HEALTH IN ALL POLICIES EXECUTIVE REPORT:

A Health-Centered Analysis of the University of California Sustainable Practices Policy

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I. FOREWORD

The success of the University of California (UC) hinges on the health and wellbeing of its students, staff, faculty, and community. The "Health in All Policies"[1] assessment of University of California sustainability policies presented here aims to identify opportunities to improve health and wellbeing at UC campuses while simultaneously advancing sustainability goals.

Advancing health equity is central to this assessment, as the greatest potential improvements in overall health require addressing the fundamental and systematic inequities that drive ill health. This assessment also comes at a time when COVID-19 and social injustices have magnified and placed a spotlight on health inequities, and when the many facets of climate change present new and growing threats to health.

Sustainability policy is a crucial asset for advancing population health. While sustainbility efforts alone cannot be expected to solve every health and wellbeing issue on UC campuses, they have the potential to offer broad benefits to health and wellbeing. Small changes in policy elements and how they are implemented can help maximize those benefits as well as minimize potential harms. Most importantly, these policies can provide critical protections and resources for health and wellbeing, especially for vulnerable groups and individuals within the UC community.

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- The University of California Office of the President, Global Food Initiative, and Healthy Campus Network for providing funding for this work.
- The nine Fellow-Mentor pairs who provided the essential research, analysis, and enthusiasm that served as the foundation of this report.
- The many stakeholders consulted along the way who provided critical input and feedback. These individuals represent diverse job titles, roles, and departments across the UC campus network, including: chairs of sustainability working groups, campus sustainability officers, environmental programs managers, campus planners and architects, and professors of environmental studies and public health, among many others.

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[1]"Health in All Policies (HiAP) is a collaborative approach that integrates and articulates health considerations into policymaking across sectors to improve the health of all communities and people. HiAP recognizes that health is created by a multitude of factors beyond healthcare and, in many cases, beyond the scope of traditional public health activities. The HiAP approach may also be effective in identifying gaps in evidence and achieving health equity." (Centers for Disease Control and Prevention)

II. INTRODUCTION, BACKGROUND, & AIMS

INTRODUCTION

Health, equity, and our surrounding environments are deeply interconnected. Whether the aims are to promote the health of all campus community members or to advance environmental sustainability in the face of climate disruption, our efforts require intersectoral and collaborative solutions. Nourishing food, green buildings, and active transportation are just some examples where health, sustainability, and equity are synergistic. The critical importance of working at this intersection is clearer now more than ever, as the COVID-19 pandemic underscored and amplified existing social, economic, and health disparities; a pattern also seen in the escalating toll of climate change on people's lives and livelihoods.

Within the University of California (UC) system, the disruption caused to UC campuses and their surrounding communities by COVID-19 and severe and ongoing climate events, such as wildfires and drought, have brought increased awareness to the ways in which the built environment shapes our physical, social, and mental wellbeing. The University of California is one of California's largest employers, with over 227,000 staff and faculty, and each year it is responsible for educating over 285,000 undergraduate and graduate students. Increased attention on the persistent, systemic racial, class, and other social inequities impacting the UC population, as well as the powerful, intersecting events of the COVID-19 pandemic and rising rates of climate disasters have amplified awareness of how the policies that shape the UC campuses bear a direct impact on the health and wellbeing of students, faculty, staff, and members of the surrounding community. Today, the UC community has an unprecedented opportunity to mobilize around these complex and interconnected challenges, reconceptualize the policies that shape where and how we live, work, and learn, and strengthen health equity across the UC campus network and beyond.

BACKGROUND

In January 2021, the UC Sustainability Steering Committee approved the addition of a new section of the UC Sustainable Practices Policy (UC SPP) around Health and Wellbeing. This policy section committed the UC Healthy Campus Network to develop ideas on how health and wellbeing could be integrated throughout the UC SPP. A cross-campus Working Group, with representation from every UC campus and health system, as well as the UC Agriculture & Natural Resources, was established through a partnership between the UC Healthy Campus Network (HCN) and UC Sustainability Offices in order to implement and collect data on the goals proposed in this new section. Notably, HCN is a UC systemwide initiative guided by the Robert Wood Johnson Culture of Health Framework, with equity serving as a foundational principle.

