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RE: COMMENTS ON UCSC 2021 LRDP DRAFT EIR

Dear Erika Carpenter:

This is a response from the Sierra Club to the Draft Environmental Impact Report (DEIR) on the draft 2021 Long Range Development Plan (LRDP), the document which would guide growth at the University of California at Santa Cruz (UCSC) for the next 20 years. The LRDP envisions growing UCSC by approximately fifty percent, with many serious impacts to the natural and human environment as a result. The Sierra Club appreciates being able to work with the University to analyze these potential impacts prior to any plans for growth being enacted.

We appreciate the relevant information and analysis contained DEIR. However, in its draft form, we find it to be deficient in key, critical categories. As such, it requires revision and recirculation in order to act as an accurate measure of the effects of the proposed growth and to comply with the California Environmental Quality Act (CEQA). As is documented below, in numerous cases the potentially significant impacts are understated, inadequate mitigation measures are proposed, feasible mitigation measures and alternatives are missing, and important, available data and evidence are not provided.

The Sierra Club has focused on the following:

- Section 3.13 Population and Housing
- Section 3.16 Transportation
- Section 3.10 Hydrology and Water Quality
- Section 3.5 Biological Resources

SECTION 3.13 – POPULATION AND HOUSING

The DEIR’s Analysis of Displacement is Inadequate. The DEIR acknowledges the project would result in a potentially significant impact on population and housing if it would displace substantial numbers of people. Then the document claims that the LRDP does not cause displacement but the DEIR’s narrow definition of displacement is not reasonable. The US Dept. of Housing and Urban Development explains, (Displacement of Lower-Income Families in Urban Areas Report, 2018), “Displacement can happen in many ways: direct displacement, in which residents are forced to move out because of rent increases, building rehabilitation, or a combination of both.” How does the DEIR address the HUD definition of displacement?

The DEIR fails to include relevant information regarding the housing crisis in the City of Santa Cruz thus precluding informed decision making and informed public participation. The DEIR needs to analyze the extent to which housing is unaffordable to large sectors of the community in the county. It needs to particularly study those markets closest to UCSC which provide the majority of housing for off campus students, and it needs to analyze how increased demand due to UCSC growth may affect these housing markets.

The DEIR asserts, “*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.*”

This assertion is not consistent with the experience of the general population and its elected officials. What “existing data” is this statement referring too? What is the basis for assuming that planned increases in housing will be available to UC staff and students and not to current City and County workers who participate in long commutes due to the housing shortage?

The DEIR needs to more thoroughly analyze the impact of additional demand on housing due to UCSC expansion. The following are some resources that need to be analyzed in this context:

- “Out of Reach Report,” (2019), National Low Income Housing Coalition finds that Santa Cruz is the least affordable small city in the Us.
- “No Place Like Home,” (2017) is a research project of UCSC Professors Miriam Greenberg and Steve McKay. Their study shows an unacceptable rent burden (more than 30% of income) for households close to UCSC: 73% for the Westside of Santa Cruz, 68% for Downtown and 76% for Beach Flats/ Lower Ocean.
- Apartment List.com reports that over the last seven years, an average of 60% of renter households in Santa Cruz County are cost burdened.

The DEIR needs to analyze the affordability of on- and off-campus housing for low-income students. Low-income students have a long history of living in cars or camping in the woods behind campus. How will the proposed LRDP affect the ability of low-income students to obtain appropriate housing?

The DEIR needs to commit to an enforceable mitigation for the LRDP's impact on housing demand. In a broad statement, the DEIR does conclude that *“the total on-campus population increase accommodated by the 2021 LRDP may directly or indirectly induce substantial housing demand in the region.”* and admits that *“This impact would be significant.”*

However, it fails to provide an enforceable mitigation for this significant impact. In Table 3.113-11, the DEIR does promote the idea of increasing building space under the LRDP to house approximately 8,500 students, or approximately 90% of proposed growth. This appears to be included as a response to a request of the Community Advisory Group convened by the University, which called for “a binding commitment of housing 100 percent of new students”, but the mitigation fails to meet that goal on two points:

- **Providing land for housing is in no way the same as building the housing. In fact, UCSC has a history of not meeting its housing goals.** The 1988 LRDP set a goal of housing 70% of undergraduate students, 50% of graduate students and 25% of faculty and staff. In reality, performance never approached that goal with the actual percentage of students housed on campus hovering at around 50%. There is every reason to assume that the structural obstacles that have prevented UCSC from meeting the housing goals of the 1988 LRDP will be repeated with regard to the current draft LRDP.
- **For on-campus housing to occupied it has to be priced so that its cost is competitive with off-campus rents.** The formula under which the UC system builds housing states that rental income has to pay for the costs of housing construction and maintenance. Historically, these costs have triggered rental rates that priced campus housing well over off campus housing. A dorm room shared by three students costs above \$4000 a month, but a typical room in a house with a kitchen and full amenities rents for \$1000. This explains the relatively high vacancy rate of 7.65% on campus, with 711 vacant beds at last count as compared to the vacancy rate on rentals in the County of 1.9% referenced on page 3-13-4. The EIR should do more analysis on the disparities between the relative vacancy rates and include the vacancy rates for rentals in the City of Santa Cruz, which is more relevant to UCSC. As noted in its own documentation, the vacancy rates for housing as a whole, referenced in table 3-13-3, which include vacation housing and second homes, are irrelevant.

CEQA law demands that a realistic funding source be available for the project and its mitigations. In the case of the aforementioned mitigation, how will the proposed housing be built in such a way that its costs will be comparable to off campus housing? Given its history and the continuing policies on which its failure to build projected housing are grounded, how can the public be confident that this mitigation will be accomplished, and how is the DEIR accurate if it provides a mitigation that is unlikely to be achieved?

Without a credible plan to provide housing that is reasonably priced, it can be assumed that meeting the housing goal is not feasible. We propose a simpler solution, in line with the request of the Community Advisory Group, which would assure that the LRDP's housing projections are fully mitigated.

PROPOSED MITIGATION

Each incremental step in campus enrollment growth shall be contingent on UCSC actually housing 100% of new students and 25% of new faculty and staff.

SECTION 3.16 – TRANSPORTATION

If housing mitigations are not successful, the EIR analysis of projected increase in vehicle miles traveled is not accurate. As discussed above the current goals to house students and staff are not feasible, but expected air pollution as represented by projected increases in vehicle miles traveled, are dependent on the housing goals being met. Simply put, if fewer people live on campus than envisioned, there will be more automobile use to bring students and staff living off campus to the University. Therefore, the lack of feasibility of the housing goals (as discussed above) calls into question the accuracy of the section on vehicle miles traveled. Unless binding mitigation as proposed above is adopted into the DEIR and LRDP, the vehicle miles traveled analysis of the document is not accurate.

Target for reduced vehicle miles traveled is inconsistent with goals of the Campus Sustainability Plan. The DEIR claims that Mitigation Measure 3.16-2 is in alignment with the goals outlined in the UC Santa Cruz 2017-22 Campus Sustainability Plan, including reducing commute VMT by five percent and reducing per capita parking demand by ten percent by 2022. This claim is not accurate. This mitigation measure intends to “*reduce the total campus VMT per capita to 15 percent below baseline campus average and the total employment VMT per employee to 15 percent below the countrywide average.*” Reducing VMT per capita is not the same as reducing total commute vehicle miles traveled.

Goal 3 of the Campus Sustainability Plan 2019 Update calls for “*reducing Scope 3 commuter greenhouse gas emissions 10 percent by 2022.*” The DEIR does not address this goal. Nor will it be possible to achieve this goal with the implementation of the 2021 LRDP, which will result in increased commuter trips to campus. If the Campus Sustainability Plan is a guiding planning document, how can the draft LRDP establish acceptable thresholds that are not in accordance with this plan?

Comparing on-campus students to county average VMT is not a reasonable measure of significant impact. The DEIR claims that the addition of some 15,800 additional vehicle trips to be undertaken by additional students and staff (as per table 3-16-6) is not a significant impact. This contradicts the definition of the word significant “*sufficiently great or important to be worthy of attention; noteworthy.*” (Source: *The Oxford English Dictionary*). This runs contrary to common sense and continuing to assert it as fact undermines the University’s credibility.

The claim that 15,800 additional trips is not a significant impact is reasoned by adopting standards developed by the state OCP for the addition of housing developments and businesses. UCSC is significantly different from these types of developments for two reasons: First, the proposed growth is so large that it would add approximately 20% new residents to the City of Santa Cruz, thus causing significant changes to the entire City. This type of impact cannot just be measured using averages and normatives. It needs to be examined with regard to the significance of its impact on its own merits. Second, UCSC provides housing to approximately half of its students, thus already providing both the origin and the primary destination of their potential vehicle miles traveled. Using the OCP guidelines for this kind of institution would mean that a category of projects would be effectively exempt from reducing their VMT and thus participating in statewide reductions in greenhouse gas emissions. This category would include any type of boarding school, nursing homes, sleep over camps, and prisons. UCSC needs to show how the OCP guidelines apply in its particular case. It is not reasonable to judge its vehicular emissions with the same standard used for a small apartment complex or family business.

Having claimed that adding 10,000 new students will have no significant impact, the document then admits that there will be a small but significant impact due to the VMT increases from faculty and staff. The calculation of this VMT increase is greatly reduced by current and planned housing on campus for faculty and staff. This reduction needs to be reexamined based on the same criteria outlined above.

The way that traffic is being studied effectively exempts UCSC from contributing to state, city and county plans to reduce greenhouse gas emissions. Automobiles are our state's, city's and county's largest source of greenhouse gas emissions. The reason that standards governing vehicular travel were changed to represent VMT instead of congestion standards was so that the reduction of VMT could contribute towards reducing our state's greenhouse gasses. The way in which the DEIR is counting VMT effectively exempts it from any and all legislative action to reduce greenhouse gas emissions by controlling its primary source transportation. **In what way will the draft LRDP come into compliance with state and local climate action plans to reduce overall VMT so as to address climate change?**

PROPOSED MITIGATION

Overall VMT shall be reduced by 5% as per the Campus Sustainability Plan

By adopting this standard, the DEIR will actually be in compliance with climate legislation, including its own Sustainability Plan, and the expectations of local citizens and their elected officials. This condition for growth would mirror a successful policy at Stanford University. In 2000, Santa Clara County conditioned Stanford growth on achieving zero new peak hour vehicle trips to campus. According to the former Director of Stanford Parking and Transportation Services, Stanford added an additional 5000 students and staff/faculty between 2001 and 2015 without adding additional vehicular trips to campus, as measured by periodic traffic counts at each entrance. A reduction in the number of people in California who own automobiles, especially those of college age, will continue to make it easier to reduce automobile trips. Several of the mitigations to unacceptable staff VMT will help to achieve this goal as will additional mitigations proposed below. **We ask you to seriously consider this goal and explain your reasoning why or why not it is not adopted.**

Mitigations of the increased VMT of faculty and staff are insufficient. Even using the document's aforementioned algorithm, the DEIR admits that its faculty and staff will create VMT above the level it deems acceptable and suggests mitigations for that impact. The projections are flawed and the mitigations need to be fully explored as per below. **Please respond to the proposed mitigations below as well as our criticism of one aspect of the projected VMT per capita calculations.**

The addition of a new entrance will induce more staff and faculty traffic. This needs to be added to VMT predictions. Vehicle-miles-traveled statistics for staff and faculty use current commute patterns based on two vehicular entrances to campus. Adding a third entrance will make it easier to commute to campus and thus induce traffic thereby increasing VMT per capita. Specifically, a third entrance will increase vehicular access from another neighborhood along Empire Grade not easily accessed by current entrances, thereby encouraging staff and students who live in this neighborhood to drive. It will also encourage staff who live in the proposed housing near the new entrance to drive to campus. **Has this induced traffic been accounted for in the current VMT projections?** Instead of building a road for automobiles the proposed roadway could have a one lane and/or decomposed granite treatment sufficient for it to be used by emergency vehicles and, possibly, transit vehicles. In so doing, it would still serve as the mitigation of potentially reduced emergency access mentioned in the DEIR. Please study this alternative with regard to VMT and impacts on the habitats to be bisected by the proposed road.

