Stephan C. Volker
Alexis E. Krieg
Stephanie L. Clarke
Jamey M.B. Volker (Of Counsel)

Law Offices of
Stephan C. Volker
1633 University Avenue
Berkeley, California 94703
Tel: (510) 496-0600 ❖ Fax: (510) 845-1255
svolker@volkerlaw.com

10.627.01

November 1, 2018

VIA EMAIL AND U.S. MAIL
eircomment@ucsc.edu

Alisa Klaus, Senior Environmental Planner
University of California
1156 High Street, Mailstop: PPDO
Santa Cruz, CA 95064

Re: Comments of Habitat and Watershed Caretakers (HAWC) on the Student Housing West Project Revised Draft Environmental Impact Report, SCH No. 20171102

Dear Ms. Klaus:

INTRODUCTION

On behalf of Habitat and Watershed Caretakers ("HAWC"), we respectfully submit the following comments opposing the University of California's ("University's" or "UC's") Student Housing West Project ("SHW" or "Project") and objecting to its September 2018 Revised Draft Environmental Impact Report ("RDEIR"). Please include these comments in the public record for the University's consideration and decision on the Project and related RDEIR.

Despite the "numerous comments" the University received detailing the public's concerns about the Project, including "among other things, additional analysis and clarification regarding the visual effects and the hydrology and water quality impacts of the Hagar site development; clarification regarding the project's traffic impacts; and the evaluation of additional alternatives to the proposed project," the RDEIR still contains many of the same fatal flaws as the original March 2018 DEIR. RDEIR 1.0-1 to 1.0-2.

In fact, among other changes, the RDEIR actually *increases* the Project footprint from 15 acres at the Hagar site (DEIR 2.0-1, 3.0-2) to 17 acres (RDEIR 2.0-2, 3.0-2), and the Hagar site community building from 2,000 square feet (DEIR 2.0-2) to 3,500 square feet (RDEIR 2.0-3). Furthermore, the construction activity would take place over three phases – instead of two – and be completed one year later than initially suggested. DEIR 2.0-3; RDEIR 2.0-3.

1. The Proposed Project Opens the Campus to Unanalyzed and Unapproved Growth

The 2005 University of Santa Cruz ("UCSC") Long Range Development Plan ("LRDP") "provides a comprehensive framework for the physical development of the UC Santa Cruz campus . . . to accommodate an on-campus three-quarter-average enrollment of 19,500 full time equivalent (FTE) students by 2020-21." RDEIR 1.0-3. However, the SHW Project is not necessary for these accommodations. As discussed below, there are other alternatives – such as expansion within the current footprint or repurposing other campus buildings – that could accommodate the 19,500 students projected by the 2005 LRDP. Yet, UC is still proposing this Project that would destroy the extraordinary and irreplaceable aesthetic and biological resources of the pristine East Meadow.

It appears that the unstated purpose behind the SHW Project is to preemptively open the door to future growth on campus beyond the current 19,500 FTE student projection. Indeed, the RDEIR identifies "[c]oncerns about the potential for the project to be precedent setting such that more of the East Meadow would be developed," as an area of controversy. RDEIR 2.0-15. And in January of this year, the Chancellor indicated his desire to expand the campus by approximately 10,000 FTE students, to "28,000 students by 2040" "from the roughly 18,000 students [UCSC] accommodate[s] today." Chancellor George Blumenthal, *2020 Long Range Development Plan update*, January 12, 2018, attached hereto as **Exhibit 1**. And the Project's Hagar site footprint has already increased from 15 to 17.3 acres. *Compare* DEIR 3.0-2 *with* RDEIR 3.0-2. Expanding the University's footprint now opens up the biologically and aesthetically sensitive and unique East Meadow to development, and paves the way for growth that has neither been analyzed nor approved.

The University should not use the Project to engage in piecemeal approval of the University's plans to develop the proposed – but not yet analyzed – 2020 LRDP. When evaluating a Project under CEQA, an agency must review the entire activity as a whole, and may not segment it into smaller parts. *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* ("*Tuolumne County Citizens*") (2007) 155 Cal.App.4th 1214, 1230; *Laurel Heights Improvement Association v. UC Regents* (1988) 47 Cal.3d 376, 406 ("*Laurel Heights*"); Guidelines § 15378(a), (c), (d). In *Tuolumne County Citizens*, the court observed that "segmenting the environmental analysis . . . runs the risk that some environmental impacts produced by the way the two matters combine or interact might not be analyzed in the separate environmental reviews." 155 Cal.App.4th at 1230. By studying and implementing these actions separately, the University risks incomplete environmental analysis that fails to account for the long-term impacts of potentially housing 10,000 new FTE students on the pristine East Meadow. The University must address these interrelated actions together, as one integrated project. *Id.*

2. The Public-Private Partnership Model Undermines the University's Public Values

The entirety of this Project will be completed "via a public-private partnership (P3) delivery method" ("PPP"), which raises numerous unanswered questions and apparent problems that must be addressed in order to understand and evaluate the impacts of the Project. RDEIR 3.0-1. The UC system is a public education and research institution that is "driven by values of public service."[1] UCSC specifically prides itself on its "uncommon commitment to . . . public service."[2] Yet, this Project will interpose private, profit-driven motivations and corporate management biases into the decisionmaking process of this supposedly public service-driven educational institution. Under the PPP model, the private developer – Capstone Partners – will provide the capital, design and build the buildings, set rent and fees, and make a profit, on all of the new development. This privatization of on-campus housing directly undermines the University's public service-driven decisionmaking by injecting private, profit-driven priorities and prejudices into the planning process.

The University admits that there is direct competition between these private, profit-driven motivations and the University's objectives. It states that "the use of a PPP is most effective for projects that . . . [a]re situated *off*-campus on land *not* owned by [the University]" because projects on University owned land often "constrain contracting options available to private sector developers" and limit their ability to make a profit.[3] This direct competition between these public and private decision-making paradigms raises numerous questions about whose goals will prevail in the planning process – the University's public-service objectives, or the developer's private profit-driven bottomline. In order to assess the impact that this privatization will have on the University's decisionmaking process, the RDEIR must identify and analyze all of the components of the PPP model and answer the following questions, among others:

1. Was it originally Capstone Partners' idea to locate the family housing Project in the East Meadow? Did this influence UCSC's decision to choose this location rather than alternative sites?

---

[1] University of California, *The University of California At A Glance*, February 2018, available at: https://www.universityofcalifornia.edu/sites/default/files/uc-at-a-glance-feb-2018-final.pdf (last accessed May 9, 2018), attached hereto as **Exhibit 2**.

[2] UCSC, *Campus Overview: About UC Santa Cruz*, available at: https://www.ucsc.edu/about/campus-overview.html (last accessed October 29, 2018).

[3] University of California Office of the President, Budget and Capital Resources, *Private Public Partnerships at the University of California,* July 12, 2010, revised June 10, 2013, p. 2, available at: http://www.ucop.edu/real-estate-services/_files/documents/ppp_at_uc.pdf (last accessed May 9. 2018), attached hereto as **Exhibit 3** (emphasis added).

2. Does locating the Project in the East Meadow potentially lower construction costs? If so, does Capstone Partners reap any additional financial benefit as a result? What are the costs for development of each alternative site compared to the cost of building student housing on the East Meadow?

3. Does the cost of construction affect Capstone's profit? How is Capstone's ultimate amount of profit determined? Will any other entities make a profit on the Project?

4. Who will seek the financing for the Project? Who will be the guarantors for the financing of the Project? What rights or recourse will each entity have? What is the debt repayment formula?

5. Is the Project subject to taxation? Has Capstone ever developed a housing project under the PPP model that was determined to be subject to taxation? If so, please identify what State, location, and educational institutions, and describe the resulting impacts on rental rates and occupancy.

6. What is the projected rent of the various housing units to student renters? Will the rents change based on occupancy or over time? What will those changes be? How will these rents affect demand for these units, and the off campus housing market? The projected rents should have been included in the RDEIR housing analysis.

7. Who will own the buildings? Who will manage the buildings? What is the relationship between Capstone and these entities?

8. Will Capstone Partners or the management entity working with Capstone on this project have a "possessory interest" in the master lease with UCSC or the individual rental contracts with renters?

9. Is there any provision in any of the existing documents that would allow for a person who is not a student to rent a housing unit?

10. Will a for-profit entity be operating the child care center? What is the projected lease rate for that space? Will the rate be a market rate? Will the private operator have a possessory interest in a long term lease? Will the private operator be able to profit from operating the child care facility?

11. Does UCSC have any agreements for future projects with Capstone?

To help understand these issues and provide both the public and decisionmakers with all of the information necessary to determine the impacts of this Project and what potential alternatives or mitigations are available, the University must provide all contracts and pertinent documents between Capstone and UCSC or the University of California Office of the President ("UCOP") for public review. Public Resources Code § 21061. These documents are necessary to allow the public to understand how these financial relationships might have affected the selection of the East Meadow as a building site, the scope, nature and density of the housing to be provided, and how this housing will be managed for a profit in the future.

3. The Project Description Is Inadequate

Like the DEIR, the RDEIR's Project description is inadequate. An adequate project description is an essential starting point for analysis of a project's environmental impacts, and all environmental impact reports must provide one. 14 California Code of Regulations ["CEQA Guidelines"] § 15124. As directed by the CEQA Guidelines, the project description "shall contain the following information:"

> (a) The precise location and boundaries of the proposed project . . . shown on a detailed map.
>
> (b) A statement of objectives sought by the proposed project[, which] will help the Lead Agency develop a reasonable range of alternatives to evaluate in the EIR . . . . The statement of objectives should include the underlying purpose of the project.
>
> (c) A general description of the project's technical, economic, and environmental characteristics . . . .

Id.

"An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* ("*County of Inyo*") (1977) 71 Cal.App.3d 185, 193. By contrast,

> [a] curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefits against its environmental cost, consider mitigation measures, assess the advantage of

> terminating the proposal (i.e. the "no project" alternative) and weigh other alternatives in the balance.

Id. at 192-193.

Here, the RDEIR's Project objectives state that the Project is needed to "[s]upport the development of sufficient and affordable, on-campus student housing under the UC President's Housing Initiative." RDEIR 3.0-7. The President's Housing Initiative is a statewide program that favors and promotes privatization of the University's development planning process. Under this initiative, "the Office of the President led an effort to identify housing developers . . . that would be eligible to respond to Requests for Proposals (RFPs) for campus-specific student housing projects."[4]

But the RDEIR fails to explain the three unexamined central premises of this initiative that preordain its direction and impacts: (1) that statewide campus growth be imposed on all campuses at the same rapid pace regardless of each campus' environmental carrying capacity (i.e., one size fits all), (2) that private profit-driven decisionmaking ultimately determines the size, density, pace and quality of all on-campus housing development, and (3) that on-campus housing is the only means of achieving "convenient access to" campus and of "reduc[ing] the growth in vehicle trips to the campus." RDEIR 3.0-7. The RDEIR never addresses, let alone questions, these threshold premises. It should.

Why should UCSC bear the same burden of statewide University student growth as the other campuses regardless of the severe local environmental impacts that this "one size fits all" imperative unleashes? Indeed, as the RDEIR admits, only 726 new beds are needed to accomplish the goals set forth in the 2008 Comprehensive Settlement Agreement ("CSA"). RDEIR 3.0-8. Additional growth that follows the University-wide "one size fits all" approach should not be the guiding principle here. As discussed below, UCSC faces water supply shortfalls, massive defacement of a world-renowned iconic landscape, and significant biological impacts from placement of the SHW Project on the East Meadow.

Furthermore, why is this growth dictated by private interests rather than the public goals of the University? As discussed above, the privatization of the University undermines these important goals and should not dictate housing policy.

---

[4] University of California Office of the President, *Student Housing Initiative*, available at: https://www.ucop.edu/student-housing-initiative/ (last accessed October 30, 2018).

Lastly, contrary to the assumptions in the RDEIR, on-campus housing is not the only means "to facilitate convenient access to classrooms and other learning environments; student services; campus amenities such as retail, restaurants and fitness facilities; and reduce the growth in vehicle trips to the campus." RDEIR 3.0-7. Rather, these objectives could be encouraged and accomplished through increased shuttle access, better online and electronic access, incentives and infrastructure for carpooling, and greater pedestrian and bicycle access coupled with greater restrictions on campus vehicular use and parking.

Yet, the RDEIR objectives describe the Project as a forgone conclusion because they presume that this privatization and housing growth must occur at UCSC. And as further discussed below, even if housing growth on the UCSC campus is justified, the RDEIR fails to address why it cannot be accommodated largely – if not wholly – within the current building footprint.

4. The RDEIR Fails to Consider a Reasonable Range of Alternatives

CEQA mandates that an EIR must provide the public with a full assessment of alternatives to the proposed project. Public Resources Code § 21001(g). CEQA confirms "it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives . . . available which would substantially lessen the significant environmental effects of such projects . . . ." Public Resources Code § 21002. The Legislature directed that an "[EIR] shall include a detailed statement setting forth . . . [a]lternatives to the proposed project," and declared that one of "[t]he purpose[s] of an [EIR] is . . . to identify alternatives to the project." Public Resources Code §§ 21002.1(a) (second quote), 21061, 21100(b)(4) (first quote).

CEQA requires an EIR to describe a reasonable range of alternatives that could feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of its significant effects. CEQA Guidelines § 15126.6(a) and (f). "An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision making." *Laurel Heights Improvement Association v. Regents of the University of California* ("*Laurel Heights*") (1988) 47 Cal.3d 376, 404. An alternative may "not be eliminated from consideration solely because it would impede to some extent the attainment of the project's objectives." *Habitat and Watershed Caretakers v. City of Santa Cruz* ("*HAWC*") (2013) 213 Cal.App.4th 1277, 1304; CEQA Guidelines § 15126.6(b). "The EIR is required to make an in-depth discussion of those alternatives identified as at least potentially feasible." *HAWC,* 213 Cal.App.4th at 1303 (emphasis and quotation omitted).

Despite revision of the University's alternatives analysis from the DEIR to the RDEIR, the RDEIR still fails to identify and evaluate a reasonable range of alternatives to the proposed Project. RDEIR 5.0-1. The alternatives that were examined by the RDEIR were not reasonably calculated to significantly reduce the Project's adverse impacts. The RDEIR analyzes seven alternatives – a No Project Alternative, and six alternatives that *all* develop the Heller Site.

RDEIR 5.0-16 to 5.0-83. The University should consider alternatives that achieve most of the Project's objectives without developing Heller Site.

Moreover, none of these alternatives considered shifting some of the proposed student growth to other UC campuses that have greater carrying capacities, such as larger water supplies or fewer environmental impacts. Instead, the Project assumes that UCSC must be expanded, and keep expanding, to accommodate more and more students on a campus that cannot support that growth. Only one campus has been added to the UC system in more than 50 years, while the population of California has more than doubled. And UCSC is unreasonably expected to bear this growth. Yet there is nothing inherently infeasible about an alternative that limits growth on the UCSC campus while accommodating that growth at other U.C. campuses, new or existing. As noted, an alternative may "not be eliminated from consideration solely because it would impede to some extent the attainment of the project's objectives." *HAWC*, 213 Cal.App.4th at 1304.

Nor did any of the alternatives considered by the University analyze repurposing buildings – including buildings not currently used for housing – already on campus to meet the University's housing goals. *Id*.; *see also* RDEIR 5.0-15. The only mention of repurposing current infrastructure is a brief discussion in the section on Alternatives Considered But Not Evaluated In Detail that states that the University "has already implemented a number of projects to increase the density of occupancy of *existing housing*," and a conclusory claim in the discussion of the No Project alternative that states that "[m]ore beds cannot be added to the existing colleges on the campus without new construction." RDEIR 2.0-5 (second quote), 5.0-15 (first quote), 5.0-19. But dismissing an alternative that would repurpose buildings not currently used for housing without analysis violates CEQA. "A potentially feasible alternative that might avoid a significant impact must be *discussed* and *analyzed* in an EIR so as to provide information to the decision makers about the alternative's potential for reducing environmental impacts." *HAWC*, 213 Cal.App.4th at 1304 (emphasis in original); *Laurel Heights*, 47 Cal.3d at 404.

Furthermore, the RDEIR fails to analyze any alternative that maintains the current footprint and simply adds floors to – or redesigns or repurposes existing floors within – existing structures. RDEIR 5.0-11 to 5.0-83. All of the action alternatives contemplate construction of entirely new buildings, but many of the Project's impacts could be avoided by expanding or better utilizing the existing infrastructure within the same footprint. The RDEIR's failure to consider this alternative violates CEQA's demand for a reasonable range of alternatives. CEQA Guidelines § 15126.6; *HAWC*, 213 Cal.App.4th at 1304.

5. The DEIR's Discussion of Impacts Is Inadequate

CEQA mandates that the RDEIR adequately analyze a project's effects to foster informed decisionmaking and allow the public to understand those impacts. Public Resources Code § 21002.1; CEQA Guidelines §§ 15121, 15126, 15126.2. Where possible, the lead agency must employ feasible mitigation measures that could minimize the project's significant adverse impacts. Public Resources Code § 21002; Guidelines §§ 15121, 15126.4. As shown below, the RDEIR fails to adequately address the Project's impacts. Its failure to provide information in an organized, concise, and accurate manner violates CEQA's informational purpose and prevents the public and decisionmakers from fully considering those impacts. CEQA Guidelines §§ 15121, 15144; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* ("*Vineyard*") (2007) 40 Cal.4th 412, 428; *Berkeley Keep Jets Over the Bay Committee v. Board Port of Commissioners* ("*Berkeley Keep Jets*") (2001) 91 Cal.App.4th 1344, 1355-1356.

A. Aesthetics

The RDEIR downplays the impact of the SHW development on the pristine East Meadow (the Hagar site). While the RDEIR admits that impacts are significant and unavoidable, the information presented is misleading and fails to provide the public and decisionmakers with an accurate understanding of the magnitude and severity of the Project's impacts. For example, the RDEIR understates the impact at the Hagar site, claiming that the slope, two-story construction, and use of site-appropriate colors for the buildings would "minimize the obtrusion of the development in the view from this location and the rest of the East Meadow would still be visible." RDEIR 4.1-24 to 4.1-25. But that claim is highly misleading. As Figures 4.1-15 through 4.1-20 show, the gently sloping Meadow is highly visible and the Project will permanently mar that view. RDEIR 4.1-55 to 4.1-63. Even the UCSC Design Advisory Board unanimously voted to *oppose* developing the meadow.[5]

Similarly, the RDEIR trivializes the impacts from the Heller site development, claiming that the views of the bay would only be partially obstructed and "the stepping of the building heights, the selection of appropriate colors and materials . . . and new landscaping . . . would soften the appearance of the new development." RDEIR 4.1-21 to 4.1-22. But these claims are patently untrue. The large buildings proposed for development on the Heller site would obstruct the views and significantly impair the extraordinary natural beauty of the area. RDEIR 4.1-39 to 4.1-42 (Figures 4.1-2 to 4.1-5). They would also violate the 2005 LRDP Planning Principles and Guidelines ("LRDP Guidelines"). The LRDP Guidelines require that the University

---

[5] Ibarra, Nicholas, *UCSC: Meadow development opponents mull legal action*, Santa Cruz Sentinel, April 25, 2018, available at: http://www.santacruzsentinel.com/social-affairs/20180425/ucsc-meadow-development-opponents-mull-legal-action (last accessed May 10, 2018), attached hereto as **Exhibit 4**.

> "[i]ntegrate the natural and built environment: New development will respond to the aesthetic qualities of UCSC's unique natural environment through siting, development patterns and architecture that are sensitive to the natural setting. In forested areas, buildings generally should not protrude above the surrounding tree canopy; in visually sensitive areas, interruption of prime viewsheds and viewpoints will be minimized."

2005 LRDP 49. The proposed development at the Heller site, by contrast, severely "interrupts" and degrades this visually sensitive area. The Heller development deviates dramatically from – rather than adhering to – the LRDP Guidelines, as shown in the visual simulations. RDEIR 4.1-39 to 4.1-42 (Figures 4.1-2 to 4.1-5). The RDEIR claims that the Project "has been designed to address these recommendations" through clustering of buildings, increased building height to reduce footprint, and use of certain materials and colors. RDEIR 4.1-30. The RDEIR also claims that the buildings would be "below or close to the tree canopy of the adjoining forest." *Id.* But the visual simulations that the RDEIR points to as evidence of compliance with these recommendations shows the exact opposite: Buildings that well exceed the tree canopy and stick out like sore thumbs against the surrounding forested landscape. RDEIR 4.1-40 (Figure 4.1-3), 4.1-42 (Figure 4.1-5).

By downplaying these aesthetic impacts, the RDEIR misleads the public and decisionmakers, and fails to provide an accurate assessment of the Project's impacts. This violates CEQA. CEQA Guidelines §§ 15121, 15144; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. Without an accurate assessment of these impacts, it is impossible for the public and decisionmakers to make an informed evaluation of the need for alternatives and mitigation measures to avoid or reduce them.

B. Biological Resources

The RDEIR's analysis of biological impacts is insufficient. The public and decisionmakers need significantly more detail regarding the Project's impacts to wildlife and vegetation in order to make an informed decision, as CEQA requires. The University must perform additional studies to identify and evaluate the Project's impacts to biological resources, as the few surveys that were completed are inadequate.

For example, only three biological surveys were completed for each of the sites. RDEIR 4.3-5. And all were performed without regard to the standard protocol of conducting species inventories in every season to assure that all affected species are in fact identified and evaluated. The May 2, 2017, June 24, 2017, and August 17, 2018 surveys at the Heller site were performed only in the spring and summer, and thus were insufficient to determine the environmental setting in the fall and winter. RDEIR 4.3-5. Likewise, the October 5, 2017, December 7, 2017, and July 31, 2018 surveys of the Hagar site were performed only in the fall, winter, and summer and thus were insufficient to determine the environmental setting during the spring. RDEIR 4.3-5.

Therefore they fail to meet CEQA's informational demands.

Without an understanding of all of the species that utilize the Project site – and especially the East Meadow – the public and decisionmakers cannot accurately determine the Project's impacts on biological resources. These deficiencies must be rectified because they preclude informed decisionmaking. As the courts have explained, "[a] clearly inadequate or unsupported study is entitled to no judicial deference," and does not constitute substantial evidence supporting an agency's finding. *Laurel Heights*, 47 Cal.3d at 409 n.12. More thorough surveys in each season must be completed.

The RDEIR also fails to provide sufficient information on the Project's impacts to the California red-legged frog ("CRLF"). CEQA Guidelines §§ 15121, 15144; *Vineyard*, 40 Cal.4th at 448-449 (EIRs must examine seasonally-changing impacts on imperiled species); *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. The University recognizes that "[b]ased on the known occurrences of the species in the project vicinity, and the manner in which the species is known to disperse and move between drainages and breeding sites, the Heller site and off-site improvements are located in an area that could provide suitable upland and dispersal habitat for CRLF," and that the "area surrounding the Heller site has also been mapped as designed critical habitat." RDEIR 4.3-41. It also admits that "construction activities at the Heller site, including the proposed off-site utilities, could directly impact CRLF." RDEIR 4.3-42. Yet it fails to even consider the potentially devastating impact to CRLF from the enormous increase in the number of students that will live at the Heller site. The Heller site currently houses 199 two-bedroom townhouses. RDEIR 3.0-2. The Project will increase the number of beds threefold – to 2,932. RDEIR 3.0-9. Adding more than 2,000 residents to this location has the potential to significantly impact CRLF and their habitat. And unlike the construction impacts that the RDEIR admits, these operational impacts are *permanent*.

Similarly, the RDEIR's analysis of Project impacts to the western burrowing owl is insufficient. RDEIR 4.3-46 to 4.3-47. Again, the RDEIR only considers the construction impacts of the Project, ignoring the ongoing impacts created by increasing the resident population in the area. *Id.* And, even the discussion of construction impacts underestimates the severity of the harm that the Project will cause to this important species. The RDEIR fails to account for the potential to permanently remove burrows and prey for the western burrowing owls that overwinter there. *Id.* It erroneously claims that because "burrowing owls are known to overwinter within the upper East Meadow" and the "proposed Hagar site development would be located in the southern portion of the East Meadow," that the Project's impacts to this important species would be less than significant. However, this claim underestimates the potential impact to burrowing owls, which have been recently spotted on the east meadow.[6]

---

[6] October 5, 2018 photos showing burrowing owls on the UCSC East Meadow, available at: https://ebird.org/view/checklist/S48955832 (last accessed October 31, 2018).

The RDEIR's discussion of golden eagles is also insufficient. RDEIR 4.3-46. Despite recent golden eagle sitings on the East Meadow,[7] the RDEIR erroneously concludes that with implementation of "LRDP Mitigation BIO-11, which sets forth measures that the Campus requires all projects to implement during construction to avoid impacts to nesting birds, including preconstruction surveys of all potential nesting habitats at and within 200 feet of the project work areas, and establishment of appropriately sized buffer zones in the event that active nests are observed," the Project's impacts will be less than significant. But this is problematic for multiple reasons. First, as further discussed below, LRDP Mitigation BIO-11 is not defined anywhere in the RDEIR. RDEIR 4.3-29 to 4.3-31.[8] Second, even if LRDP Mitigation BIO-11 were defined, it is not sufficient to mitigate the impacts to special status species known to occur and forage in the area. RDEIR 4.3-20.

Likewise, the RDEIR ignores ongoing operational impacts from the increased resident population on numerous other species, including special status birds, special status bats and the San Francisco dusky-footed woodrat. RDEIR 4.3-46 to 4.3-48. These impacts must be addressed under CEQA. CEQA Guidelines §§ 15121, 15144; *Vineyard*, 40 Cal.4th at 448-449 (requiring examination of seasonal impacts on imperiled species); *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356.

C. Hydrology and Water Quality

The RDEIR also fails to adequately analyze the Project's runoff impacts. The Hagar site is "currently an undeveloped hillside" but will be developed with 6.32 acres, or 50 percent, of "impervious surfaces on the site after project construction." RDEIR 4.7-34. By covering half of the Hagar site on the East Meadow with impervious surfaces, the Project creates a significant runoff impact. Yet the RDEIR claims that this impact is less than significant because all new runoff from the site would be directed "into storm drains located in the proposed roadways" and treated to remove pollutants. RDEIR 4.7-33 to 4.7-34.

---

[7] September 29, 2018 photos showing a golden eagle at the UCSC East Meadow, available at: https://macaulaylibrary.org/asset/116764871 and https://macaulaylibrary.org/asset/116764881 (last accessed October 31, 2018).

[8] LRDP Mitigation BIO-10 does discuss nest surveys for golden eagles. If the University is referring to LRDP Mitigation BIO-10, and not BIO-11, the RDEIR must be revised. Furthermore, the surveys contemplated in LRDP Mitigation BIO-10 do not account for foraging activities that might occur at the Project site.

But that conclusion is not supported by the facts. If there were no impervious surface, much – perhaps most – of the rain falling on the site would percolate through the soil and recharge the underlying aquifer. That groundwater, in turn, feeds downgradient waterbodies such as Kalkar Quarry Spring, West Lake Pond Spring, Messiah Lutheran Spring, Bay Street Spring and their associated streams, and Moore and Wilder creeks to the west. That recharged groundwater would then support the plants, birds, fish and other wildlife that inhabit these springs and creeks and their associated riparian areas. Thus, the Project's impervious surfaces would remove water that would otherwise recharge the groundwater and support these downgradient waterbodies and their vegetation and wildlife. This impact should be examined and mitigated.

The fact that the "complexity of the underlying karst system" may make runoff impacts "difficult to predict" (RDEIR 4.7-39) does not excuse the University from examining and attempting to mitigate them. The loss of groundwater may not be dismissed as a mere storm water removal issue. CEQA requires the University to "use its best efforts to find out and disclose all that it can" regarding this significant impact. CEQA Guidelines §§ 15121, 15144; *Vineyard*, 40 Cal.4th at 440 (EIRs must provide an "analytically complete and coherent explanation" of impacts); *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356; *Laurel Heights*, 47 Cal.3d at 409 n.12.

D. Land Use and Planning

The Project also conflicts with existing and future land use plans for the area. CEQA requires examination of "any inconsistencies between the proposed project and applicable [land use] plans." CEQA Guidelines § 15125(d). And the Project's proposed development is plainly inconsistent with the 2005 LRDP.

As discussed above, the aesthetic impact of the Project would be significant (RDEIR 4.1-20 to 4.1-34) because of the new development at the Hagar site and the dramatically increased size of development at the Heller site. While the Project proposes an amendment for the LRDP's land use designation at the Hagar site, this attempt at piecemeal revision and weakening of the LRDP violates CEQA's mandate that cumulative impacts, including both direct and indirect impacts, be examined. CEQA Guidelines §§ 15130, 15355. Nothing in the RDEIR explains the inconsistency of this amendment with other principles outlined in the 2005 LRDP, as required by CEQA Guidelines section 15125(d).

That LRDP calls for maintenance of the "unique character of the UC Santa Cruz campus," "preserv[ation of] open space," and integration of "the natural and built and environment." RDEIR 4.8-9. Furthermore, the 2005 LRDP directs that "[n]ew development in the lower East Meadow between Hagar Drive and Coolidge Drive will be minimized to maintain the overall sense of an open meadow landscape." 2005 LRDP 74. The Project conflicts with each one of these land use standards and guidelines. Yet the RDEIR ignores these conflicts. The

Project proposes to develop the currently undeveloped and ecologically important East Meadow, opening it for future growth. This directly violates the LRDP's mandate that UCSC "preserve open space," and the "overall sense of an open meadow landscape." RDEIR 4.8-9; 2005 LRDP 74. And the sizeable buildings proposed for the Heller site fail to maintain the "unique character" of the UCSC campus, nor do they "[i]ntegrate the natural and built environment." *Id.*

Indeed, the RDEIR falsely claims that the "proposed project would not conflict with the UC Santa Cruz 2005 LRDP once amended." RDEIR 4.8-12. The RDEIR asserts that the Project is consistent because the new development would "remain almost completely within the boundary of existing development" or "would be clustered adjacent to existing housing." RDEIR 4.8-12. Not so. These claims ignore the fact that the proposed development would significantly degrade the scenic and environmental resources of the campus. The RDEIR must disclose, discuss and fully and fairly analyze these impacts as required by CEQA.

E. Noise

The RDEIR's noise analysis entirely fails to consider the impact of housing thousands more students in previously quiet, undeveloped areas of the campus. RDEIR 4.9-10 to 4.9-22. Despite recognizing the public's concern about this inadequacy, the RDEIR fails to remedy the DEIR's failure to analyze this significant impact. RDEIR 4.9-1 (this "section is substantially the same as the section in the [DEIR]" despite the public's comments), 4.9-10 to 4.9-22. Rather, the RDEIR only discusses the noise impacts of traffic and construction. But the thousands of additional students themselves will create noise and its attendant impacts on wildlife, and that noise impact must be analyzed under CEQA. *Id.*

F. Public Services

The RDEIR admits that the Project "could not be served [by the Santa Cruz Fire Department ("SCFD")] at the existing level of service." RDEIR 4.10-13. The SCFD determined that to serve the new development it would need additional staff, and construction of a new engine bay. *Id.* Yet the RDEIR astonishingly claims this impact is less than significant and that no mitigation is required. RDEIR 4.10-13 to 4.10-14. The RDEIR appears to base this erroneous conclusion on the fact that SCFD expansion was considered in the 2005 LRDP, but there is no evidence that such an expansion is ever going to occur. RDEIR 4.10-13. That expansion is absolutely necessary for the SHW Project and must be considered in the RDEIR as part of the Project itself. CEQA Guidelines § 15130 (requiring discussion of cumulative impacts). Without such an analysis, the public and decisionmakers are left unaware of the costs and impacts of this consequential expansion and therefore cannot make an informed evaluation of those costs and impacts, let alone the mitigations or alternatives to the SHW Project that would be needed to avoid or reduce them.

G. Utilities and Service Systems

i. The City's Water Supply Is Insufficient

UCSC "receives potable water for use on the main campus from the City of Santa Cruz Water Department" ("SCWD"). RDEIR 4.13-2. The RDEIR admits that the Project "would increase the amount of water used" on the campus and would therefore not be served by existing entitlements "under multiple dry year conditions." RDEIR 4.13-21. But the SCWD does not have an adequate water supply to meet current demands. According to the City's Urban Water Management Plan ("UWMP"), "the City has had to declare a water shortage in five of the . . . seven years" between 2009 and 2015.[9] Indeed, the RDEIR admits in the Water Supply Impact Assessment ("WSA") that SCWD "is facing several obstacles in meeting its present and future water supply needs." RDEIR 7.1-12. It concludes that "a small shortage (1 to 3 percent) can be expected in future normal water years," "annual shortages of 16 to 21 percent are predicted" during a single dry year, and shortages over 50 percent will occur after three dry years. RDEIR 7.1-32 to 7.1-33 (Table 7.1-10).

While UCSC has included an MBR wastewater treatment plant at the Hagar site, which would generate recycled water for toilet flushing and landscaping (RDEIR 4.13-1), the Project's water demands still would be more than SCWD has the ability to supply. RDEIR 7.1-32 to 7.1-33 (Table 7.1-10). The Project, in conjunction with other reasonably foreseeable developments, "would generate increased demand for water during normal and drought years," creating significant and unavoidable water supply impacts. RDEIR 4.13-26, 7.1-27.

Despite these significant and unavoidable impacts, and the documented lack of available water from SCWD, the RDEIR states that the City will be able to serve the Project. RDEIR 7.1-52 to 7.1-53. But given the precarious nature of the water supply, it would be irresponsible for the City to commit to providing water to the Project when it does not even have adequate water supply for its current commitments. And, it is a violation of CEQA for the RDEIR to imply that the City can provide this additional water when the undisputed facts show otherwise. *Vineyard*, 40 Cal.4th at 438-447.

---

[9] City of Santa Cruz, *2015 Urban Water Management Plan*, August 2016, p. 8-1, available at: www.cityofsantacruz.com/home/showdocument?id=55168 (last accessed October 30, 2018), excerpts attached hereto as **Exhibit 5**.

ii. Increased Water Demand Will Be Detrimental to Special-Status Fish Species

The City's water sources support populations of Central California Coast ("CCC") Distinct Population Segment steelhead (*Oncorhynchus mykiss*), a threatened species (62 Fed. Reg. 43937 (August 18, 1997)), and CCC Evolutionarily Significant Unit (ESU) coho salmon (*Onorhynchus kisutch*), an endangered species. 70 Fed.Reg. 37160 (June 28, 2005); 64 Fed.Reg. 24049 (May 5, 1999); RDEIR 7.1-8. The endangered CCC coho relies on the San Lorenzo River watershed for recovery. 64 Fed.Reg. 24049; RDEIR 7.1-32. The prospects for recovery of the CCC steelhead and coho are dependent on suitable habitat being restored and maintained. Certain minimum levels of flow and temperature are required in streams for the proper development, growth and spawning of salmonids.

Currently, in critically dry years, the City does not have enough water to meet the City's existing needs, including the instream needs for fish. RDEIR 7.1-32. During these dry years maintenance of instream flow is critically important for the survival of the salmonids as rearing juveniles are typically unable to rear in small tributaries and will need adequate water flow in the main stem of the San Lorenzo River. As climate change continues to alter ambient temperatures, the need for cool water flows will increase, requiring corresponding reductions in water supplies for human uses, further limiting the City's ability to meet water demands. Both the RDEIR and the WSA must address this when calculating the City's ability to meet water demand. *Friends of the Eel River v. Sonoma County Water Agency* (2003) 108 Cal.App.4th 859, 874-875 (EIR must address cumulative impacts of upstream and downstream diversions of water for human uses on salmonid species in the river); *Vineyard*, 40 Cal.4th at 448-449 (EIR must examine impact of seasonal reductions in river flow on both salmon and human water supply).

Furthermore, the RDEIR and the WSA should also analyze the impacts that would occur if the City were forced to pump groundwater to make up for reduced surface water supplies in the future. *Vineyard*, 40 Cal.4th at 438-447.

iii. Alternative Water Supplies Analyzed in the RDEIR and the WSA Are Not Sufficient To Meet Water Demand

The WSA suggests four alternative sources of water, including In Lieu Transfers (Passive Recharge), Aquifer Storage and Recovery (Active Recharge) ("ASR"), the Regional Recycled Water Facilities Project, and the City Seawater Desalination Project. All of these alternative water sources are speculative, their feasibility is still being evaluated, and each has its own set of

unstudied environmental impacts that neither the City nor any other agency has yet evaluated under CEQA.[10] RDEIR 7.1-13 to 7.1-14, 7.1-38 to 7.1-39, 7.1-42, 7.1-45.

The City has concluded that "it cannot confidently determine that these source options are 'likely future water sources,' the impacts of which an EIR must analyze, 'to the extent reasonably possible,' under *Vineyard Area Citizens et al. v. City of Rancho Cordova* (2007) 40 Cal.4th 412. However, because these are under consideration by the City and none of these options has been determined to be infeasible at this time, all four water supply augmentation options . . . are briefly described." RDEIR 7.1-38.

While the City approved a pilot project for the in lieu transfers and ASR, the larger-scale feasibility of those projects is uncertain. RDEIR 7.1-39. And as the WSA admits, "[b]ecause no CEQA review has been undertaken and neither project has been developed to a level that its environmental impacts may be ascertained, this [RDEIR] cannot reasonably present the environmental impacts of [those projects], although it is acknowledged that such projects would likely result in environmental impacts." RDEIR 7.1-39 to 7.1-40.

Similarly, the WSA only discusses the impacts of the Regional Recycled Water Facilities Project "generically" because no CEQA review has been completed. RDEIR 7.1-42. The City is also considering a "future 3.3 million gallons per day (mgd) desalination plant." RDEIR 7.1-45. As the WSA admits, "there is substantial uncertainty regarding approval and timing of the desalination water supply option," and it will present a whole new realm of environmental consequences to Monterey Bay and the adjacent counties and cities. RDEIR 7.1-45 to 7.1-49. Seawater desalination is not only expensive, it also uses massive amounts of energy, contributes to global warming due to its huge energy consumption, and will likely be detrimental to the area's biological resources both through entrainment of tiny marine organisms and nutrients, and the discharge of highly saline effluent. RDEIR 7.1-47 to 7.1-49.

Since the possibility of developing each of these four alternative water supply options remains uncertain, the City has no certain source of the additional water which the City will need to carry out the Project. Without an adequate supply of water to meet all of its demands, neither UCSC nor the City can proceed with the Project without further, detailed environmental analysis of the feasibility and impacts of doing so.

---

[10] The City prepared a Draft EIR for the desalination plant but it was never certified. RDEIR 7.1-45 to 7.1-46.

6. The Proposed Mitigation Measures Are Inadequate Under CEQA

CEQA directs that "agencies shall not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects . . . ." Public Resources Code § 21002; CEQA Guidelines § 15126.4. Furthermore, "[f]ormulation of mitigation measures should not be deferred until some future time," unless specific performance standards are specified. CEQA Guidelines § 15126.4(a)(1)(B). "[M]itigation measure[s] [that do] no more than require a report be prepared and followed" do not provide adequate information for informed decisionmaking under CEQA. *Endangered Habitats League, Inc. v. County of Orange* ("*Endangered Habitats League*") (2005) 131 Cal.App.4th 777, 794; CEQA Guidelines § 15126.4(a)(1)(B). The RDEIR does not comply with these CEQA requirements for mitigation measures.

Many of the mitigation measures proposed are inadequate because they are too vague, incomplete, ineffective or unenforceable. The RDEIR relies on numerous mitigation measures from the 2005 LRDP that are vague, such as mitigation measures AES-5A and AES-6C, which call for the Design Review Board to "review project designs for consistency with the valued elements of the visual landscape" and "require the incorporation of measures into the project design to limit" light and glare. RDEIR 4.1-19 to 4.1-20. These measures are too broad to be informative or enforceable.

Other proposed mitigation measures are ineffective. For example, SHW Mitigation BIO-1B requires the replacement of lost purple needlegrass grassland at a ratio of 1:1. RDEIR 4.3-34. Loss of grassland and habitat is a permanent impact that cannot be effectively remedied or mitigated at all. Planting new vegetation cannot make up for the loss of well-established populations of sensitive species. It is at best problematic. Therefore the replacement areas must be at least three times greater than the areas impacted for the species to even have a chance at recovery years later. Despite the fact that the University received numerous comments identifying this failure of the DEIR, the RDEIR fails to remedy this inadequacy. RDEIR 4.3-2, 4.3-34.

Further, many of the mitigation measures are improperly deferred. Guidelines § 15126.4(a)(1)(B). For example, SHW Mitigation measure BIO-1A calls for the future development of a mitigation and monitoring plan for vegetation restoration (RDEIR 4.3-34), 2005 LRDP Mitigation CULT-5B calls for a paleontologist to "to develop a paleontological monitoring and data recovery plan" if necessary (RDEIR 4.4-25), and 2005 LRDP Mitigation measure GEO-1 suggests that geotechnical studies should be developed in the future (RDEIR 4.5-11). None of these deferred mitigations includes any specific performance standards and therefore, all are inadequate under CEQA. Guidelines § 15126.4(a)(1)(B); *Endangered Habitats League*, 131 Cal.App.4th at 794.

Finally, the RDEIR relies on non-existent mitigation measures as means of lessening impacts of some of the identified alternatives. The RDEIR references SHW Mitigation BIO-2 to address the potentially significant impacts to special-status plants under Alternative 4. RDEIR 5.0-43. But SHW Mitigation BIO-2 has been entirely removed from the RDEIR. RDEIR 4.3-38; *see also* DEIR 4.3-32. Likewise, the RDEIR's reliance on LRDP Mitigation measure BIO-11 is problematic, because that mitigation measure is not defined in the RDEIR. RDEIR 4.3-29-4.3-31, 5.0-44, 4.3-46, 4.3-54, 5.0-55. Therefore, even if SHW Mitigation BIO-2 and LRDP Mitigation BIO-11 were adequate mitigation measures – which they are not – they are not included as part of the currently proposed Project.

The mitigation measures identified above, as well as many others, are toothless, committing the University to do nothing more than conduct more studies, review further designs and implement vague future strategies. These mitigation measures include *no* mandatory actions to be taken if the studies demonstrate that a significant environmental impact exists. Without mitigation measures that require actual reductions in Project impacts, and measurable achievement of environmental standards, CEQA's mandates are not met and the Project cannot be approved.

7. The University's Inclusion of Supplements to the 2005 LRDP in a Project Level EIR Is Inappropriate Under CEQA

The University attempts to evade the limitations on development set forth in the 2005 LRDP, and the 2008 CSA that resulted from the litigation challenging that plan, by including "supplements" to the 2005 LRDP EIR. RDEIR 1.0-3 (the 2005 LRDP "supplemental analysis is also included in this [RDEIR]), 2.0-16 to 2.0-17, 7.0-1 to 7.2-42. The University attempts to include EIR supplements to purportedly enable modifications of both the WSA and the Population and Housing Impact Assessment. RDEIR 7.1-1 to 7.1-55, 7.2-1 to 7.2-42. But a supplement to an EIR is inappropriate here. CEQA Guidelines § 15163. Supplements to EIRs are only allowed where there have been changes to the project, changes to the circumstances surrounding the project, or new information arises, and those supplements must be separately noticed and approved. *Id.* Purporting to attach these supplements to a *different* project's EIR creates confusion, ignores cumulative impacts, and violates CEQA's prescribed procedures.

The RDEIR claims that these supplements are included so that "the University can complete a streamlined review of subsequent projects proposed for development under the 2005 LRDP" under the CEQA Program EIR tiering model. RDEIR 1.0-2; CEQA Guidelines § 15168. But this presents numerous problems. First, the RDEIR at issue here is a project-level RDEIR for the SHW Project, subject to different standards than a Program EIR. CEQA Guidelines §§ 15161, 15168. Second, the CSA states that "for future projects under the 2005 LRDP, UCSC will not 'tier' from or otherwise rely on the water or housing analysis in the [2005] LRDP EIR

invalidated by the Santa Cruz Superior Court to obtain CEQA compliance." CSA 20-21. The inclusion of these supplements here is invalid because it violates both the letter and the spirit of CEQA and the CSA.

CONCLUSION

The RDEIR violates CEQA because it ignores or downplays the SHW Project's broad ranging, far-reaching and, in many respects, severe environmental impacts. Therefore it must be substantially revised to address the numerous problems identified above. And, because this Project's impacts are profoundly and needlessly harmful, and its water supply needs cannot be met with the measures considered, the Project must be rejected.

Respectfully submitted,

Stephan C. Volker
Attorney for Habitat and Watershed Caretakers

SCV:taf

Attachments:

Exhibit 1: Chancellor George Blumenthal, *2020 Long Range Development Plan update*, January 12, 2018;

Exhibit 2: University of California, *The University of California At A Glance*, February 2018, available at: https://www.universityofcalifornia.edu/sites/default/files/uc-at-a-glance-feb-2018-final.pdf (last accessed May 9, 2018);

Exhibit 3: University of California Office of the President, Budget and Capital Resources, *Private Public Partnerships at the University of California,* July 12, 2010, revised June 10, 2013, p. 2, available at: http://www.ucop.edu/real-estate-services/_files/documents/ppp_at_uc.pdf (last accessed May 9. 2018);

Exhibit 4: Ibarra, Nicholas, *UCSC: Meadow development opponents mull legal action*, Santa Cruz Sentinel, April 25, 2018, available at: http://www.santacruzsentinel.com/social-affairs/20180425/ucsc-meadow-development-opponents-mull-legal-action (last accessed May 10, 2018);

Exhibit 5: City of Santa Cruz, *2015 Urban Water Management Plan*, August 2016, p. 8-1, available at: www.cityofsantacruz.com/home/showdocument?id=55168 (last accessed October 30, 2018)

EXHIBIT
1

NEWSCENTER

2020 Long Range Development Plan update

To: UC Santa Cruz Community
From: Chancellor George Blumenthal

January 12, 2018

As we spend 2018 celebrating the Year of Alumni, I'd like to talk to you about what we're doing to prepare ourselves to teach the next generation of students—our future graduates.

Last spring, I brought together a group of campus constituents and members of the greater Santa Cruz community to begin creating our 2020 Long Range Development Plan. These leaders, with input from you and the community as a whole, aim to have a draft of this plan in hand later this year, at which point it will undergo a rigorous environmental review.

An LRDP is like a city's general plan. It designates areas of campus for certain types of use: open space, for example, or housing. It does not mandate growth. It simply provides a blueprint for it when it's needed and when there's funding available. It's an extremely effective, proactive planning tool as we look two decades down the road and contemplate how best to educate our future students.

Earlier today I met with a group of community appointees who were convened as part of an advisory group to make sure we gather multiple perspectives on the plan. Hearing different viewpoints is important because the LRDP touches on issues that affect all of us who live and work in this community: water use, traffic, and housing.

As I mentioned above, the LRDP is not an OK for enrollment growth. However, we need to have an enrollment target to determine our space and facilities needs. This includes classrooms, lab spaces, housing, student-support services, and other facilities critical to a university experience. The number I have asked the LRDP planners to consider is 28,000 students by 2040. I have no doubt this figure will trigger some conversations, so I want to share with you the reasoning behind my request.

This number does not come out of thin air. It makes sense for a host of reasons.

It walks us out two decades, to the year 2040, using a growth rate of 1.5 to 2 percent a year. That's about 400 students annually. This is the rate at which we have been growing. We would see an increase in undergraduates—with special focus on transfer students—and, more substantially, those in doctoral and master's programs.

The figure has actually been public for nearly 60 years. Roughly 28,000 students has long been the enrollment vision for UC Santa Cruz, outlined in our very first LRDP in 1963, created not too long after the city of Santa Cruz approached UC about building a campus here.

Importantly, I am asking for a strategy of phased investments to accommodate future growth. In other words, there would be no sudden jump from the roughly 18,000 students we accommodate today to 28,000. Growth would be incremental, proceeding only if identified impacts are mitigated. Maybe that will be water use, vehicle trips to campus, or the number of on-campus beds we provide.

I believe this approach will allow us to keep our campus values front and center. Structured correctly, a plan with strong mitigations will allow us to grow larger, while actually reducing our impacts.

Some will question our need to grow at all. I'd remind them that the University of California is facing unprecedented enrollment pressure. More than 56,000 people — a new record — applied to UC Santa Cruz to be first-year students this

coming fall. We also saw 11,300 students apply to transfer here from community colleges. We're seeing this type of demand systemwide, and it's our institutional mission to provide educational opportunity to this state's growing, increasingly diverse population. We have an obligation to these students, just as we have served today's students and the generations before them.

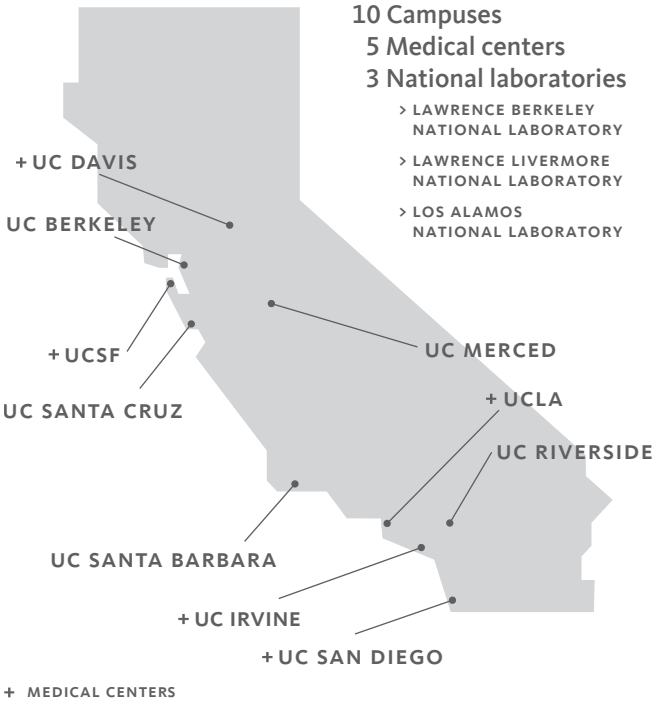
So what's next? Later this month, on Jan. 18, a special interactive LRDP forum for students will take place at 5:30 p.m. at Kresge Town Hall. Interactive forums for faculty and staff took place in November and December. Forums for the broader Santa Cruz community are currently in the works, and details on the events will be published soon on our LRDP website.

A good plan requires a wide range of input, so please join me in this process. If you have any questions, ideas, or suggestions, feel free to email me at chancellor@ucsc.edu.

EXHIBIT
2

The University of California improves the lives of people in California and around the world through world-class educational opportunities, groundbreaking research, top-rated health care and agricultural expertise. We are driven by values of public service in all we do.

UC SYSTEM



EDUCATION

Total enrollment	**273,179**
Undergraduate students	**216,747**
Graduate students	**56,432**
Alumni	**2.0 M**
More than 160 academic disciplines	
More than 800 graduate degree programs	

UNDERGRADUATE APPLICATIONS HAVE INCREASED EVERY YEAR FOR MORE THAN A DECADE; MORE THAN 207,000 STUDENTS APPLIED FOR FALL 2016 UNDERGRADUATE ADMISSION.

FACULTY AND STAFF

Faculty	**22,700**
Other academic (postdocs, etc)	**45,700**
Staff	**154,900**
Represented employees	**59%**

UC IS THE STATE'S THIRD LARGEST EMPLOYER.

STATISTICS DRAWN FROM MOST RECENT DATA AVAILABLE

UNDERGRADUATE SNAPSHOT

California resident			**82.8%**
Nonresident			**17.2%**
Community college transfer			**28%**
First-generation students			**42%**
African American			**4%**
Latino			**24%**
White			**22%**
Asian American			**34%**
Graduation rate	4-YEAR	5-YEAR	6-YEAR
ALL STUDENTS	**64%**	**82%**	**85%**
PELL STUDENTS	**58%**	**79%**	**82%**

STUDENT FINANCIAL AID

Total financial aid	**$4.3 B**
Federal aid	**$1.65 B**
> Federal Pell grants	**$381 M**
> Undergrads who qualify for Pell grants	**38%**
University aid	**$1.53 B**
State aid	**$914 M**
Private aid	**$161 M**
CA undergrads with tuition fully covered	**56%**
Undergrads without loans at graduation	**50%**
UC student debt at graduation (avg.)	**$20,600**
National student loan debt (avg.)	**$30,100**

THE UNIVERSITY OF CALIFORNIA OFFERS ONE OF THE NATION'S STRONGEST FINANCIAL AID PROGRAMS.

HONORS AND AWARDS

Nobel Prize winners	**61**
MacArthur "Genius" grants	**90**
National Medal of Science winners	**67**
Fulbright Award recipients	**264**
Pulitzer Prize winners	**16**

SIX OF UC'S 10 CAMPUSES ARE MEMBERS OF THE PRESTIGIOUS 62-MEMBER ASSOCIATION OF AMERICAN UNIVERSITIES (AAU), A REPRESENTATION NO OTHER STATE SYSTEM CAN MATCH.

RESEARCH IMPACT

Inventions per day (avg.)	**5**
Inventions	**1,803**
Startups founded on UC patents (TO DATE)	**1029**
Active patents	**12,420**

MANY OF THE CALIFORNIA'S LEADING INDUSTRIES GREW FROM UC RESEARCH, INCLUDING BIOTECHNOLOGY, COMPUTING, SEMICONDUCTORS, TELECOMMUNICATIONS AND AGRICULTURE.

RESEARCH FUNDING

Research awards	**$4.97 B**
Federal research awards	**$2.88 B**
Federal research contracts/grants	**6,500**

UC IS AWARDED MORE NIH AND NSF FUNDING THAN ANY OTHER INSTITUTION IN THE COUNTRY.

K-12 EDUCATIONAL OUTREACH

Schools and Departments of Education	**8**
K-12 school partnerships	**400**
Students reached by UC programs	**100,000**
Participants who go on to college	**70%**

UC PLAYS A ROLE IN THE EDUCATION OF MILLIONS OF CALIFORNIA K-12 STUDENTS, WHETHER OR NOT THEY ARE UC-BOUND.

AGRICULTURE AND NATURAL RESOURCES DIVISION

Cooperative Extension offices	**57**
Campus-based advisors and specialists	**130**
Local agricultural advisors and specialists	**200**
Academic researchers	**700**

UC HAS HELPED CALIFORNIA BECOME THE NATION'S TOP AGRICULTURAL STATE WITH FARM REVENUES THAT EXCEED $42 BILLION.

MEDICAL CENTERS AND CLINICS

Outpatient visits	**4.9 M**
Emergency room visits	**368,000**
Inpatient admissions	**167,000**
Medicare, Medi-Cal and uninsured patients	**60%**

UC MEDICAL CENTERS PERFORM HUNDREDS OF CLINICAL TRIALS EACH YEAR, RESULTING IN NEW DRUGS AND DISEASE TREATMENTS.

HEALTH SCIENCES TRAINING PROGRAM

Health professional schools	**18**
Health science students	**14,000**

UC TRAINS NEARLY HALF THE MEDICAL STUDENTS AND MEDICAL RESIDENTS IN CALIFORNIA.

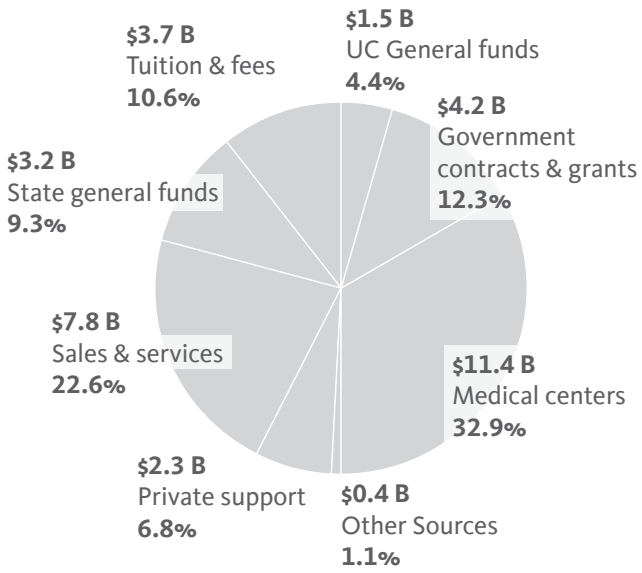
ECONOMIC IMPACT

CA jobs supported by UC operations	**430,000** (1 in 46)
Economic impact of UC activities	**$46.3 B**
Contributions to gross state product	**$32.8 B**

UC RESEARCH IN NANOTECHNOLOGY, CLEAN ENERGY, NEUROSCIENCE, GENOMICS AND MEDICINE IS HELPING DRIVE THE NEXT WAVE OF CALIFORNIA ECONOMIC GROWTH.

UC REVENUE SOURCES

Total operating budget	**$34.5 B**



UNIVERSITY OF CALIFORNIA

STATISTICS DRAWN FROM MOST RECENT DATA AVAILABLE

EXHIBIT
3

PRIVATE PUBLIC PARTNERSHIPS AT THE UNIVERSITY OF CALIFORNIA

Prepared by
Gordon Schanck, Tara Lamont
Capital Resources Management

Budget and Capital Resources
University of California Office of the President

July 12, 2010
Revised June 10, 2013

INTRODUCTION

The University of California has successfully employed or is the process of planning 81 Public Private Partnerships (PPP) ranging from medical office buildings and research facilities to student apartments and hotels. The UCSF Neurosciences project completed in 2012 on the Mission Bay campus has provided valuable lessons on utilizing a PPP approach to deliver facilities for programmatic (i.e., mission-serving) use. The West Village project at UC Davis is a large-scale application of a PPP to deliver a new residential community for auxiliary (i.e., revenue-generating) uses. Another application of PPP is the implementation of energy projects in support of UC's sustainability goals.

For institutions and governmental entities a primary motivation for utilizing PPPs is access to capital. UC, however, has robust financing capability. Thus the University's focus, when considering PPPs, is on other beneficial aspects, including risk allocation and the management efficiencies intrinsic to experienced private development teams, particularly those that specialize in a particular building type. Even for capital projects on campus, PPPs are now considered as one method for delivering UC capital solutions.

CRITICAL FACTORS

For UC, the use of a PPP is most effective for projects that:

- Are situated off-campus on land not owned by UC; and/or
- Generate stable income; and/or
- Represent a building type commonly developed privately, such as rental and for-sale housing, commercial and medical office buildings, hotels, and generic laboratory facilities.

Programmatic projects located on-campus or on UC-owned land off-campus, as well as highly complex projects, may also benefit from the use of a PPP, but the advantages are more limited for the following reasons:

- Many projects on UC-owned land must comply with requirements of the Public Contract Code, which constrain contracting options available to private sector developers.
- Projects that are highly complex require substantial technical input from user groups and more proscriptive specifications. The resulting UC oversight limits opportunities to achieve PPP efficiencies in managing schedule and cost.

To succeed, projects delivered under a PPP, especially programmatic projects, require a well-thought through "Basis of Design" document (BOD) that delineates design specifications and operating parameters. Also critical is a thoroughly vetted set of transaction documents that effectively represent both parties' interests.

MECHANISMS FOR IMPLEMENTATION

PPPs at UC have been structured in a variety of transaction forms:

- Ground Lease (auxiliary use, third party users).
- Ground Lease-Leasebacks (programmatic use, UC is the user).
- Developer Build-to-Suit for purchase by UC on completion (also known as Turnkey projects).
- Variants on Ground Lease-Leasebacks and Developer Build-to-Suit projects unique to UC (Space for Lease and Donor Development transactions respectively).
- Master Lease or Lease with Option to Purchase.

Of these mechanisms, developer build-to-suit on private land, ground-lease housing transactions on UC land, and donor developments have proven to be the most effective. A recently-developed form of ground lease-leaseback with tax exempt financing appears promising as an alternative delivery method for programmatic projects on campus.

KEY DECISION POINTS

Key issues to be considered in the evaluation of a PPP are listed below.

General Issues Applicable to All Project Types:

- Is this a use or project type with which the private sector has significant development and operating expertise?
- If on UC land, is the University willing to make a long-term commitment of that land to a private developer?
- Utilizing a PPP, can UC reasonably expect to manage and meet its goals for this project i.e. maintain sufficient control of the desired outcome?
- Are UC's design and functionality requirements thoroughly vetted and sufficiently detailed to make commitments to a PPP delivery team?
- Is transferring the risk, inherent in construction and/or facility operations to another party, necessary or desired?
- Does the preferred PPP delivery approach afford sufficient long-term savings to offset the UC financing advantage and PPP profit requirements?

Issues Applicable to "Programmatic Use" Projects:

- If developed on UC land, what difficulties will be encountered in creating a legal transaction structure, while still achieving the potential benefits afforded by PPP delivery?
- Does the project include third-party users and/or donor-driven concerns that favor PPP delivery?

Issues Applicable to "Auxiliary Use" Projects:

- Is there sufficient project demand and potential net income for a financially feasible project?
- Does UC have a need to isolate the financial operations of the new project from existing operations (e.g., existing UC rental housing or parking); can UC accept that a PPP product my charge different rates than competing campus product?

- Does UC seek to have the project off of its balance sheet, and can that goal be achieved with PPP delivery while meeting other project goals?
- Can UC structure a PPP transaction in such a manner as to preserve UC's project entitlement advantages and property tax exemption?

The success of a PPP is dependent on utilizing an organized dedicated team of experienced personnel, a detailed business plan, a bankable revenue/funding source, and stakeholder and senior campus leadership support for the PPP drivers and principles.

EVALUATION OF A PPP IN THE BUSINESS CASE ANALYSIS

Consideration of PPPs can occur at two levels. First, as part of the Business Case Analysis (BCA), Master Leases, Lease Options and Developer Build-to-Suits off campus may be considered along with purchases of existing buildings as alternatives to developing a capital project on campus. If the result of the BCA is to develop an on-campus solution, then a PPP transaction structure based on a Ground Lease (Auxiliary) or Ground Lease-Leaseback (Programmatic) should be considered as one capital project delivery alternative alongside design-bid-build; CM at risk, design build, and best value.

CASE STUDIES

Three case studies have been provided to illustrate the use of PPPs at UC:

- a student rental housing project utilizing a ground lease;
- a research laboratory building utilizing a ground lease-leaseback with tax exempt financing ; and
- a medical office building utilizing a build-to-suit mechanism.

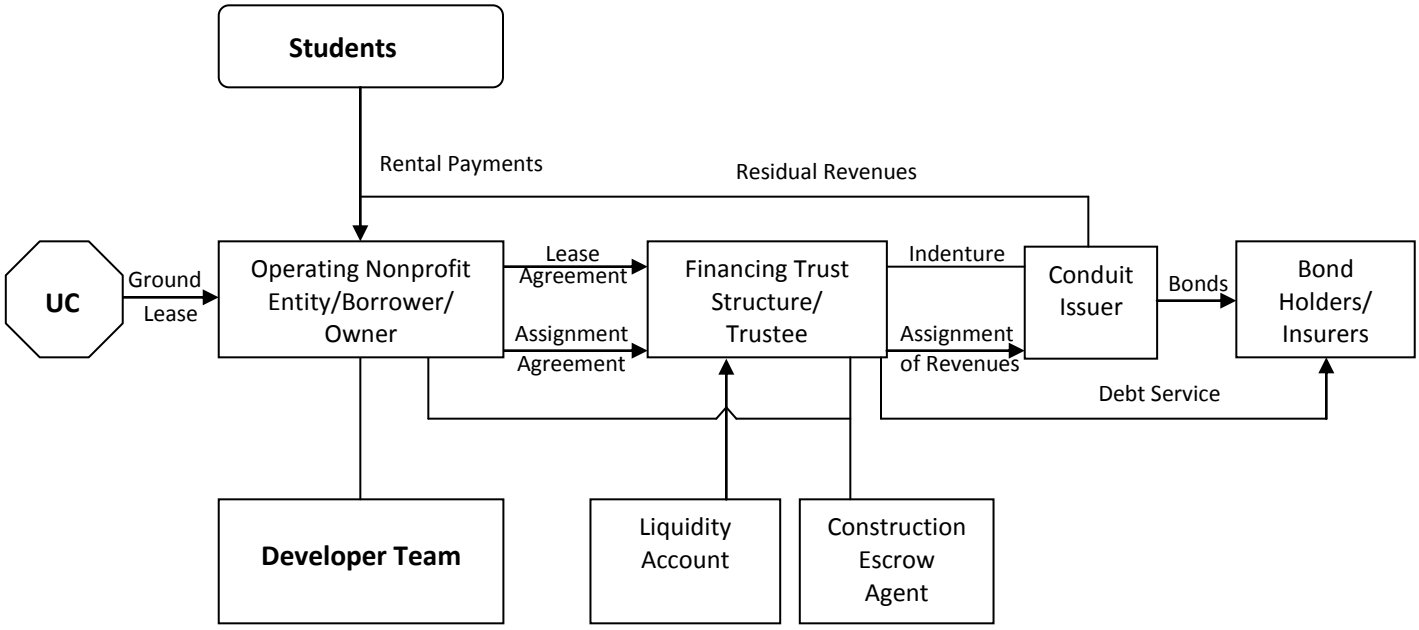
As can be seen, the use of PPPs in the delivery of generic projects for auxiliary use, such as student housing and medical office buildings, has proven effective and beneficial to the University. The programmatic use research laboratory project has been less successful in schedule and cost savings primarily because as the first project of its kind, new contractual and legal documents had to be developed. This experience and documentation could expedite schedules of future projects using this approach.

EXHIBITS

Exhibit 1A: Ground Lease Transaction Structure & Case Study—UCI East Campus II Student Housing
Exhibit 1B: Ground Lease-Leaseback Transaction Structure & Case Study—UCSF Neurosciences Building
Exhibit 1C: Developer Build-to-Suit Structure & Case Study—UCSF Medical Office Building
Exhibit 2: Listing of UC PPP Projects Completed or in Development

EXHIBIT 1A: GROUND LEASE TRANSACTION STRUCTURE

- Private Party designed, "financed", constructed, owned and operated
- May be taxable or tax exempt
- Taxable with private equity at risk may be off balance sheet
- Tax exempt may revert to UC when debt is repaid typically at the end of a 30-year period vs. 55-65 years if developed for profit
- Financing Trust Structure (FTS)[1] financing available for tax exempt transactions.



[1] FTS is not a University financing but a pooled project concept available system-wide to lower reserve requirements and enhance the credit of PPP housing projects financed in this manner without significant University guarantees.

CASE STUDY 1: GROUND LEASE: EAST CAMPUS II STUDENT HOUSING, VISTA DEL NORTE, UC IRVINE

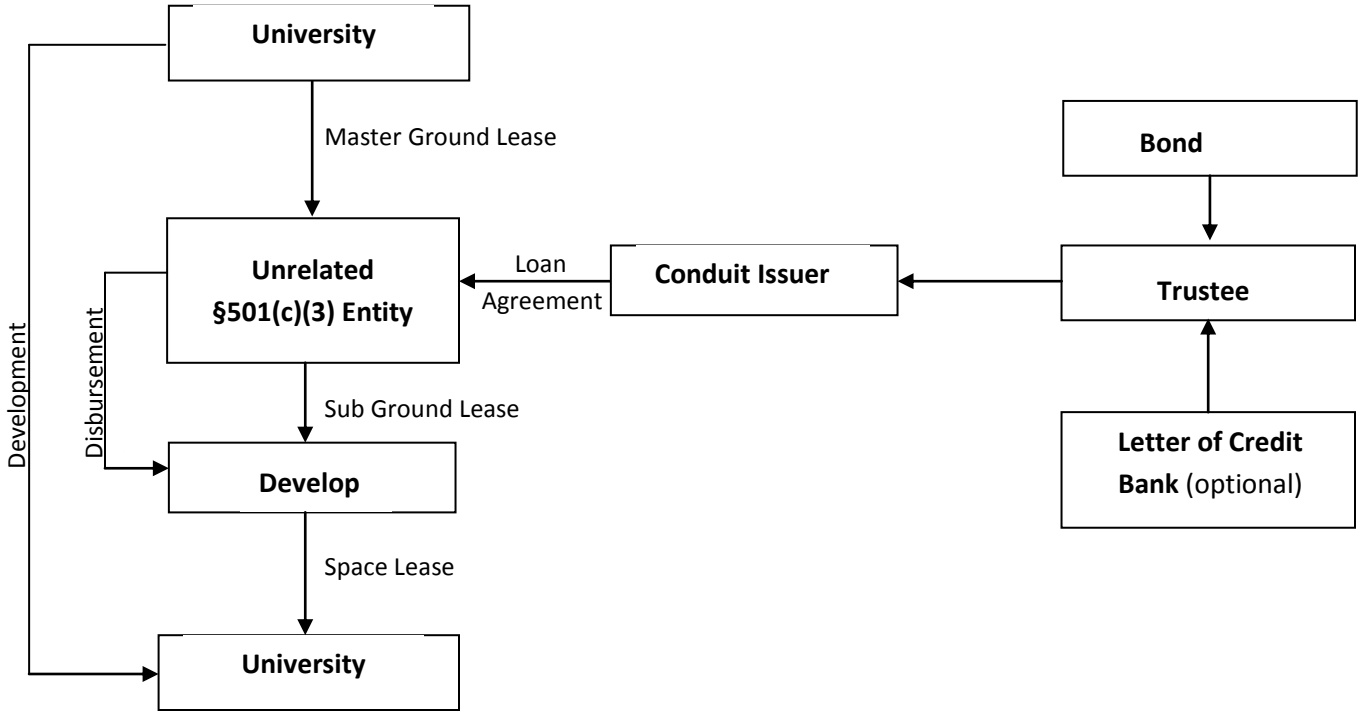
Project Type: Student Rental Housing
Project Goal: To deliver a large number of beds at a competitive rate without any effect on rates for existing UCI housing or significant impact on debt capacity.
Land Area: 24 acres.
Unit Mix: 545 units, 1,564 beds. The 404 unit undergraduate community comprises a mix of three-bedroom and one-bedroom units. The 141 unit graduate community comprises a mix of two-bedroom and one-bedroom units.
Target Market: Single sophomore, upper-division and graduate students.
Student & Ground Rents: In 2008/09 these units were priced at over 20% in excess of comparable campus-owned bed rates for shared and single units averaging $522/bed/month for multiple bed units and $916/bed/month for single bed units. The Project pays ground rent ($1.0 million in 2008/09) and potentially accelerated debt reduction as the project matures.
Lease Term: 40 years, subject to earlier or later termination upon payoff of bonds (amortized over 30 years following completion).
Commencement: December 1, 2004. In service in 2006.
Tenant: Collegiate Housing Foundation, Irvine, L.L.C., (CHF), a non-profit owner of student rental housing.
Financing: Tax-Exempt Bonds issued on behalf of an unrelated non-profit buyer through a conduit issuer.
Comparator: Total project cost (excluding underwriting and reserves) of $91,016,466 or $58,195/bed. This is significantly less than the cost of a comparable University-developed project in the same period.

Analysis:
The project was developed by ACC SC Development (UCI II) LLC, under contract with CHF. American Campus Management, California, LLC, under contract with CHF, currently manages the project. The Project was financed with a 30-year tax exempt bond issue, uninsured, rated "Baa3" (Moody's) and was placed in the University's Financing Trust Structure (FTS). The only University commitment was a three-year occupancy guarantee. Under the specific circumstances of this project, prevailing wages were not required to be paid.

Student bed rents were required to be maintained at no less than 100% of rents for comparable on-campus (UC) housing, and no more than 90% of rents for comparable off-campus (private) housing. Ground rent is initially $1,000,000/year, subject to CPI and periodic reappraisal adjustments (appraisal reflects rent restrictions). Payment of ground rent is subject to Project maintaining certain financial covenants. The Project's excess cash flow is distributed to campus. UC was contingently obligated to lease sufficient beds to bring Project to break-even occupancy, for first three operating years, if student demand was is insufficient. The units were fully leased at opening.

EXHIBIT 1B: GROUND LEASE-LEASEBACK WITH TAX EXEMPT FINANCING

- Most applicable to "Commercial" Projects
- UC may have first rights of offer/refusal & possibly options but developer must bear risk in transaction
- Set price/rent early based on Performance Specifications --or-- Compete fees, UC at risk for pricing & rent resulting from subcontractor bids.
- Potentially costly carrying cost for developer financing and equity until option exercised unless tax exempt financing employed.



CASE STUDY 2: NEUROSCIENCES BUILDING, MISSION BAY CAMPUS, UC SAN FRANCISCO

Project Type: A major research building with laboratories, vivarium, and clinical spaces.

Project Goals: A ground lease leaseback approach was chosen in order to reduce delivery and operating cost. This is the first such development on UC land for UC's exclusive use.

Land Area: The building footprint comprises approximately 35,000 SF on Block 19A.

Configuration & Use: The project consists of a six story research building including a full build out of user-specified tenant improvements. The campus is responsible for developing on-site utilities and the landscaping and related features on the grounds outside the building envelope. The campus will also equip and furnish the property consistent with its research requirements.

Completion Date: Projected for Spring 2012

Financing: A hybrid tax exempt finance model made available through a nonprofit and a conduit issuer based on the University's use and eventual ownership. The financing was accomplished as a condition to the start of construction. The campus was at risk for cumulative design costs in the event final Regental approval was not obtained or the financing could not be consummated.

Comparator: The essential trade off for this project was giving up control in order to reduce risk and manage user expectations through the design process. Despite the tax exempt financing facility, the front end capitalized interest was substantially higher than in UC's conventional approach and the long term interest rate diluted the University's underlying credit on the order of 30 basis points.

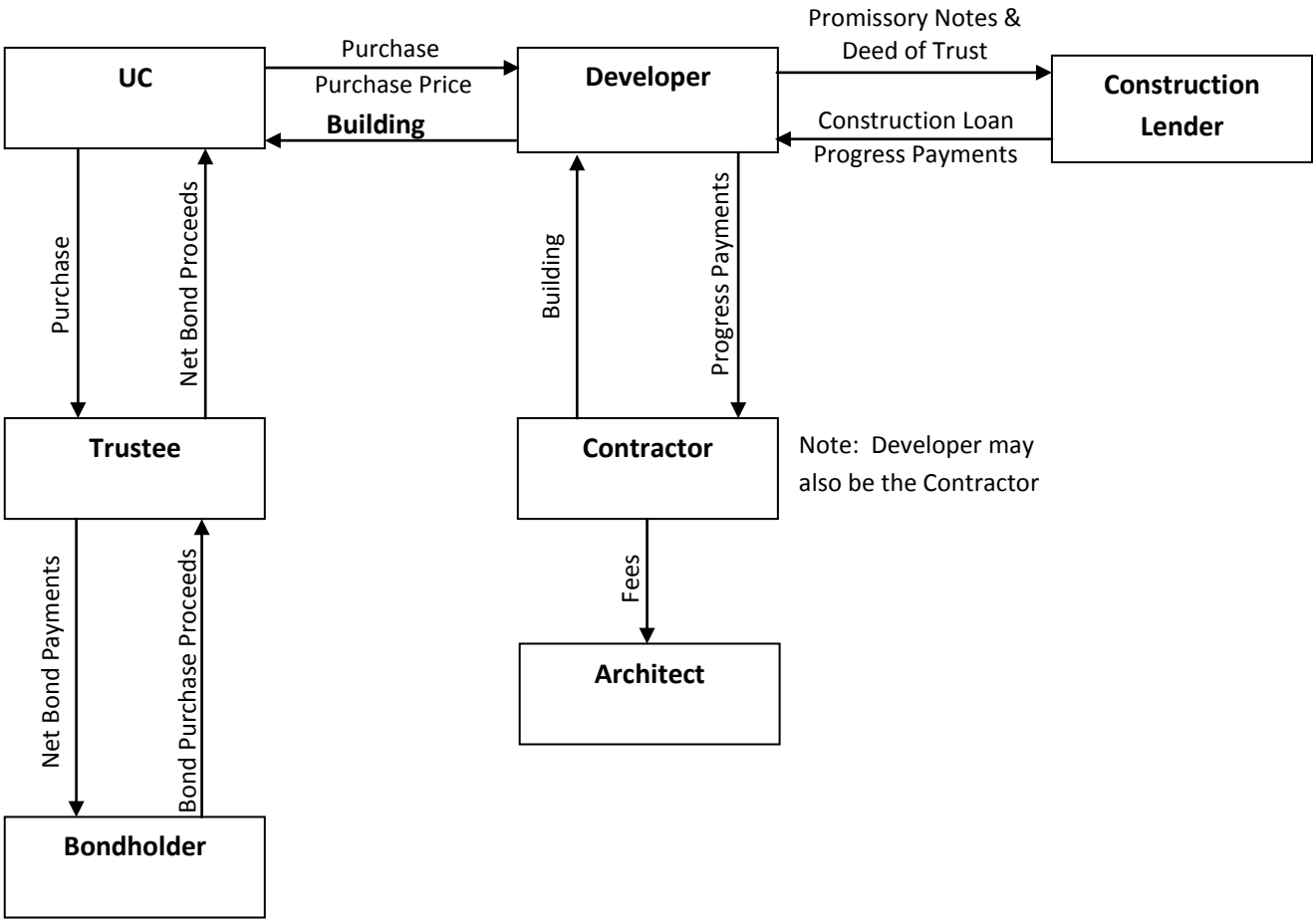
Analysis:

This project did not achieve expected time savings because it was the first of its kind and legal opinions confirming the viability of the approach and documents confirming the parties' rights and responsibilities were developed as the project was negotiated. These documents will expedite schedules of future projects using this approach. Also, changes to the senior leadership of the campus during this process necessitated additional review and consideration. The project required a substantial subsidy from School of Medicine and is further reliant on a gift program to be raised on the order of $100MM.

Another major concern for the University was that the developer be provided with the freedom to produce a cost effective project that would comply with the campus' Basis of Design (BOD) documents. The final design met with unanimous approval from the campus and user groups in areas such as urban design and context, aesthetics, material and building system choices and spatial configuration. The project is under construction. A post occupancy evaluation will provide additional data as to the success of the PPP for this type of project.

EXHIBIT 1C: DEVELOPER BUILD-TO-SUIT

- Most applicable to "Commercial" Projects.
- Analogous to Design-Build Delivery.
- Good technique for PPP Development on Private Land.
- Possible on UC land but challenging solicitation process/requirements in public contract code.



CASE STUDY 3: MT. ZION MEDICAL OFFICE BUILDING , UC SAN FRANCISCO

Project Type: A medical office building on private land proximate to UCSF's Mt. Zion Hospital.
Project Goals: A developer turnkey for conventional delivery at competitive rate on private land. Developer was responsible for securing and entitling the site, as well as for the design, financing and construction of the facility for a fixed price. The Developer also bore the construction and construction financing risk.
Land Area: 13,750 GSF at the NW Corner of Divisadero and Sutter Streets, San Francisco.
Configuration: The project consists of a medical office building of approximately 49,000 rentable square feet over a multilevel 150 space subterranean garage.
Use: Clinical space and physicians offices.
Completion Date: circa 1995.
Lender(s): Taxable construction debt obtained by developer; UC GRB ultimately financed the purchase.

Analysis:
Because this project was always envisioned as an off campus turnkey , no development cost for UC were prepared to allow for cost comparisons. Project costs were evaluated by an independent cost estimator and were determined to be in line with private delivery of similar buildings. The price included entitled land for the development. Savings in the overall cost were achieved by allowing the developer to use commercial specifications with broad UC parameters. Accordingly, the building systems are not as robust as those typically found in a comparable UC-developed facility.

This project on Divisadero, and a second one on Post Street on ground leased land, were solicited from an open competition to provide needed medical office space and parking proximate to the Mt. Zion Hospital. The campus did not have land on which to develop these facilities and thus it was beneficial to the campus to employ a PPP-style approach to achieve a timely delivery of needed space with reduced risk and an expedited time schedule.

EXHIBIT 2: UC PPP PROJECTS COMPLETED OR IN DEVELOPMENT

PROJECT	TRANSACTION TYPE	PROJECT COST/YEAR IN SERVICE
STUDENT RENTAL HOUSING		
La Rue Apartments (UCD)	Ground lease	NA/1986
Russell Park Apartments (UCD)	Ground lease	NA/1986
Primero Grove (UCD)	Ground lease	NA/1998
Colleges at La Rue (UCD)	Ground lease	NA/2000
Stonehaven (UCR)	Ground lease	~$8.5MM/2000
International Village UCR (UCR)	Ground lease	~$11MM/2002
Holiday Inn Dormitory (UCSC)	Master lease	$16.2MM (10 Yr. Rent PV)/2001
Vista Del Campo I (UCI)	Ground lease	$76.7MM/2004
Vista Del Campo II (UCI)	Ground lease	$91.0MM/2006
East Campus III (UCI)	Ground lease	$172.5MM/2010
West Village Student Housing (UCD)	Ground lease	$112.7MM/2011 (1st phases)
Castilian Apartments (UCD)	Ground lease	$24mm/2014
Orchard Park Apartments (UCD)	Ground lease	TBD
Bowles Hall (UCB)	Ground lease	$32MM/TBD
MultiPhase Apartments (UCM)	Ground lease	TBD
FACULTY FOR SALE HOUSING		
Irvine Campus Housing Authority (UCI)	Ground lease	Multiple phases of single family homes, town homes & apartments/1985
Levering Condominiums (UCLA)	Build-to-suit	$9.5MM/1992
Aggie Village (UCD)	Ground lease	$6.9MM/1997
Ranch View Terrace (UCSC)	Ground lease	$30.0MM/2008
West Village Faculty Homes (UCD)	Ground lease	Est. $112MM/TBD
North Campus Homes (UCSB)	Ground lease	Ph 1 $9.5MM/2011 (Subsequent phases $60.0MM/TBD)
HOTELS		
Camellia Inn and Suites (UCDMC)	Ground lease	~$20MM/2001
Estancia La Jolla Hotel & Spa (UCSD)	Ground lease	~$60MM/2004
Ronald McDonald House (UCDMC)	Ground lease	NA/~1999
Family House (UCDMC)	Ground lease/ Build-to-suit	$3.3MM/2006
Davis Campus Hotel (UCD)	Ground lease	$11.1MM/2010
Davis Hotel Phase 2 (UCD)	Ground lease	TBD/2014
KITP Guest House (UCSB)	Donor development	$12MM/TBD
OFFICEBUILDINGS/INSTRUCTIONAL SPACE		
Hollister Research Center (UCSB)	Build-to-suit/Leaseback	$6.3MM/1987
Berkeley Way (UCI)	Ground lease/ Build-to-suit/Leaseback	~$18MM/1988
Institute for Americas Phases I-III (UCSD)	Donor development	NA/1983 & 2001
UCOPHQ (UCOP)	Build-to-suit	$37MM/1998
Heckman Center (UCR)	Donor development	$6.5MM/2003

PROJECT	TRANSACTION TYPE	PROJECT COST/YEAR IN SERVICE
University Town Center (UCR)	Master lease	$1.0MM(Prepaid Master Lease)/~1998
Tipton Center @ Sedgwick Reserve (UCSB/NRS)	Donor development	$2.5MM/2009
Gateway Office Building (UCB)	Ground lease/Leaseback	Est. $65MM/TBD
Haas Renovation and Addition(UCB)	Donor development	$60MM/TBD
Blum Center Renovation and Addition (UCB)	Donor development	TBD/2011
Mission Bay Office Building (UCSF)	Build-to-suit	TBD
DANR Davis HQ (UCD)	Build-to-suit	$8.3MM/2013
2020 Office/Research Buildings (UCM)	Ground lease/Leaseback	TBD
MEDICAL OFFICE & CLINICAL RESEARCH		
100 UCLA Medical Plaza (UCLA)	Ground lease/Air lot	~28MM/1989
Mann Center (UCLA)(note 2)	Donor development	NA
Venice Dental Clinic (UCLA)(note2)	Donor development	$340K/1997
4156 Front Street (UCSD)	Build-to-suit	$9.3MM/1989
2330 Post Street (UCSF)	Build-to-suit	$10.8MM/1995
1701 Divisadero (UCSF)	Build-to-suit	$147MM/1996
Osher Center for Integrative Medicine (UCSF)	Build-to-suit (on campus)	~$34MM/2010
Stewart House (UCLA)	Donor development	Est. $10MM/TBD
1223 16th Street OSC (UCLA)	Master Lease	$65MM/2012
Palm Desert MOB – Surgery Center (UCR)	Ground Lease	TBD
RESEARCH BUILDINGS		
Nelson Research (UCI)	Ground lease/ Build-to-suit	NA/1983
Super Computer Center (UCSD)	Ground lease/ Space-for-lease	~14MM/1987
Plum Wood House (UCI)	Ground lease/ Space-for-lease	$25+MM/1989
Dorris Stein Eye Institute (UCLA)	Donor development	Ph. 3 $60MM/2012
Oiled Wildlife Recovery Center (UCSC)	Ground lease/ Space-for-lease	~$6MM/1996
Tahoe Environmental Science Center (UCD)	Build-to-suit/Space-for-lease/Lease with purchase option	$21.4MM/2006
Sanford Consortium for Regenerative Medicine (UCSD)	Ground Lease/Leaseback	$111.8MM/2011
University Research Park (UCI)	Ground lease	NA (The Irvine Company built out 85 acres)/1999+
EPA Building – Richmond Field Station (UCB)	Ground lease	$11.0MM/1994
Brain Mapping Suites I-III (UCLA)(note 2)	Donor development	3 Phases $370-$500K/2003-2008
Neurosciences Building (UCSF)	Ground lease/Leaseback	~$198MM/2012

PROJECT	TRANSACTION TYPE	PROJECT COST/YEAR IN SERVICE
Community Health Campus Phase 1 (UCB)	Ground lease/Leaseback	Est. $75MM/TBD
Center for Novel Therapeutics (UCSD)	Ground lease/leaseback	TBD
Packard Humanities Inst. Off. & Research	Donor development	TBD/2014
CHILD CARE CENTER / K-12 School		
Montessori (UCI)	Ground lease	$1.7MM/1987
Russell Childcare Center (UCD)	Ground lease	NA
Special Needs School (UCI)	Donor development	$350K/2013
THEATRES/RETAIL		
La Jolla Playhouse (UCSD)	Ground lease/ Space-for- lease	~$20MM/2005
Irvine City Theatre (UCI)	Ground lease/ Space-for- lease	$8MM/1991
Geffen Playhouse (UCLA)(note 2)	Master lease/ Donor development (UC as lessor)	NA
West Village Retail (UCD)	Ground lease	$11.8MM/2011
Sprouts Market Shopping Center (UCB)	Ground lease	TBD
PARKING		
Mt. Zion Parking Lot (UCSF)	Build-to-suit	$16.1MM/2012
Maxwell Field Garage (UCB)	Ground lease	TBD
OTHER		
Cal Crew Facility (UCB)	Donor development	$5MM/2004
Cogeneration Facility (UCLA)	Ground lease	$188MM/1993
Packard Humanities Institute Film Archives (UCLA)	Donor development (off campus)	$39MM/2008
Albany Senior Housing Project (UCB)	Ground Lease	TBD
Berkeley Aquatic Center (UCB)	Donor development	$15MM/2014
C-Center Multi-Purpose Events Venue (UCR)	Space for Lease	TBD

NOTES:

(1) Public Private Partnership (PPP) development as used here refers to projects where the University has contracted either to lease its land to another party to develop a project which has programmatic benefits or serves auxiliary needs (Ground Lease) or contracts to purchase a build-to-suit facility in the community or on campus (Build-to-Suit) on a turnkey basis. Other variants include Donor Development where a donor develops a facility on UC land for donation to UC upon completion (Donor Development); Space for Lease deals where in exchange for providing an entitled on campus site, the University receives a significant dedication of space in the building in lieu of ground rent (Space-for-Lease); Master Lease Arrangements (Master Lease); and transactions where the University leases (Lease with Purchase Option)

a facility with an option to purchase (or leases back the facility in the case of a project on Regents land—Ground Lease-Leaseback).

(2) Unless otherwise indicated, the Project Cost amount represents the estimated total project cost at the time of development. As the University does not always have access to the developer's costs some amounts listed are estimates (~). Projects planned as PPP deliveries but for which the schedule for construction is not yet known are listed as TBD—to be determined. The Year in Service is the completion date or projected completion date.

EXHIBIT
4

UCSC: Meadow development opponents mull legal action

santacruzsentinel.com/social-affairs/20180425/ucsc-meadow-development-opponents-mull-legal-action

By Nicholas Ibarra, Santa Cruz Sentinel

Posted: 04/25/18, 8:25 PM PDT | Updated: 2 weeks ago

Led by UC Santa Cruz faculty, members of the East Meadow Action Committee are hoping to stop a development on UCSC's East Meadow. (Dan Coyro -- Santa Cruz Sentinel)

PUBLIC COMMENTS

Members of the public may learn about the draft Environmental Impact Report on Student Housing West and submit comments at two upcoming meetings. Comments may also be submitted via mail and email through May 11.

• 6:30-8:30 p.m. Wednesday, Louden Nelson Community Center, 301 Center St., Santa Cruz.

• 5-7 p.m. May 3, Hotel Paradox, 611 Ocean St., Santa Cruz.

Info: ches.ucsc.edu/studenthousingwest

SANTA CRUZ >> Opposition to developing part of an iconic UC Santa Cruz meadow is heating up, with a faculty-led group announcing it has retained legal counsel to help sift through an environmental report and "prepare for the possibility of eventual litigation."

By Wednesday afternoon, more than 57,000 people had signed a separately organized online petition against the project that was created by an alumnus of the school's first graduating class.

The campus's Design Advisory Board also unanimously opposed developing the meadow at its February meeting, according to notes from the meeting.

"The negative reaction to this idea has been overwhelming," said Paul Schoellhamer, an alumnus of UCSC's first graduating class of 1969 who lives in Watsonville with his family and is an organizer of East Meadow Action Committee opposition group.

The development plan is part of UCSC's Student Housing West project to add 3,000 new beds, a chief concern for a campus situated in one of the nation's most expensive rental markets that is experiencing a crisis in availability and cost of housing.

More than half of about UCSC's some 18,500 students live on campus, but that leaves more than 8,500 students competing with residents for scarce rentals, and the campus is taking steps to prepare for the possible addition of almost 10,000 more students by the year 2040.

But contention has focused on a second, smaller site added to the project in the fall on the southern corner of UCSC's iconic East Meadow that, stretching north from the main entrance, serves as a sprawling welcome-mat to campus visitors. Designed to house students with families, the East Meadow site would have 148 beds — about 5 percent of the project total — and a childcare center for students and staff.

Building on that site would require an amendment to the meadow's land-use designation that would require sign-off from UC regents. As it stands, the meadow is designated as Campus Resource Land, which is not designated for development. The amendment is expected to be brought to the regents in July, according to UCSC spokesman Scott Hernandez-Jason.

If approved, construction is scheduled to begin in September.

'DIFFICULT CHOICES'

Announced in 2016, Student Housing West was originally planned for a single site along Heller Drive to the campus's west. But an initial environmental review revealed potential impacts to the red-legged frog, according to Dan Killam, a graduate student involved in the planning process.

University leaders instead chose the 13-acre plot of the East Meadow at Hagar and Coolidge drives as the most feasible site for relocation due to its proximity to faculty housing and to the campus's entrance, according to a March 21 message to the campus community penned by Chancellor George Blumenthal and Provost Marlene Tromp titled "Making difficult choices to provide campus housing."

Critics of developing the meadow respond by pointing three alternative sites outlined in the recently released draft environmental impact report, including a smaller or redesigned project at the original site or building a portion of the housing on a northern site.

"We would be happy with any of the alternatives that get to the required housing," Schoellhamer said.

ENVIRONMENTAL REVIEW

Comments on the draft environmental impact report on both Student Housing West sites may be submitted through May 11, and UCSC is hosting two public meetings to solicit input in person May 2 at Louden Nelson Community Center and May 3 at Paradox Hotel.

The latter meeting had originally been scheduled to take place on campus but was moved out of concern that access to campus could be disrupted by a protest, according to Hernandez-Jason.

A final version of the environmental report would be released in mid-June. The East Meadow Action Committee would then consider filing a lawsuit depending on how, and if, its concerns are addressed, according to UC Santa Cruz Professor emeritus Jim Clifford, one of the committee's organizers.

"At that point we will have an important decision to make," Clifford said.

PUBLIC COMMENTS

Members of the public may learn about the draft Environmental Impact Report on Student Housing West and submit comments at two upcoming meetings. Comments may also be submitted via mail and email through May 11.

6:30-8:30 p.m. Wednesday, Louden Nelson Community Center, 301 Center St., Santa Cruz.

5-7 p.m. May 3, Hotel Paradox, 611 Ocean St., Santa Cruz.

Info: ches.ucsc.edu/studenthousingwest

About the Author

Nicholas Ibarra covers government, education, cannabis and agriculture for the Sentinel. Raised in the Santa Cruz Mountains, Nicholas has earned multiple statewide awards for his writing, which has appeared throughout numerous Bay Area newspapers including the Mercury News and East Bay Times. He has also contributed reporting to publications including KQED Radio, Scientific American and Sierra Magazine. Nicholas earned a B.S. in journalism from San Jose State University. Reach the author at nibarra@santacruzsentinel.com or follow Nicholas on Twitter: @nickmibarra.

- Full bio and more articles by Nicholas Ibarra
- Back to top

EXHIBIT
5

City of Santa Cruz

2015 Urban Water Management Plan




Prepared by: City of Santa Cruz Water Department August 2016

City of Santa Cruz Water Department

2015 Urban Water Management Plan

Santa Cruz City Council

Cynthia Mathews, Mayor
Cynthia Chase, Vice Mayor
Pamela Comstock
Don Lane
Richelle Noroyan
Micah Posner
David Terrazas

Water Commission

Walt Wadlow, Chair
Linda Wilshusen, Vice Chair
David Baskin
Doug Engfer
Andy Schiffrin
Doug Schwarm
David Stearns

Rosemary Menard, Water Director

Prepared by
Toby Goddard, Administrative Services Manager
Katie Moore, Associate Planner

Assisted by
Heidi Luckenbach, Deputy Water Director and Engineering Manager
Kevin Crossley, Senior Civil Engineer
Amy Poncato, Administrative Assistant III
Catherine Borrowman, Professional & Technical Assistant
Lindsay Edelman, Water Conservation Representative

August 2016

TABLE OF CONTENTS

Chapter 8

WATER SHORTAGE CONTINGENCY PLANNING

This chapter presents information about how the City of Santa Cruz manages the water system during a water shortage emergency that arises as a result of drought. It also describes actions that would be undertaken in response to a catastrophic interruption of water supplies, including a regional power outage, earthquake, or other emergency situation.

8.1 Background

In 2009, the City of Santa Cruz completed a comprehensive update of its Water Shortage Contingency Plan. This project was an outgrowth of a previous Urban Water Management Plan, which recognized the many changes in regional conditions and local water supply planning that had taken place over the previous decade and identified a need to better prepare for the possibility of future water shortages in advance of the next major drought. Since then, the City has had to declare a water shortage in five of the past seven years, including a Stage 3 Water Shortage Emergency in both 2014 and 2015.

The City's Water Shortage Contingency Plan describes the conditions which constitute a water shortage and provides guidelines, actions, and procedures for managing water supply and demands during a declared water shortage. The primary focus of the plan is on measures that reduce customer demand for water, but it also covers actions that can be implemented to stretch or increase the water supply.

The overarching goals of this plan are as follows:

1. to conserve the water supply of the City for the greatest public benefit,

2. to mitigate the effects of a water supply shortage on public health and safety, economic activity, and customer lifestyle, and

3. to budget water use so that a reliable and sustainable minimum supply will be available for the most essential purposes for the entire duration of the water shortage.

Development of the City's Water Shortage Contingency Plan was a collaborative effort among the City Water Department staff, the City's Water Commission, City Council, and the public over a three year period beginning in 2006. Research involved reviewing state regulations and legal requirements (Water Code section 350 et seq.) and the water shortage plans of 21 other urban water utilities from throughout California, and from selected cities in the western United States and across the country. The Water Commission provided its input and recommendations throughout the process.

The plan is based on lessons learned here and from other water agencies during past droughts. Nevertheless, it is important to note that every drought will evolve differently and that it is not practical to develop a set of hard and fast rules that apply to all situations. The plan should be thought of as a general framework that will need to be adjusted and refined based on actual conditions.

Early in the planning process, staff and the Water Commission developed a set of principles to guide the water shortage planning process. These principles are as follows:

- **Shared contribution.** All customers will be asked to save their share in order to meet necessary reduction goals during water shortages.

- **Reduce non-essential uses first.** The plan concentrates on the elimination of non-essential water uses and on outdoor reductions, and gives the highest priority to essential health and safety uses.

- **Preserve jobs and protect the local economy.** The plan minimizes actions that would have substantial impact on the community's economy and provides large users the flexibility to determine their own reduction strategies within a water budget.

- **Existing conservation measures recognized.** Customers that have already implemented water conservation measures are acknowledged to have less potential for reduction and should not be penalized for conserving.

- **Communication at every stage.** A public information campaign at every level of shortage is essential for customer preparation and will encourage confidence in the City's ability to respond to water shortages.

- **Public participation.** Public participation in the development and implementation of the plan will help to ensure fairness, encourage cooperation, and facilitate implementation and with demand reduction measures in times of shortage.

The final Water Shortage Contingency Plan was adopted by resolution of the City Council of the City of Santa Cruz in March 2009 as an amendment to the City's Urban Water Management Plan (Appendix L) and is adopted herein by reference. Subsequently, the City Council adopted an ordinance implementing the water shortage regulations and restrictions contained in the plan (Santa Cruz Municipal Code Chapter 16.01, Appendix M). The water shortage regulations and restrictions were updated in early 2015 to integrate some changes recognized as being needed during implementation of rationing in 2014.

Portions of the City's Water Shortage Contingency Plan have since been published and highlighted by the American Water Works Association in its new Manual of Water Supply Practices, *M60: Drought Preparedness and Response* as an example of a model staged demand reduction program (AWWA, 2011).

8.2 Stages of Action

The updated Water Shortage Contingency Plan uses a staged approach that classifies a shortage event into one of five levels spanning a range from less than 5 percent up to 50 percent (Table 8-1).

Table 8-1. Stages of Water Shortage Contingency Plan

Stage	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition
1	0-5%	Water Shortage Alert
2	5-15%	Water Shortage Warning
3	15-25%	Water Shortage Emergency
4	25-35%	Severe Water Shortage Emergency
5	35-50%	Critical Water Shortage Emergency

[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

NOTES:

The overall concept is that water shortages of different magnitudes require different measures to overcome the deficiency. Because there is so little the City can do in the short run to increase the supply of water, the focus of this plan is primarily on measures that reduce demand. Each stage includes a set of demand reduction measures that

become progressively more stringent as the shortage condition escalates. When a demand reduction is necessary, typically one of these five stages would be put into effect by a resolution of the Santa Cruz City Council at the recommendation of the Water Director in the spring and remain in force for the entire dry season.

8.2.1 Assessing Water Supply and Demand

There is no one single criterion, trigger, or definition that is used to determine if a water shortage exists. The determination of a shortfall involves consideration of multiple indicators of water supply, as well as expected system demand.

Rainfall, runoff, reservoir storage, and water year classification are the key hydrologic indicators used by the City to evaluate water conditions. The plan describes these factors affecting the City's water supply and discusses the forecasting process and management considerations used in dry years to determine whether a water shortage is expected for the year ahead and how much water use must be cut back system-wide in response. In recent years, the City has also considered statewide drought intensity, long-range weather predictions, and local instream flow requirements in its analysis.

In Santa Cruz, a water shortage occurs when the combination of low surface flows in the coast and river sources and depleted surface water storage in Loch Lomond Reservoir reduces the available supply to a level that cannot support existing demand.

After an unusually dry winter or period of consecutive dry years, when a lack of supply appears possible, the Water Department undertakes an analysis to determine whether water supplies will be deficient relative to estimated water needs for the coming dry season. This analysis involves first comparing projected water supply and demand on a monthly basis, assuming no restriction on water use, to forecast the end of season water level and storage volume in Loch Lomond Reservoir. The Department then evaluates whether the amount of carryover storage in Loch Lomond at the end of the year will be sufficient to meet essential health and safety needs in case the dry weather pattern continues into the following year. If this analysis shows that Loch Lomond Reservoir would be depleted to a dangerously low level, then a decision is made regarding how much reservoir water is available to use in the current year and how much should be banked as a safeguard against the possibility of another dry year. The amount of cutback in demand needed to reduce the rate of reservoir depletion and end the year at a safer level of storage is then determined. If necessary, cutbacks would go into effect in late April/early May and span the entire dry season, typically through late

October. A hypothetical situation is provided in the full plan to illustrate this decision-making process.

The degree of shortage is normally defined as the supply deficiency in relation to normal water use over a given period of time, and expressed as a percentage. For example, a 25 percent shortage means the City has one-quarter less water supply available than what is normally used during the seven-month long dry season.

8.2.2 Timeline for Declaring Water Shortage

The timeline showing when the City evaluates water supply conditions and, if necessary, declares a water shortage is presented in Table 8-2 below.

Table 8-2. Calendar for Declaring Water Shortage

Target Date	Action
Months of Oct -Dec	Monitor rainfall, reservoir level, and runoff amounts
Late January	Prepare written status report on water supply conditions
Early February	Present initial estimate of water supply availability for year ahead
Early March	Present revised estimate of water supply availability for year ahead
Mid-March	SCWD announces existence of water shortage (if applicable)
Mid to late March	SCWD determines monthly water production budget and need for voluntary or mandatory response.
Early April	Present shortage response recommendation to Water Commission; notice of public hearing published
Mid-April	City Council formally declares a water shortage, adopts emergency ordinance
May	Water shortage regulations become effective
NOTES:	

8.2.3 Process for Declaring Water Shortage

Once the water shortage condition has been defined (as soon as reasonably certain), recommendations regarding water shortage rules and regulations consistent with this contingency plan are discussed with the City Water Commission. Monthly Water Commission meetings serve as a public forum for discussing water conditions and for hearing issues associated with implementation of the water shortage ordinance throughout the entire duration of the water shortage event.

Following consideration by the Water Commission, a declaration of water shortage is made by a resolution of the City Council. The legal requirements for such action are covered in Section 350 et seq. of the California Water Code. The code requires the following process be followed:

- That City Council hold a public hearing on the matter;
- That the public hearing be properly noticed (minimum of publishing once in newspaper at least seven days prior to the date of the hearing);
- Upon determining and declaring the existence of a water shortage, City Council may then adopt regulations and restrictions governing the use and delivery of water.

In accordance with Municipal Code section 16.04.480, rules adopted by the City Council establishing water use regulations become effective immediately after their publication in a newspaper of general circulation published in the City of Santa Cruz.

8.3 Demand Reduction Strategy

The City's strategy for dealing with water shortages of all levels involves the following four interrelated components:

1. An allocation system to establish reduction goals for different customer groups
2. Demand reduction measures
3. Publicity and communications
4. Operating actions

These four components are summarized below.

8.3.1 Allocation System

A fundamental issue any water supplier faces in managing a water shortage involves the allocation of water and how to distribute the available supply among customer categories when supplies fall short. In the process of updating this plan, various options and alternatives were reviewed and a priority-based allocation system was selected. This allocation system produces specific demand reduction goals for each major customer category at various levels of shortfall based on the unique usage characteristics of each customer category.

Customer reduction goals for all but the first stage were developed by evaluating the composition of demand for each major group and dividing it into three usage priorities. These priorities are, from highest to lowest, 1) health/safety, i.e., all domestic and sanitary uses, 2) business and industrial uses and, 3) irrigation and other outdoor uses. Normal demands were then scaled back in accordance with the schedule presented in Table 8-3.

Table 8-3. Reduction in Water Delivery by Usage Priority (percent of normal deliveries)

Stage	Magnitude of Water Shortage:	Health/Safety	Business	Irrigation
2	15%	95	95	64
3	25%	95	90	34
4	35%	90	85	12
5	50%	75	67	0

In essence, this allocation system strives to balance available supplies in times of drought as much as possible through cutbacks in outdoor water use. At each level of shortfall, public health and sanitation usage is afforded the highest priority by cutting back on interior usage the least. The importance of water in protecting the City's employment base is also acknowledged through disproportionate, modest cutbacks to the commercial sector as compared to the overall system shortfall. Irrigation and other outdoor uses are cut back the most. The larger the water shortage, the greater the cutbacks, but this same order of priorities is maintained throughout the range of potential shortages.

The heavy reliance on outdoor use reductions makes sense, both from a water system perspective because it reduces peak demands, which is important to preserving storage in Loch Lomond Reservoir, and from a public health and welfare perspective, because irrigation and other outdoor uses are the most discretionary of all uses when drinking water is in short supply. It also makes sense from an operational perspective because outdoor water use cutback can be achieved relatively quickly. From a legal perspective, this allocation system is consistent with the priorities and requirements of Water Code section 354. The resulting water supply allocation and customer reduction goals are presented in Table 8-4.

Because both total and categorical water demand has undergone a significant decline in the intervening time since this allocation was initially developed in 2009, it is recommended that this schedule and the monthly rationing allotments be revised once demand stabilizes again following the 2014-2015 implementation of residential/irrigation water rationing.

Table 8-4. Water Supply Allocation and Customer Reduction Goals

Normal Peak Season Demand = 2,473 mil gal	No Deficiency		Stage 2 15% Deficiency		Stage 3 25% Deficiency		Stage 4 35% Deficiency		Stage 5 50% Deficiency	
	Delivery		Delivery		Delivery		Delivery		Delivery	
Customer Category:	%	Volume (mil gal)	%	Volume (mil gal)	%	Volume (mil gal)	%	Volume (mil gal)	%	Volume (mil gal)
Single Family Residential	100	1,031	84%	864	73%	753	62%	639	48%	495
Multiple Residential	100	524	87%	454	78%	411	69%	361	55%	287
Business	100	438	95%	416	92%	402	87%	381	70%	307
UC Santa Cruz	100	132	85%	113	76%	100	66%	87	52%	68
Other Industrial	100	23	95%	22	90%	21	85%	20	67%	15
Municipal	100	48	76%	36	57%	27	41%	20	28%	14
Irrigation	100	110	64%	70	34%	37	12%	13	0%	0
Golf Course Irrigation	100	106	73%	78	51%	54	34%	36	20%	21
Coast Agriculture	100	59	95%	56	90%	53	85%	50	67%	40
Other	100	2	95%	2	90%	2	50%	1	50%	1
Total	**100**	**2,473**	**85%**	**2,111**	**75%**	**1,861**	**65%**	**1,607**	**50%**	**1,247**
Demand Reduction %, Million gallons	**0**	**0**	**15%**	**-362**	**25%**	**-612**	**35%**	**-866**	**50%**	**-1,226**

8.3.2 Demand Reduction Measures

The City's Water Shortage Contingency Plan uses a combination of voluntary and mandatory demand reduction measures, which vary depending on level of cutback. As mentioned earlier, the regulations against water waste are in effect in Santa Cruz on a permanent basis. Once a water shortage is declared, however, enforcement of this ordinance is increased and enhanced by the use of fines.

The primary demand reduction measures used in **Stage 1** are to restrict all landscape irrigation to certain hours of the day and to prohibit certain uses defined as non-essential.

The main approach to reducing water use in **Stage 2** involves expanding mandatory water restrictions and limiting landscape irrigation to specified days, times, and durations. Large landscape users are required to adhere to water budgets.

A **Stage 3** water shortage constitutes an emergency situation. The three primary measures to meet this emergency reduction goal are 1) residential water rationing, 2) mandatory water shortage signage in all commercial buildings, and 3) reduced water budgets for large landscapes. Single family residential customers are rationed using a hybrid approach that provides a base allocation for a family of four and an additional amount per person for larger households. Multi-family residential accounts are rationed based on the number of dwelling units at an account.

A **Stage 4** water shortage requires expanding water rationing to cover all water customers, including business, and reducing residential allocations. At this severe level of shortage, only minimal water is available for outdoor purposes.

Stage 5 represents an extraordinary crisis threatening health, safety, and security of the community. It would involve reduced rationing levels for all customers and a ban on outdoor uses to cut back normal water use by half.

A summary of the demand reduction methods and mandatory prohibitions against specific water use practices is provided in Table 8-5.

8.3.3 Publicity and Communications

Effective communication is essential to the success of any water shortage contingency plan in achieving the desired water use reductions. All customers need to be adequately

informed about water supply conditions, understand the need to conserve, and know what actions they are being requested or required to take to mitigate the shortage. The full Water Shortage Contingency Plan articulates the City's communications strategy, identifies the main customers and groups that need to be kept updated, advised, and informed, and outlines various communication and public outreach measures to employ in a water shortage. The plan also provides prepared public statements for each of the 5 stages that are intended to help communications stay on message and set the tone for subsequent communications through the duration of the incident.

8.3.4 Operating Actions

The City's Water Shortage Contingency Plan outlines the added responsibilities and internal actions taken Water Department when a water shortage arises. Many represent increased costs to the Department for additional personnel, services, and supplies. An important initial step is to designate a working group consisting of the Water Director and senior staff to lead and manage the Department's internal and external water shortage response. The Water Department then must mobilize the necessary personnel, resources, and equipment to undertake the various activities that are critical to implementing an effective response. These initial actions may include, among other things:

- Establishing water production budgets
- Coordinating with other city departments and affected public agencies
- Establishing a public communications program to publicize use restrictions and to engage and involve the community and key water-using sectors in curtailing their demand
- Ensuring adequate staff and training to effectively respond to customer inquiries and enforce water shortage regulations
- Adapting utility billing format and database capabilities
- Expanding water conservation assistance, outreach, and education
- Instituting a system for processing exception requests and appeals
- Addressing policy issues and updating status with decision makers
- Implementing monitoring mechanisms to track actual usage and measure performance

A summary of these key operating and communications actions is provided in Table 8-5.

Table 8-5. Summary of Demand Reduction Actions and Measures

Water Shortage Condition	Key Water Department Communication and Operating Actions	Customer Demand Reduction Measures
Stage 1: Water Shortage Alert (0-5%)	• