately reflect growth expectations. Further, the AMBAG projections are used to develop various regional planning documents, including the sustainable community strategy required by SB 375 (Chapter 4.2 of CEQA) to provide for more efficient land use patterns that facilitate a reduction in ~~regional VMT and~~ per capita greenhouse gases over time.”

## Chapter 6, Alternatives

The third bullet on page 6-3 has been amended as follows:

* Recognize, to the extent feasible, UC Santa Cruz and regional histories within the campus, including protecting tribal cultural resources and maintaining the integrity of existing historic structures and enhancing the Cowell Lime Works Historic District as a campus gateway.

The fifth paragraph on page 6-25 has been amended for clarity as follows:

Alternative 4 would provide campus facilities and infrastructure to accommodate projected increases in student enrollment up to a projected 28,000 FTE, consistent with the University of California’s forecasted need for additional public university capacity. Development on the main residential campus would be reduced compared to the proposed 2021 LRDP which would maintain existing open space within the LRDP area. Similar to the 2021 LRDP, this alternative would also maintain existing historic structures, and support a more efficient roadway network. Therefore, this alternative would meet some of the project objectives (Project Objectives 4, 5, 7, and 8). However, under this alternative on-campus student housing would only be provided for students enrolled on the main residential campus and Westside Research Park, but not for students~~employees~~ at UC MBEST. Similarly, the alternative provides on-campus housing for about 25 percent of the new employees~~students~~ on the main residential campus and Westside Research Park, but not for employees at UC MBEST. The reduction in on-campus housing opportunities would contribute to off-campus housing demands, although these demands would likely be closer to the UC MBEST campus, but would not fully meet the UC Santa Cruz objective of accommodating 100 percent new student enrollment above 19,500 and up to 25 percent of new faculty/staff (Project Objectives 1 and 6).

## Chapter 8, References

The reference information related to AMBAG provided at the bottom of page 8-2 is revised as follows:

AMBAG. *See* Association of Monterey Bay Area Governments.

Association of Monterey Bay Area Governments. 2018. 2018 Regional Growth Forecast. Available: <https://ambag.org/sites/default/files/2020-01/08-AMBAG_MTP-SCS_AppendixA_PDFA.pdf>. Accessed August 25, 2020.

The following reference has been added to page 8-26 of the Draft EIR:

Sempervirens Fund. 2020 (August). *What Recovery Means for Big Basin and Santa Cruz Redwoods.* Available: <https://sempervirens.org/news/what-recovery-means-for-big-basin-and-santa-cruz-redwoods/>. Accessed April 15, 2021.

The reference information related to AMBAG provided on page 8-29 of the Draft EIR is revised as follows:

AMBAG. *See* Association Monterey of Bay Area Governments.

Association of Monterey Bay Area Governments. 2018. 2018 Regional Growth Forecast. Available: <https://ambag.org/sites/default/files/2020-01/08-AMBAG_MTP-SCS_AppendixA_PDFA.pdf>. Accessed August 25, 2020.

## Appendices

### Appendix D, Air Quality Modeling

The total trips for the 2019 plus Project scenarios included in the table titled “VMT forecasts from Fehr and Peers” on page 11 has been amended from 44,600 to 44,700 trips.

### Appendix G, Hydrologic Conditions Technical Information

Append G has been amended to include a summary of water year rainfall modelling information, conducted for the purposes of supplementing the analysis of the Draft EIR.

### Appendix I, VMT Analysis Memorandum

The second paragraph on page 3 has been amended as follows:

Given that the model overestimates campus vehicle trips, the trip generation rates for the campus were adjusted to more consistent with the UCSC tool. It should be noted, that as one of the final validation steps to assess the validity of the adjust trip generation rates, the model outputs with the adjust trip generation rates were compared to the daily vehicle driveway counts discussed on page 5 and illustrated in **Table 3**.

The first and second paragraph on page 5 have been amended as follows:

As a final step, the vehicle generation and assignment model was validated using observed traffic counts collected around the UCSC campus during Fall 2019. Table 3 shows a comparison of daily vehicle volumes at the two campus driveways after incorporating the trip generation changes described above.

Within the SCC model, the campus is presented by two transportation analysis zones (TAZs), or geographic areas. Due to the limited on-campus zonal detail within the SCC Travel Model, the model assigns most trips to the main entrance at Coolidge Drive/High Street and a smaller fraction to the west entrance. However, the total number of vehicle trips from the model accessing/leaving the campus at the two main entrances is within 10 percent of the observed data and this shows the model is reasonably estimating the daily number of trips generated by the campus. For the purpose of the VMT calculation the total number of trips accessing the campus is more important than which gate they use, since the model link distance within the campus’ TAZs is about the same.

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1. For example, a theoretical TDM measure A and B may have an effectiveness of 10 percent each when they are considered on their own. However, if the two measures are combined, the reduction may only be 15 percent and not the 20 percent expected by adding the two measures together. [↑](#footnote-ref-2)
2. Service population correlates to information included in Table 2-1 of Chapter 2, “Project Description,” and includes resident and commuter students, resident and commuter faculty/staff, and non-UC employees. [↑](#footnote-ref-3)