The Health in all Policies (HiAP) initiative sought to make the UC system a healthier place for all through intentional, systematic integration and elevation of health and equity principles into the UC SPP. Such focus is needed to both identify positive potential consequences of policy change, as well as guard against potential unintended negative consequences of the UC SPP on human health, especially in furthering health inequities among marginalized and underserved members of our UC community. To support this effort, the UC Healthy Campus Network (HCN), in partnership with UC Office of the President (UCOP) Sustainability, recruited student Fellows

to partner with content experts across each UC campus to identify gaps, opportunities, and best practices for increasing health benefits and equity within the UC SPP.

AIMS

The aims of the HiAP initiative were as follows:

1. Review the strengths and gaps in the UC SPP and make recommendations for integration based on:
    a. Environmental and human health co-benefits,
    b. Social, physical, and emotional wellbeing, and
    c. Health equity.
2. Engage those operating in UC sustainable practices (e.g., campus architects, sustainability officers) to formulate cross-disciplinary, cross-campus connections and evaluate the feasibility of potential policy adjustment.
3. Engage UC community members (e.g., students, staff, and faculty) to better understand how they are impacted by the UC SPP, as well as to identify areas for improvement to enhance health and equity throughout the UC SPP.

III. PROCESS & METHODS

SUMMARY

This assessment consisted of the following stages implemented over the 2021-2022 academic year:

1) **Recruitment and training:** Fellow-Mentor dyads were identified, recruited to engage in analysis of one of eleven sections of the UC SPP, and trained on different steps of the "Health in All Policies" approach.
2) **Analysis:** Fellows, under the guidance of their Mentor, evaluated their designated section of the UC SPP for potential health and equity benefits and opportunities, engaged in literature review, and developed potential policy modifications.
3) **Stakeholder engagement:** Fellows worked with key stakeholders to gain deeper understanding of the challenges and opportunities within their designated section, as well as acquire feedback on their policy analysis ideas.
4) **Synthesis:** Fellows synthesized their findings into a final research report. A condensed version of each report can be found in *Appendix I.*

PROCESS & METHODS

The HCN leadership identified leading content experts at the UCs (e.g., faculty, senior administrators) to partner with UC student Fellows to review the UC Sustainable Practices Policy and identify both beneficial and harmful health impacts, as well as opportunities to insert additional focus areas related to health. Each fellow-mentor dyad reviewed one of the eleven existing policy sections using the collaborative, interdisciplinary "Health in All Policies" (HiAP) approach. HiAP is a well-respected approach to champion health equity by weaving it into the fabric of institutions and aims to identify and integrate health across sectors and policies in a holistic and integrative manner.[1] The five fundamental elements of the HiAP approach were

integral to the success of this project: 1) promote health and equity; 2) support interdisciplinary collaboration; 3) create co-benefits for multiple partners; 4) engage stakeholders; and 5) create structural or process change.

Additionally, the Health Impact Assessment methodology was used to review evidence and engage campus community stakeholders to generate feasible and well-vetted policy recommendations. Using these methods, the fellow-mentor dyads worked to identify potential downstream effects of campus sustainability policies on health and explore opportunities to maximize health benefits and minimize potential harm that may stem from the various elements of campus sustainability policies. A key element of this effort included consideration of the UC SPP from a systemwide context, rather than a localized, individual campus perspective.

Stakeholder engagement is critical to both Health Impact Assessment and the Health in All Policies approach in order to tap into the expertise, insights, and priorities of individuals and groups affected by policies and of those charged with implementation. Fellows and their mentors worked to engage stakeholders across the various areas of sustainable practice, including those who are participating in the UC Sustainability Working Groups. These stakeholders shared their vital insights and years of experience, and supported Fellows in their goal of developing recommendations that were feasible and well-vetted.

Fellows and their mentors concluded this process by developing policy recommendations for UC Sustainability Working Groups to consider based on their potential for improving 1) environmental and human health co-benefits, 2) social, physical, and emotional wellbeing, and 3) health equity, along with measures to track progress in implementing these recommendations. In some cases, dyads were able to meet directly with Working Groups to discuss these recommendations, however not all were able to do so due to time and other logistical constraints.

Notably, all recommendations in this report (see *Appendix I*) will be made available to committees of experts and stakeholders, including members of UC Sustainablity Working Groups, with the aim of ultimately being presented to the UC Sustainability Steering Committee for review, discussion, and possible implementation. *Tables outlining a summary of the policy analysis and recommendations for each section of the UC SPP can be found in Appendix I.*

IV. LIMITATIONS & FUTURE EFFORTS

LIMITATIONS

Despite the recognized value of stakeholder input, the breadth and depth of stakeholder engagement in this project was limited due to resource and logistical constraints, such as Fellow's capacity given other commitments, additional funding, COVID-19 pandemic, and the time constraints of the academic year. Instead, Fellows relied heavily on key informant interviews with a more select group of stakeholders. The limited stakeholder engagement was, however, critical in the development of more realistic and implementable recommendations. For example, feedback and buy-in from the respective Working Groups, was critical in helping bridge research and academic-oriented analysis with the practicalities, limitations, and realities of real-world policy implementation.

In addition to limited stakeholder engagement, one of the most significant challenges included the development of suggestions for the UC SPP that were 1) feasible and acceptable for all relevant stakeholders, 2) specific enough to encourage meaningful change, and 3) flexible and generalizable enough to be applied across the large, diverse campus network. Due to time, resource, and other logistical constaints, Fellows were unable to engage in conversation with all relevant stakeholders across all UC campuses, resulting in analysis that may be more rooted in the needs of a specific campus or stakeholder groups. This challenge was not experienced across all sections, however, as certain sustainability challenges share more similarities across campuses compared to others. For example, many UC campuses face similar challenges related to water and address them in similar ways. In contrast, issues related to public and active transport or extreme heat mitigation may vary more significantly due to the layout and infrastructure within the specific campus and its surrounding community and geographic location. Lastly, Fellows had to manage the tension between aspirations and feasibility of certain suggestions within a large, complex system, as well as navigate the complexities of intricate policies. For example, the aim to support more locally owned vendors was in conflict with longstanding, existing contracts with large, corporate vendors.

FUTURE EFFORTS

This Health in All Policies review promoted innovative reforms in all dimensions of health, equity, and wellbeing to make the UC system a healthy, equitable and sustainable place to work, learn, and thrive, and sought to generate best practice guidelines to further reinforce a culture of health across the UC system. This work promoted innovative and thoughtful collaboration across the UCs to work towards lasting solutions to climate change without compromising human health and equity in the process, strengthened partnerships systemwide, and furthered the effort to build and deepen a culture of health for UC students, staff, and faculty.

This process demonstrated the value of HiAP by effectively using the method to analyze existing policy and generate guidance to create more equitable systems. By integrating health and wellbeing into a UC-wide sustainability policy, this assessment serves as a case study that demonstrates the challenges, opportunities, and value of using the HiAP approach for non-explicitly health-related policies within a large, public university system, and in doing so, offered a unique opportunity enhance experiential learning for students and to pay students for their work and time.

Future efforts using the HiAP method to evaluate the UC SPP would benefit from deeper engagement across different sections of the policy to identify and capitalize on interdisciplinary overlaps and potential synergies, engaging a broader cross-section of stakeholders for each of area of sustainability policy. Additionally, given the intricacy and complexity of implementation and change of UC systemwide policies, future efforts would greatly benefit from additional time, funding, and stakeholder buy-in. Despite limited resources, this process demonstrated the potential for intentional evaluation and integration of health and equity considerations into the UC SPP.

Going forward, UC SPP may benefit from institutionalizing a process that requires formal, intentional consideration and evaluation of aspects of health and equity when making modifications or additions to sustainability policy (e.g., annual checklist or evaluation procedure

that integrates health and equity components; Health in all Policies training for Working Group chairs and/or members). Continued work building on this project's health-centered sustainability policy analysis has potential to not only enhance the health and wellbeing of the UC community, but also serve as a model for other education systems striving to build healthier and more equitable environments.

APPENDIX I. UC SPP POLICY ANALYSIS

Appendix I provides tabular summaries of (1) Recommendations, (2) Health Impacts, and (3) Equity Considerations for each of the ten UC Sustainable Practices policy domains. *(Click to go directly to that section.)*

A. Green Building Design Emily Winer & Christina Banks
B. Clean Energy Tiffany Taylor & Gail Lee
C. Sustainable Transportation Katja Lazar & Katie Crist
D. Sustainable Building and Laboratory Operations Zoe Manolo & Katie Maynard
E. Zero-Waste Haley Gunther & Bonnie Benson
F. Sustainable Procurement Anusha Fatehpuria & Cristina Hect
G. Sustainable Food Services Spencer Weiss & Heather Bullock
H. Sustainable Water Systems Deidre Reyes & Mehti Nemati
I. Sustainability at UC Health Grant Cho & Arturo Sanchez
J. Climate (*review not complete*)*

* The Climate Protection section of the UC SPP is not included in this review, as the recruited Fellow-Mentor dyad withdrew from the project due to time conflicts. This section did not undergo evaluation given timeline constraints of this assessment.

A. GREEN BUILDING DESIGN

Policy Goal	Encourage holistic approaches to building design and construction that help to address negative impacts of buildings on the natural environment.
Health-focused Recommendation(s)	*Primary recommendation*: Update policy language to require all UC LEED projects to achieve a minimum number of credits in LEED Indoor Environmental Quality (IEQ) category. Achievement of the Leadership in Energy and Environmental Design (LEED) rating system is currently required of all newly constructed UC buildings. The proposed recommendation aims to further UC green building design practices that are linked to positive health outcomes. LEED IEQ credits have numerous overlaps with health and offer wide potential for health promotion. This recommendation presents an opportunity to codify a health-oriented green building strategy without being overly prescriptive and has relatively lower barrier to implementation compared to other potential policy shifts, as it is: 1) based on the already existing Water Efficiency minimum two-point requirement (Section A, Item 6); 2) UC LEED projects are already achieving numerous credits in the IEQ category based on assessment of past LEED scorecards; and 3) the IEQ category has a wide-range of options and flexibility.
Potential Health Impacts	People in the U.S. spend, on average, 90% of their lives indoors.[2] The built environment where we spend this time has a major influence on physical, mental, and cognitive health.[3] Building design strategies such as improved ventilation, access to daylight, views outside have long been championed as beneficial to human wellbeing.[4] The necessary restrictions of COVID-19 disrupted campus life for students, faculty, and staff across the UC system, placing a spotlight on the relationship between the built envirnonment and physical, mental, and social health.
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	The powerful, intersecting, and overlapping events of the COVID-19 pandemic and rising rates of climate disasters have amplified awareness of how the built environment shapes health and wellbeing. The COVID-19 pandemic has amplified existing social, economic, and health disparities; a pattern also seen in the escalating toll of climate change on people's lives and livelihoods. Health related challenges are one of the leading impediments to academic and professional success, and as the largest education system and one of the largest employers in the state, it is critical that the physical spaces within the UC community are meeting both the existing and emergent physical, social, and mental health needs of this diverse population.[5]

B. CLEAN ENERGY

Policy Goal	Support energy efficiency, including obtaining 100 percent energy in SolarPV, wind, solar hot water, geothermal, and biodigesters by 2025 and maintaining alignment with the U.S. Department of Energy's Better Building Challenge.
Health-focused Recommendation(s)	1. Offer opportunities for education on clean energy including: • Provide educational materials to educate incoming students, faculty, and staff on UC's clean energy goals, achievements, and other educational materials deemed necessary. • Create additional funding opportunities for students to create educational materials (e.g., short documentaries and videography around clean energy practices at UCSF). • Develop marketing campaigns to educate the UC campuses on clean energy, including encouraging the promotion of clean energy via individual campuses and UC-wide social media platforms. 2. Provide resources for the creation of a novel Clean Energy certification program to encourage education about clean energy sources and the linkage between clean energy and social determinants of health. 3. Promote the adoption of strategies to expand partnerships across campuses and accelerate the implementation of clean energy strategies, especially those developed by diverse stakeholders. 4. Engage campus stakeholders in plans to expand clean energy strategies for early identification, mitigation, and monitoring of potential negative health impacts (e.g. noise).
Potential Health Impacts	Increased use of energy alternatives (e.g., solar energy) will reduce the UC need for fossil fuel extraction, and as such, reduce the numerous downstream impacts of fossil fuel use on local communities; reduced extraction of raw materials to make the solar hot water panels. Additional considerations related to increased clean energy use involve the noise and resource-use associated installing windmills, drilling and infrastructure installation of the geothermal equipment, and the unpleasant odors created by biodigesters.[6]
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	The benefits of the transition to clean energy are not equitable distributed, with marginalized communities experiencing inequitable and inadequate access to clean energy-related knowledge, jobs opportunities, teachnologies, and resources.[7] Fossil fuel usage and consumption has a well-identified connection with perpetuating health inequities, with communities of color disproprionately impacted by burning of fossil fuels.[8] Pollution from fossil-fuels is one of the leading global and local environmental threat, with broad negative impacts on maternal, child, adolescent, and population health at-large.[9]

C. SUSTAINABLE TRANSPORTATION

Policy Goal	Reduce the greenhouse gas (GHG) emissions associated with commuting, university fleet use, and business air travel.
Health-focused Recommendation(s)	*Overarching recommendation*: Implement strategies that support alternative fuel infrastructure and electric vehicle usage, alternative and non-single occupancy vehicle (SOV) commuting, and parking management. Current policy focuses largely on reducing greenhouse gas (GHG) emissions. Through a health-focused lens, increasing active transportation both aligns with the current goals and has the largest potential for impact on health. *Primary recommendation*: Add policy language to encourage greater use of health metrics in transportation and planning decisions to more strongly encourage healthy commute modes. For example, Section D.2.a could be revised to "By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10% relative to its 2015 SOV commute rates by prioritizing biking, walking and transit as primary commute modes as these have the greatest individual and climate health benefits, followed by carpool and vanpool programs and lastly ZEV." *Additional recommendations* include: a. Prioritize programs that increase physical activity and reduce emissions through active transportation and non-SOV commute methods. b. Pursue alternate funding sources for transportation subsidies and alternative transportation programs separate from parking citations and fees. c. Incorporate behavior change techniques into future programs to address social and psychological barriers to change. d. Create programs to develop a campus culture centered around active transportation utilization. e. Identify personnel or develop teams within the transportation or planning departments to advocate for transportation-related issues that are not under direct control of the department, such as tele-work, land usage in areas proximal to UC campuses (i.e., housing, first/last mile bike and pedestrian infrastructure, and public transportation subsidies and access). f. Accelerate phase-out of diesel-powered vehicles owned or operated by UC entities and replacing with zero-emission vehicles.
Potential Health Impacts	Health impacts associated with the proposed changes in transportation policy include increases in physical activity via active transport methods and reduction in local air pollution.[10] Increased physical activity is associated with reduced risk of cardiovascular disease and lung disease, as well as improvements in mental health.[10] Active transport increases time spent outdoors, which is associated with stress reduction and benefits to overall mental and cognitive health.[11]

| **Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts** | Access to reliable and affordable transportation is deeply tied to health equity.[12] Therefore, great care must be taken to evaluate the balance of efficiency-oriented and equity-oriented sustainable transportation policies. Policies that encourage cessation of vehicle usage through prohibitive parking costs must be complemented by supporting alternative infrastructure that is reliable and provides adequate access to food, healthcare, and childcare. Policies that encourage active and public transportation must also address critical equity considerations. For example, policies that reduce parking access either spatially or financially may disproportionately affect long-distance commuters who do not currently have alternate options for work commute. Additionally, non-vehicular commuting options typically lead to longer commute times, particularly for long-distance commuters, who tend to be from more marginalized communities.[13] |

D. SUSTAINABLE BUILDING AND LABORATORY OPPERATIONS FOR CAMPUSES

Policy Goal	Encourage sustainable operations through the design, construction, and maintenance of laboratories across the UC campuses.
Health-focused Recommendation(s)	*Overarching recommendation*: Increase the agency of lab workers in creating a culture of health, reduce hazardous waste through good inventory management and surplus chemical programs, and encourage all UCs to implement health and wellbeing sections into their assessment and planning processes. *Primary recommendations include*: a. Include a health and wellbeing component to the Green Lab Assessment Program, including giving lab employees the opportunity to express needs and offer suggestions pertaining to health and wellbeing. b. Create networking events or communication channels between lab managers, researchers, facilities staff to promote open communications and sharing of resources and best practices on building and laboratory operations. c. Develop a surplus chemical network, which includes an inventory of surplus chemicals and communication network between laboratories on each UC campus, with the aim of allowing laboratories to utilize chemicals that are not needed and reduce the harmful impacts of hazardous waste disposal. d. Continue to advance commitment to LEED Certification in all laboratory spaces (see recommendations in Section A. Green Building Design).
Potential Health Impacts	Implementing a health and wellbeing component to laboratory assessments has the potential to create a more inclusive, equitable workplace environment by increasing attention to the work conditions of labs and facilitating new opportunities for employees and student workers to voice their workplace needs. Lab meetings and trainings that focus on the physical and mental health and wellbeing may increase team morale and have a positive influence on relationships between lab employees.[14] Additionally, the development of a surplus chemical network, may decrease the harmful impacts of hazardous waste disposal.
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	UC laboratories employ individuals of varying ages, years of work experience, gender identifies, and educational, socioeconomic, and racial/ethnic backgrounds. Laboratory operations must take into consideration the factors that help ensure an equitable, healthy, safe environment for all.

E. ZERO WASTE

Policy Goal	Reduce campus waste through reduction, reuse, recycling, and composting, as well as the elimination of single-use plastics and packaging foam.
Health-focused Recommendation(s)	Reducing waste on campuses requires system-wide engagement. Recommendations cover a range of departments and domains throughout the UC system, including: a. Procurement: Shift procurement practices to prioritize whole-of-life values for goods and services and support local small businesses. Create a working group between Procurement and Zero-Waste on each campus. b. Residential Dining: Expand food recovery programs. c. Housing and Hospitality: Support campus and community members by directing reusables to local surplus and thrift stores. d. Facilities Management: (i) Decrease travel distance (and related vehicle emissions) for compost processing; (ii) Explore opportunities to collaborate with public agencies and non-profits to pilot innovative technologies for composting sites close to campus e. Zero-Waste Group: Increase knowledge about sustainability initiatives to increase engagement.
Potential Health Impacts	Implementing suggested policy changes may come with both positive and negative impacts. Negative impacts include increased responsibility and costs placed on students, staff, and faulty.[15] Numerous benefits counteract these challenges, including positive environmental and health impacts of decreased waste being sent to landfills (e.g., decreased emissions from road transport)[16]; increased resources available for students, faculty, and staff (e.g., food recovery programs supporting nutrition access for food insecure students)[17]; and increased support for local and small businesses within the communities surrounding each UC.[18]
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	These proposed changes are intended to support more equitable access to resources among students, faulty, and staff. Moving forward, it will be important to keep in mind that the total ban on single-use plastics (e.g., straws), as well as removal of food trays in dining halls as a food waste reduction technique, may reduce accessibility for mobility-challenged or disabled community members.[19] Stakeholders within this community should be consulted before any policy change. Additionally, there are numerous human health risks and equity issues associated with waste processing. It is paramount that the UC partner with waste facilities (e.g., landfills, recycling plants, composting centers) that uphold the highest standard of working conditions to minimize risks to human health.[20]