PROPOSED MITIGATION

Increase parking fees to pay for transit system. We appreciate the commitment made as part of the TDM mitigation to have “no net increase in parking.” Decreasing parking supply on a per capita basis will raise its value, and parking fees should be raised accordingly so as to further disincentivise personal automobile use. Monies gained by raising these fees should be used to pay for public transportation for staff and students. Current policy seems to rely on increasing student fees to pay for transit but as shown by the recent defeat of such a measure in 2018, this funding source is not entirely reliable. If students do agree to raise fees for transit, it should be go for additional service, while parking fees should be used to maintain basic levels of transit service.

PROPOSED MITIGATION

Designate additional parking spaces—currently used by single occupant drivers—as carpool-only spaces. This will provide an incentive to carpool and provide an option for low income staff and students to mitigate the financial impact of increased parking fees.

PROPOSED MITIGATION

Provide free electric charging for automobiles and electric bicycles. Incentivizing electric cars over gas cars would not affect VMT, but would reduce air pollution caused by automobiles, which is a primary end goal of VMT legislation.

PROPOSED MITIGATION

Implement traffic calming measures on all campus streets and reduce the speed limit to 25 mph. While this would not necessarily reduce VMT, a reduced speed limit enforced via hardscape changes to the roads (speed reduction platforms being the most common example) would reduce pollution caused by tires, as well as deaths and injuries to human beings and animals.

SECTION 3.10 – HYDROLOGY AND WATER QUALITY

Potential Impacts to Karst Aquifer

The DEIR properly states, “*Potential impacts on groundwater that could result under the 2021 LRDP include 1) reduced spring flows and lowering of aquifer water levels as a result of a reduction in recharge due to increased impervious surfaces, and as a result of a potential groundwater extraction in the event that groundwater pumping is implemented to reduce demand for water from the City’s supply...Impacts associated with new development on the karst aquifer would be potentially significant.*” (3.10-33) The campus expansion requires millions of square feet of new paving, as well as expanding from 2 million square feet of buildings to 5 million. **How will systems directing water runoff be renovated so as to insure that additional runoff does not damage surrounding habitats including the Kalkar pond on the east side of campus?**

Water Supply

The city of Santa Cruz has supplied UCSC with water since its founding in 1965, and will continue to do so, but the city itself relies on the surrounding river and watershed systems. The Santa Margarita Groundwater Basin (SMGWB) underlies 30 square miles of the Santa Cruz Mountains and on top of it is the watershed of the San Lorenzo River, of which the river itself supplies 59% of the city's water. The SMGB has lost an estimated 28,000 acre feet in groundwater storage since data has been recorded, resulting in diminished local water supply and reduced sustaining base flows to streams that support fishery habitats. Although pumping from the SMGB has been reduced by 45% since 1997, and supply and demand have been in balance for the last 10 years, the substantial increase in county residents projected by the LRDP poses a significant strain on resources, particularly as we face current and future water deficits due to drought, wildfire, and climate change. The Santa Margarita Groundwater Agency (SMGWA), a joint powers authority comprising the Scotts Valley Water District, the San Lorenzo Valley Water District, and the County of Santa Cruz, was formed in 2017 to protect and sustain the overdrafted groundwater basin by the development of a Groundwater Sustainability Plan (GSP). The GSP must be completed by 2022, and the basin must reach sustainability by 2042. Regardless of suggested UCSC mitigation measures, if the campus continues to rely on the city for a majority of its water, the expansion places a significant strain on a limited resource.

How does the University intend to mitigate the long-term strain on water resources placed on the county of Santa Cruz by its growth from 18,500 current students to 28,000 by 2040, as well as an additional 2200 faculty and staff from its current 2800, for a potential total of 33,000?

Comments on UCSC Long Range Development Plan Water Supply Evaluation, Appendix J of the DEIR including the need for an approved habitat conservation plan.

7.0 Determination of Water Supply Sufficiency Based on the Requirements of SB 610. Table 7-1, which lists City of Santa Cruz Water Supply and Demand in Normal Years, Single Dry Years and Multiple Dry Years, MGY, presents unrealistic and inaccurate information for the Supply Totals. With this error, the Demand vs. Supply ratios are not accurate and will not provide proper compliance to SB 610, nor to this environmental review process.

The DEIR must include accurate assessments and this listing of available water supply is not accurate. An accurate assessment of available water supply must include requirements for water to be set aside for fish and wildlife identified by a Habitat Conservation Plan (HCP), but the city of Santa Cruz has not had an approved HCP since 2002. Prior to expanding water supply to UCSC, an HCP must be approved by relevant state and federal agencies.

The LRDP rightly notes, at page 27 of Appendix J, that the HCP issue exists. However, no accounting of the coming reduction in supply is shown in any projections. In a February 10, 2012, letter from NOAA National Marine Fisheries Service (NMFS) to Local Agency Formation Commission (LAFCO), NMFS stated that “it does not appear that current *water supplies are sufficient to meet current demand and protect listed salmonoids, let alone allow for increased demands.*” (Emphasis in original.) The clear and obvious inference is that the City does not and will not have the water supply listed in this DEIR once the mandated allocations are made to account for protection of listed species. **How does this DEIR permit a water supply analysis that is clearly incorrect projecting forward?**

Water District Boundaries Need Relevant Approvals

The DEIR should acknowledge that expansion of the City water supply into North Campus is subject to approval by LAFCO. Under CEQA, LAFCO is the Responsible Agency for proposed expansion of utility

service areas. It is the responsibility of LAFCO to review challenges to the water supply and UCSC's history and projections of reducing water use per capita, and then to make a consideration. In so doing, LAFCO would safeguard the water supply for UCSC as well as other City users. The DEIR acknowledges that providing city water for the projected increase in students and staff is a significant impact even after mitigations are put into place: UCSC's remaining water demand with implementation of the 2021 LRDP would contribute to the need for the City to further restrict water deliveries or secure a new water source for multiple dry water year conditions."

During an earlier process step in this University expansion plan, in 2012, it was deemed necessary to expand the Water District boundaries, as much of the new, expanded development is situated outside the Water District Boundary. LAFCO received significant pressure from the community to not expand this boundary until the City fulfilled its legal obligations with regard to the HCP. The boundary was not expanded.

It is no coincidence that UCSC now claims that the Water District Boundary does not need to be expanded, as that would have required an HCP which will surely reduce available water supply. But the requirement to implement an HCP did not disappear due to assertions that the City water supply can be expanded outside its boundaries without legal approvals from LAFCO.

SECTION 3.5 – BIOLOGICAL RESOURCES

Wildfire impact on wildlife populations is not noted in this section of the DEIR. This is a critical oversight as in August and September of 2020 Santa Cruz and San Mateo Counties experienced the most severe wildfires in their history with the ignition of the CZU Lightning Complex Fire which burned 86,500 acres and resulted in significant habitat loss and displacement of thousands of individuals of many animal species. The fire event is noted in the DEIR's wildfire section (3.18) with the acknowledgement that the CZU fire occurred after the NOP for the 2021 LRDP had been published (3.18-9), but the DEIR Biological Resources section does not account for the fire's impact on wildlife. This is of serious concern as the UCSC campus adjoins forested areas of the Santa Cruz Mountains which were heavily affected by these fires, burning large portions of Bonny Doon, upper San Lorenzo Valley and along the coast, all of which had a high fuel load accumulated over many decades of fire suppression. In some areas, notably Big Basin California State Park which housed populations of the endangered marbled murrelet, the fires were of crown-destroying intensity, and occurred at a critical juncture in the species' nesting period. It will take decades for these areas to fully recover, if such recovery is possible with the accelerating effects of climate change and human activity. Damage to natural resources is still being assessed, with possibly as much as 40% of redwoods in the Santa Cruz Mountains suffering burns.

With this in mind, any mitigation offered in the DEIR in consideration of species such as mountain lions, foxes, coyotes, bobcats, etc. is not adequate because it fails to address the disruption of wildlife's normal patterns of migration, denning, hunting and reproduction caused by both the CZU fire and the following months of extensive tree-removal operations, utility work, logging road construction, debris removal, site-scraping, clear-cutting and general construction and repair work taking place in the areas adjacent to UCSC's North Campus, the long-term effects of which on habitat and species may not be known for some time. This creates significant pressure on animal populations in the fire zones, and may result in some individuals entering the LRDP area when they otherwise would not have. How does the University plan to address these concerns?

In 2017 UCSC Professor of Environmental Studies Chris Wilmers, who operates the joint UCSC/CDFW Santa Cruz Puma Project, estimated the number of mountain lions in the Santa Cruz Mountains. at 50-60, each with a territory of anywhere from 5-100 square miles. When these individuals are displaced by a natural disaster such as the CZU, they come into competition with each other and with humans for resources, increasing population stress, malnourishment, and affecting reproduction as well.

The DEIR acknowledges potentially significant impacts to this population but based on the fact that it does not account for changes in environment caused by the CZU fire, the suggested mitigation is inadequate and should be re-assessed. The LRDP DEIR mitigation measures proposed in regard to mountain lion dens and other predators are insufficient to address potential impacts of construction. Mitigation Measure 3.51a specifies, “Within at least 30 days before commencement of project activities, a qualified wildlife biologist with familiarity with mountain lion...will conduct focused surveys of habitat” (3.5-61) and “If no potential dens are found...no further mitigation will be required.” The language given for this survey period is too vague to provide clear data. As worded, the time-frame of the survey allows for it to have occurred ANY TIME prior to 30 days before project activity commences, thus permitting outdated survey data to be used. We request that this mitigation be re-written to provide reasonably current data. Also, since there is no sunset clause, an outdated 2021 survey could be used many years from now if the expansion is delayed (as it has been in the past).

The LRDP zone includes habitat and terrain for 66 special-status wildlife species and 64 special-status plant species, many holding statuses CRPR 1B (Endangered in CA) and known to occur in the development zone.

Other animals affected by the campus expansion include coyotes, gray foxes, bobcats, bats including Townsend’s big-eared bat, western red bats and pallid bats, American badger, ringtails, San Francisco dusky-footed woodrats, invertebrates such as the Ohlone tiger beetle (critically imperiled) and amphibians like the California red-legged frog (a federally listed threatened species), deer, and other vital prey animals. UCSC campus also contains the San Francisco Campion, Point Reyes horkelia, Santa Cruz Manzanita, San Francisco Popcorn Flower and Marsh Microseris, among others, all listed as State Endangered and all known to occur in the LRDP area. What has made UCSC a focus of the UC system for life sciences is exactly this abundance of wildlife in a vibrant ecosystem accessible for observation and study. By so extensively altering the natural landscape of its campus the University runs the risk of damaging the very programs which have made it so attractive to students.

Ohlone Tiger Beetle

Native coastal prairie habitat on campus critical habitat for the endangered Ohlone tiger beetle. Future housing development is proposed within and adjacent to coastal prairie habitat mapped at Crown Meadow, and within a short walk or bike ride from Marshall Field. Concentrated bike and traffic and picnicking activity would cause significant “take” of Ohlone tiger beetles in open areas, foot paths, roads and cleared areas, as the beetles concentrate in open areas during breeding season to look for mates, dig burrows and deposit eggs. These potential impacts must be disclosed and addressed through project modification and mitigation.

The proposed development zone would convert to residential uses the entire area of Habitat Conservation Plan Area 1D, a former Ohlone tiger beetle habitat that was restored to support reintroduced tiger beetles. If re-establishment effort has not yet proved successful, the management effort benefits coastal prairie restoration habitat and should be continued. This effort should be one of multiple measures to address the increased cumulative adverse impact on the Ohlone tiger beetle of the closer proximity of development, elevated population and intensified activity associated with the proposed LRDP.

Not only would the UCSC human population increase from 18,500 to 28,000 on campus under the proposed LRDP, but the number of student beds would increase from 9,300 to 17,700 and the number of staff and faculty units would grow from 270 to 828. Much of the proposed residential development would be placed in the north campus area, with easy access to native grassland habitat in Marshall Field that supports one of only a handful of remaining occurrences of Ohlone tiger beetle, a federally endangered species endemic to the marine terraces in Santa Cruz County characterized by Watsonville loam soils.

The increased bicycle and foot traffic associated with a substantially increased population of students, and the increased reliance on outdoor activity, will inevitably result in the increased mortality and disturbance of adult and larval Ohlone tiger beetles, by roughly doubling human activity in the meadows and open patches of bare ground that the Ohlone tiger beetle depends on for foraging, mating, thermoregulation and oviposition. This is a potential cumulative impact of all the development proposed by the LRDP to cover the next two decades, comprises a “take” of the Ohlone tiger beetle incurred by the action of the UC Regents and cannot be addressed by piecemeal evaluation of individual construction sites. A piecemeal approach to such impacts, without analyzing and mitigating the cumulative impact, comprises “segmentation” and is prohibited under CEQA law. Unless the University develops and implements an adaptive Habitat Conservation Plan approved and supervised by the United States Fish and Wildlife Service, the most important remaining populations of OTB are likely to be extirpated. Simply stated, the LRDP poses an imminent threat to the survival of the species.

The deficiency of the EIR in failing to consider potentially significant recreation impacts to the OTB extends to the recreation section, where the trail network map provided by Figure 3.15-1 omits three trails that pass right through OTB HCP Area 1A-A. This omission is important not only because it fails to disclose a significant source of adverse impacts to OTB, but also because the recreation section proposes a University strategy to increase in outdoor recreation by expanding formal trail links to adjoining State and County parks. This would intensify activity on three trails that intersect within Inclusion Area 1AA. The recreation section (falsely) asserts that, although the campus population and potential demand for recreational facilities would nearly double, the impact on existing recreational facilities would be less than significant even without mitigation and without any commitment of the UC Regents to construct additional recreational facilities. This failure to accommodate recreational demand would place even greater pressure on trails, meadows and outdoor recreation areas, particularly Inclusion Area 1AA, which is located at the intersection of several campus trails and an ad-hoc access point from Meder Street.

The vulnerability of the Ohlone tiger beetle population to increased human presence and outdoor movement underscores the inadequacy of the existing habitat preserve Area 1A-A, which comprises approximately 12 total acres, of which only about 10.8 acres are effective habitat, and the rest is oak woodland. To protect an organism that is clearly in retreat from human activity and development, that has been extirpated from numerous sites adjoining urban development in Soquel and Santa Cruz, larger habitat set-asides are required. The Ohlone tiger beetle will become extinct unless protected areas are large enough to include all of the suitable habitat, characterized by USFWS (reference below) as “shallow, pale, poorly drained clay or sandy clay soil that bakes



Existing Ohlone tiger beetle Habitat Conservation Area 1A-A (dark purple) and recommended conservation area (light purple).

to a hard crust by summer, after winter and spring rains cease,” including “barren areas among low or sparse vegetation within the grassland. Ohlone tiger beetles require these open areas for construction of larval burrows, thermoregulation, and foraging.” Adequate mitigation for the potential impact to this species of LRDP development must include adding the mima mound habitat west of Empire Grade, comprising approximately 80 acres, and protecting and managing all existing and suitable OTB habitat in upper and lower Marshall Field.

The EIR proposes to survey for rare plants and wildlife only “within a project site,” and only when the proposed LRDP could result in direct disturbance of OTB. This approach to impact mitigation fails in this regard: it would allow housing development to be placed entirely around the central area of the Crown Meadow on north campus with no biological survey of potential occurrence of the OTB or its habitat within Crown Meadow or nearby Marshall Field. This failure alone renders the EIR deficient in failing to assess the presence of an endangered species or to consider the potential multifold impacts of surrounding sensitive habitat with intensive human activity.

According to “Ohlone Tiger Beetle (*Cicindela ohlone*) 5-Year Review: Summary and Evaluation” prepared by the U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office (Ventura, California, 2009) (https://esadocs.defenders-cci.org/ESAdocs/five_year_review/doc3220.pdf), six of the seven then remaining Ohlone tiger beetle occurrences were located on open space or park areas accessible to the public and vulnerable to the same types of impacts proposed by the LRDP. By 2013, only five segmented subpopulations of the OTB remained¹ Arnold and Knisley (2018) found the OTB total population at its four primary sites to range between 500 and 1,750 individuals.² It is unknown whether the species can colonize or migrate between colonies, although Cornelisse et.al. (footnote next page) demonstrated that migration reduces the possibility of OTB extinction.

OTB subpopulations are already experiencing significant impacts from invasive vegetation, fire suppression, removal of grazing pressure and direct human disturbance, sufficient to reduce known subpopulations by 30% in less than a decade, and to reduce the area occupied by larval burrows at Marshall field, for example, from 13,000 square feet in 2003 to 770 square feet in 2017, a decrease of 95%. In the absence of grazing at Marshall Field, bare ground areas are maintained primarily by bike traffic, which has a deleterious effect on the OTB but, in the absence of superior management measures, provides a means of maintain bare earth. Any exacerbation of these existing significant impacts of human activity and development on OTB populations must be considered significant.

Without active habitat management, OTB habitats are also likely to be subsumed by invasive vegetation. According to the FWS report, Ohlone tiger beetles have been potentially extirpated from two of the five geographic areas as a result of habitat degradation primarily caused by the lack of a habitat management program. The report stated, “*Habitat degradation continues to be a threat to all remaining Ohlone tiger beetle occurrences. Without management efforts to reduce and control encroachment by nonnative plants, the Ohlone tiger beetle will likely continue to decline and the risk of extinction will increase. Without active habitat management, increased growth of nonnative vegetation can severely reduce the availability of bare or sparsely vegetated ground.*”

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1. Tara M. Cornelisse*, Michelle K. Bennett, Deborah K. Letourneau, “The Implications of Habitat Management on the Population Viability of the Endangered Ohlone Tiger Beetle (*Cicindela ohlone*) Metapopulation.”
 2. Richard A. Arnold and C. Barry Knisley, “Biology and Conservation of *Cicindela ohlone*, the Endangered Ohlone Tiger Beetle.” <https://ucscampusreserve.ucsc.edu/documents/arnold-knisley-2018>

According to the USFWS report, nonnative plants, including French broom (*Cytisus monspessulanus*), velvet grass (*Holcus* spp.), filaree (*Erodium* spp.), and Eucalyptus spp. are encroaching into grassland habitats and out-competing native grassland vegetation (Morgan, in litt. 1992; Hayes, in litt. 1997; Sculley, pers. obs. 1999, 2000). Nonnative grasses, such as bromes (*Bromus* spp.) and oats (*Avena* spp.), can rapidly invade California grasslands. Filaree is abundantly invasive on the UCSC campus.

OTB populations also cannot survive without an adequate prey base of small invertebrates. OTB prey availability is proportionate to the availability of bare ground. Additionally, the precipitous drop in worldwide insect populations documented by scientific studies is attributed to the lack of large, intact habitat areas away from the proximity of urban and/or agricultural development and the associated impacts of pesticides, air pollutants, dust, noise, light, meso-predation, declines in songbirds, and invasion of exotic plants and wildlife. The increasing proximity of residential and public facilities to native grasslands and OTB habitat may have similar effects. The reasons for the failure of conservation area “Parcel D”, which was managed to maintain the required habitat physiography, are apparently not fully understood, but the site was immediately adjacent to a residential development.

Cornelisse, et.al demonstrated that active management of existing subpopulations to increase or maintain bare ground through direct scraping or by imposing livestock grazing, with measures to slow bicycle speeds, had a significant positive effect on beetle populations. Reducing bicycle speed to 8–12 kph increased population growth by 42–58%. The study warned against over-management of existing colonies, however, and recommended “at a landscape level both recently extirpated sites and potential coast prairie habitat should be managed to maintain suitable *C. ohlone* habitat for future colonizations.” Adequate mitigation of the potential disturbance impact of the LRDP on existing OTB populations thus requires setting aside enough habitat to allow development of new colonies in suitable habitat areas near each other, and actively managing and monitoring these areas. The University should also obtain offsite conservation easements for OTB habitat management and expansion, including habitat set asides on the Goode property adjacent to the University parcel south of Empire Grade.

The potential adverse impact to Ohlone tiger beetle of the proposed LRDP would not be reduced to “less than significant” unless the following change is made to the proposed mitigation and monitoring plan:

To the extent the project may result in “take” of the species, UC Santa Cruz shall develop and implement an HCP addressing existing and potential Ohlone tiger beetle habitat across the UC Santa Cruz campus, consistent with Mitigation Measure 3.5-2a, which would require authorization by USFWS under Section 10 of the ESA.

Further, in order to ensure that the required HCP is effective in protecting beetle populations, and in to support a finding of less than significant impacts to the OTB, the EIR will remain deficient unless the HCP include the following measures:

- Manage the location, extent and timing of foot and bicycle traffic, and bicycle speed, to maintain appropriate habitat and limit the risk to adult and larval Ohlone tiger beetles.
- Implement manual habitat scraping and compaction rather than relying on incidental foot and bicycle traffic.
- Control residual dry matter in OTB habitats through effective implementation of grazing, fire management, mowing, hand removal and shrub mastication.

- Control invasive vegetation, particularly invasive forbs and grasses in grassland habitats, by grazing, manual removal, controlled burning or flaming, chemical control, scraping, shallow scarifying, or other means as appropriate.
- Employ adaptive management: Test the efficacy of the above management measures and adapt changes to ensure that the measures achieve reduction in RDM and increase bare soil areas. Monitor OTB populations and adjust management measures to arrest population declines.
- Require the HCP to, at minimum, maintain OTB populations with no decrease.

Coastal Prairie/Grassland

The Ohlone tiger beetle is one of the most important, but not the only rare or declining wildlife species in Santa Cruz County that requires grasslands and Coastal prairie habitat to survive. Coastal native grassland prairie in Santa Cruz County supports a wide variety of special status birds, mammals, plants and insects. The DEIR states that on the UC campus, five special status plant species are known to occur on campus, all in the Marshall Field complex, as follows:

San Francisco popcorn flower (*Plagiobothrys diffusus*)

Point Reyes horkelia (*Horkelia marinensis*)

Marsh microseris (*Microseris paludosa*)

Santa Cruz clover (*Trifolium buckwestiorum*)

Pacific Grove clover (*Trifolium polyodont*)

The list omits Shreve Oak (*Quercus parvula* var. *shrevei*), a species describes as “near threatened” on the International Union for Conservation of Nature’s Red List of Threatened Species.

In addition to the listed plant species, a number of special status bird and mammal species rely on Coastal prairie habitats found on campus. As the EIR observes, two species of State Special Concern, burrowing owls and Bryant’s savannah sparrow, breed in campus grasslands. Northern harrier (Protected, SSC) and loggerhead shrike (SSC) occur during breeding season. American badger, a State mammal of special concern, also appears to breed on campus. Protected Golden eagles, a species only recently delisted that incorporate the campus into their breeding territories, some seasons visiting virtually every day to exploit the prey base of ground squirrels, rabbits and other small mammals.

California’s relatively intact grasslands are reservoirs of biodiversity. Grassland birds, mammals, reptiles, insects, pollinators and other animals depend on the resources these plants and spaces provide. “Old-growth” grasslands are ancient ecosystems characterized by high herbaceous species richness, high endemism, and unique species compositions. Native grasslands support about 40% of California's total native plant species (Wigand 2007:55). An astounding 90% of California's rare and endangered plant species reside in grasslands (Skinner & Pavlik, 1994). Currently 73 grassland-associated species are listed by the state and

federal Endangered Species Acts: 14 vertebrates and 59 plants, and 14 invertebrates, including 6 butterfly species. This count does not include unlisted native pollinators and other plants and animals experiencing sharp declines. The importance of UCSC coastal prairie habitat to a diversity of plant species and insect pollinators was documented by the late naturalist Randall Morgan, whose insect collection is housed at the Kenneth S. Norris Center for Natural History, where it inspires and serves as a reference point for student and faculty research, providing a rich cultural tradition on campus.

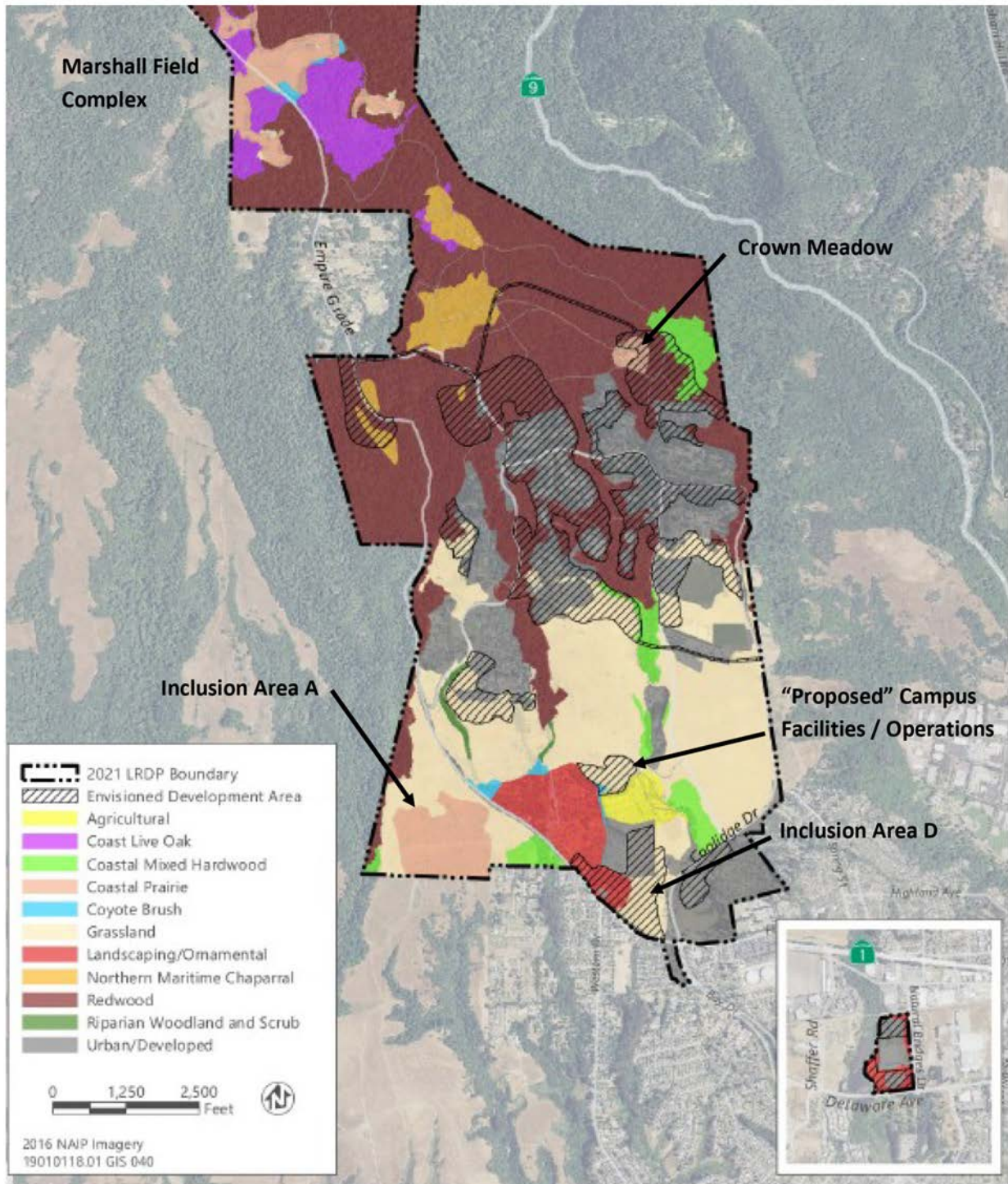
Randall Morgan, who discovered and named several of the special status plant species potentially occurring on the UCSC campus, ranked “native grassland/flowerfield” as one of the most sensitive habitats in Santa Cruz County, with the greatest number of endemic or special status taxa, the most severe threats, immediate and continuing, and the greatest percentage lost or degraded, in a formal habitat rating system developed for open space acquisition purposes:

Habitat Evaluation Matrix						
<i>Natural communities/habitat types occurring in Santa Cruz County, ranked on a scale of 1-5 (one being highest) on each of six parameters</i>						
Natural communities/ habitat types	Evaluation parameters					
	Greatest number of endemic or special-status taxa	Most severe threats, immediate and continuing	Greatest percentage lost or degraded	Smallest total area remaining	Smallest area under legal "protection"	Lowest potential for recovery once lost or degraded
Sand parkland	1	2	2	1	2	1
Central maritime chaparral ¹	3	1	2	1	1	2
Native grassland/flowerfield	1	1	1	4	2	2
Coastal headlands	2	2	3	2	1	1
Freshwater wetlands	3	2	3	3	2	3
Beaches, coastal dune	2	2	3	3	3	4
Riparian deciduous forest	4	3	2	3	3	2
Northern maritime chaparral ²	2	3	4	4	2	3
Estuaries, salt marshes	3	3	4	2	2	4
Primary forest (conifer)	3	3	1	4	4	4
Perennial streams	4	3	4	3	2	4
Northern mixed chaparral ³	3	3	5	4	3	3
Coastal sage scrub	4	5	4	4	2	5
Non-native grassland	2	4	5	4	4	5
Ocean	3	5	5	5	5	5
Mixed hardwood forest	4	5	5	5	5	5
Secondary forest (conifer)	5	5	5	5	5	5

The decline in native grasses and grasslands in the last two centuries has been caused by intensive cultivation, poorly managed grazing, urbanization, fire suppression, and the introduction of invasive, nonnative species. Agriculture, invasion by exotic species, development, and other human-related activities have reduced California native grasslands by 99 percent.

The proposed LRDP would convert to housing and office buildings approximately 70 acres of grassland habitat, including 2-4 acres of coastal prairie habitat at Crown meadow on north campus that would experience a combination of direct conversion and indirect adjacent impacts from proposed housing. Residential uses immediately adjacent to sensitive grassland resources would introduce trampling, disturbance, litter, non-native vegetation and fire hazards that would undermine habitat quality or change the plant composition to a ruderal habitat type. The proposed residential zone is deformed towards the meadow and was evidently designed to encircle the habitat. A slight modification of the proposed development area at Crown meadow to avoid the habitat and provide a habitat buffer setback would eliminate the direct impact and significantly reduce indirect effects. This reconfiguration could easily be accomplished by adding height to the proposed buildings or by extending the habitat to the north and east, where it would

affect mixed hardwood and second growth conifer forest, rated the least sensitive habitat by Morgan. The EIR is obligated to avoid identified sensitive habitat where feasible. At minimum, the EIR should evaluate the feasibility of reconfiguring the North Campus housing zone as a project alternative, to provide a buffer area between the development area and the grassland.



The University has already damaged or destroyed 16-20 acres of existing grassland habitat on campus, including all of area proposed for the campus facilities and operations adjacent to the Great Meadow, and part of Inclusion Area D, the site restore coastal prairie and Ohlone tiger beetle restoration. The affected areas have been cleared of vegetation and used for refuse management, including discharge of debris piles and fill and storage of waste receptacles. Development prior to environmental review constitutes a violation of CEQA and the responsible parties should be identified and held responsible. This type pre-emptive habitat destruction is a commonplace occurrence in private development but reprehensible at an institution that is supposed to set an example of the highest ethical standards for its students and faculty. The photographs below document the CEQA violation:

Proposed Campus Facilities and Operations, 2007:



Proposed Campus Facilities and Operations, 2020:



Dumpsters, debris boxes and other waste receptacles at the “proposed” facilities site:



Inclusion Area D, 2016 to 2020 (left to right), indicating recent vehicular activity and dumping:



Impacts

The DEIR proposes essentially three measures to mitigate potential impacts to sensitive plants and plant communities: avoidance at the project phase, or transplantation/offsite restoration where avoidance is not feasible.

These mitigation measures are all inadequate. Avoidance of sensitive plants must be implemented at the program phase, when roads, proposed development zones and infrastructure can be reconfigured to avoid plant habitats. When roads, neighboring buildings and infrastructure already have been constructed, avoidance is no longer feasible. It is not effective or realistic to avoid sensitive plants by retaining them in a tiny island of open space surrounded by development, and such cannot be used as a basis for a finding of less than significant.

Transplantation or creating habitat is rarely effective. The high degree of failure of transplantation and habitat creation is such that it cannot be used to justify a determination of “less than significant” impact at the project phase. As coastal prairie expert Randall Morgan observed, if plants were meant to grow in the new location, they would be there already.

In terms of restoring existing degraded habitat, the campus should be managing its sensitive coastal prairie habitat to prevent degradation, not waiting for an opportunity to restore them in response to development. This incentivizes neglectful management. Numerous scientific papers have documented the existing, ongoing degradation of coastal prairie within and around campus lands by invasive European grasses and non-native trees and shrubs. Degradation, either deliberate or neglectful, is also affecting prairie habitat and wildlife through off-road vehicular use, dumping, mountain biking and other human activities. Not only to maintain the quality of this existing sensitive plant community, but to maintain the Ohlone tiger beetle and other special status wildlife, the University should be implementing, improving and expanding grassland management measures.

The following mitigation measures shall be required to adequately address CEQA:

1. The 50 to 60 intact acres of grassland habitat affected by proposed development zones shall be subject to a comprehensive data, literature and on-the-ground surveys to identify sensitive plants and wildlife currently existing, prior to EIR certification.
2. Areas with sensitive plants, animals or plant communities shall be avoided by redrawing proposed development zones.
3. If the extent or location of the sensitive species precludes full avoidance, the resultant habitat degradation shall be mitigated by purchasing conservation easements or fee-simple acquisition of comparable offsite habitat at a 3:1 area ratio as the LRDP is implemented.
4. Inclusion Area D, an established habitat restoration area with soil substrate that supports coastal prairie management, shall be removed from the development area.
5. The residential zone surrounding Crown Meadow shall be redrawn to avoid the habitat and provide a 200-foot buffer from housing development.
6. The LRDP shall call out the proposed phasing of development, and place development of more sensitive habitats and potential habitat last in order. The development zone proposed along the north side of the Great Meadow is sensitive, and should be among the last sites developed, if developed at all, for multiple reasons:
 - a. Intact grassland habitat blocks are important to preserve, to avoid fragmentation;
 - b. The Great Meadow is inhabited by American badger, which is sensitive to vibration, dust noise and human activity, and is likely to be extirpated if this area is developed. The proposed strategy of identifying dens and fencing these off until they are abandoned is not a mitigation, it is an adverse impact;

- c. Special status raptors, Bryant's savannah sparrow and loggerhead shrikes breed in the meadow or include in breeding territory for foraging;
 - d. Part of the development area proposed on the edge of the Great Meadow is believed to be potentially suitable habitat for OTB, according to a report prepared by entomologist Richard Arnold (citation above).
 - e. The proposed development would impose in an ecotone along the north border that is important habitat and a wildlife corridor for movement.
 - f. The proposed development would have visual impacts and intrude / disturb / disrupt recreational and research uses.
 - g. The topography may suggest possible karst / geologic constraints.
7. The University shall permanently protect the Marshall Field Complex from any future development of roads, structures, recreational facilities or other uses that could damage sensitive plant species found in the coastal prairie habitat.
8. The University shall prepare and implement a comprehensive habitat conservation plan (HCP) to maintain and expand native and mixed native coastal prairie habitat in the Marshall Field complex and in Inclusion areas A and D.

Summary

The Sierra Club appreciates this opportunity to comment on the University of California Santa Cruz 2021 Long Range Development Plan Draft Environmental Impact Report. We appreciate the educational mission of the University and its contributions locally, regionally, and beyond. We look forward to working with the University to determine the scope of its proposed growth over the next 20 years based on a complete and accurate analysis of its potential impact to the environment.

Yours Sincerely,



Micah Posner, Executive Committee Chair