F. SUSTAINABLE PROCUREMENT

Policy Goal	This section anaylsis focuses on beverage procurement, and more specifically, procurement of sugar-sweetened beverages (SSB) and water. While food & beverage is not a part of Sustainable Procurement in the UC SPP, this section was developed with the aim that certain findings may be translatable to other components of Sustainble Procurement.
Health-focused Recommendation(s)	Recommendations related to the sections of the Sustainable Procurement policy relevant to beverages include: a. Prioritizing zero waste through encouragement of reusable products in addition to reduction of packaging and increased use recyclable products. b. Implement strategies to discourage consumption of SSBs, including increasing UC campus access to clean, paltable drinking water and minimizing exposure to harmful chemicals in drinking water. c. Ensuring toxin-free packaging in all beverages for purchase. d. Build policy and administrative alignment regarding campus pouring rights contracts and policies relevant to beverage provision. e. Develop robust UC Campus healthy beverage education for students, faculty, and staff. Additional recommendation a. Pilot incentive programs for vendors who deliver goods and services to campuses with only zero-emission vehicles.
Potential Health Impacts	Reduction in the negative impacts of SSB consumption on health (e.g., increased risk of obesity, type 2 diabetes, heart disease, tooth decay and cavities) and increase in positive impacts of water consumption on health (e.g., improved energy levels and cognitive functioning, regulation of body temperature, reduced risk of headaches).[21]
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	The beverage environment, including access to and promotion of various beverages, including drinking water, can impact beverage choice, which in turn may increase or reduce disparities in health status.[22] There are multiple drivers of beverage choice (e.g., access, targeted marketing, promotion, safety, perceived safety) that impact population sectors differently and that can lead to disparities in consumption of SSBs, water, and the associated health impacts.[23–25] Further, vulnerable and marginalized populations may have less access to healthcare, thus magnifying the negative health impacts of sugary drink consumption.

G. SUSTAINABLE FOODSERVICES

Policy Goal	Prioritize sustainable food procurement across campus foodservices operations, increase education for patrons and foodservice staff surrounding food choices, develop plant-forward, sustainably-minded menus across foodservice locations, and work with leased foodservice locations to advance sustainable foodservice practices.
Health-focused Recommendation(s)	Increasing sustainable foodservices requires involvement across multiple departments within the UC system. Recommendations include: a. Dining: Invest in more eco-friendly packaging; provide a wide range of nutritious, culturally acceptable food options; provide subsidies to ensure that all students with meal plans have access to a nutritious diet. b. Basic Needs: Provide increased options for students experiencing food insecurity to access nutritious food; work with campus and local farms to build sustainable farming practices, source food locally and ethically; create free cafes and markets to provide the campus community with a safe and comfortable area to access food on campus without cost burdens. c. Procurement: Source food locally, sustainably, and ethically; work with vendors to offer an array of locally sourced organic food as an alternative to mass pre-packaged food. d. Sustainability Office: Increase advocacy efforts regarding the importance of sustainable foodservices; increase awareness of sustainable food options within the campus community. e. Carbon, water (and other sustainability) footprint reporting for foods served on campus to increase awareness and accountability.
Potential Health Impacts	Enhancing sustainable foodservices offers a range of positive impacts, including: increased health and wellbeing among foodservices patrons; decreased negative health outcomes associated with poor diet (e.g., diabetes, cardiovascular disease); increased awareness of sustainable food options health among foodservices patrons; and a more equitable, food-secure environment for among lower income and marginalized students.
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	Food is central to health and wellbeing but cost and availability often present as key barriers to accessing more sustainable, nutritious food options. Food insecurity is a significant concern across the UC system.[29] Historically marginalized students, including students of color, LGBTQ+ students, student parents, and first generation students are among the groups at heightened risk of experiencing food insecurity.[26] Offering subsidies, reducing costs, and increasing access are essential to ensure that all students, regardless of background, have access to a nutritious food options.[29] Additionally, increasing availability of range of food options ensures more equitable inclusion of UC community members across diverse cultural and religious backgrounds, as well as those with allergies and other dietary restrictions.

H. SUSTAINABLE WATER SYSTEMS

Policy Goal	Reduce potable water use by 36% by 2025 through increased use of recycled water, implementation of efficient irrigation systems, and planting drought-tolerant landscaping, as well as developing long-term strategies for achieving more sustainable water systems.
Health-focused Recommendation(s)	Reducing water usage and implementaiton of sustainable water system is an incredible challenging task across all ten UC campuses due to different climates, geographies, and infrastructures. Recommendations that can be broadly applied include: a. Wider implementation of California native plants into existing landscapes. Native plants typically do well in their natural climate and soil and require less watering than non-native plants. b. Utilize use-assessments in landscape planning to limit lawn and turf to those specific locations where uses make lawn or turf imperative. c. Minimize impermeable surface cover and where this unavoidable, incorporate bioswales and similar features to reduce runoff and maximize groundwater recharge. d. Set stormwater run-off goals that exceed regulatory requirements and become progressively more stringent over time. e. Wider implementation of water-effecent toilets, shower heads in gyms; and equipment for all UC Campuses student housing and all off-campus apartments that meet "best practice" standards, not just minimum government standards.
Potential Health Impacts	Native plants attract native wildlife, produce less harmful garden toxins, prevent urban runoff, and require minimal water and maintenance.[30]
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	All 58 counties within California are facing severe drought conditions. Factors contributing are weather systems and insufficient rainfall, in addition to experiencing some of its driest months on record over the past 128 years.[31] Droughts cause public health and safety impacts, as well as economic and environmental impacts. Public health and safety impacts are primarily associated with catastrophic wildfire risks and drinking water shortage risks for small water systems in rural areas and private residential wells.[32] Examples of other impacts includen potential costs to homeowners within UC communitites due to loss of residential landscaping, degradation of urban environments due to loss of landscaping, agricultural land following, and associated job loss, degradation of fishery habitat, and tree mortality with damage to forest ecosystems.[33]

I. SUSTAINABILITY AT UC HEALTH

Policy Goal	Mitigate waste and incorporate efficient renewable and reusable infrastructure in UC Health facilities through reduction of municipal solid waste, reduction of potable water consumption, and implementation of renewable energy technologies.
Health-focused Recommendation(s)	The following recommendations are focused on supporting strategies for UC Health to accomplish the outlined sustainability goals associated with increased safety standards for staff and patients at UC Health, environmental benefits, and improved mental and physical health outcomes. a. Identify 3-5 high-volume single-use medical supplies that can be replaced with re-usable and/or reduced packaging alternatives. b. Partner with environmentally-preferred medical device manufacturers to sustainably source, manufacture, and transport medical supplies, and decrease overall carbon output. c. Identify specific water components to upgrade and integrate EPA approved water-sense water infrastructure at UC Health facilities to decrease overall water utilization. d. Incentivize and implement energy efficient technologies such as LED and solar, and implement greenspaces where applicable to reduce excess energy use and provide overall cooling which further decreases overall pollution output from UC Health facilities. e. Identification of specific performance metrics that will be utilized to gauge efficacy of proposed changes, as well as changes in specific human health determinant outcomes.
Potential Health Impacts	Medical waste is one of the leading sources of pollution worldwide and is a significant contributor to the spread of disease, as well as a major factor affecting disease as well as air, water, and soil quality in and around healthcare structures.[34] Health systems must apply innovative approaches to sustainability to manage negative environmental externalities. In doing so, health systems like UC Health can both preserve scarce resources and provide high quality services to patients and community members.
Health Equity, Vulnerable Populations, and DEIJ Considerations and Impacts	As of 2021, UC Health UC Health spans across California, encompassing 12 medical center hospitals, 20 health professional schools, and tens of UC campus-specific medical centers and clinics. UC Health serves about 1.8 million patients annually. In addition, UC Health is California's fourth largest health care delivery system with over 41,000 employees.[35] UC Helath is commited to serving underserved communities,with nearly 80% of inpatient days comprising of Medicare and Medi-Cal patients, and UC Health as an entity is the second largest provider of Medi-Cal inpatient care.[36] Underserved and marginalized communities are disproportionately impacted by inequitable access to healthcare and climate change, and as such, it is imperative that UC Health incorporate sustainability measures to prevent further exacerbation of inequites.

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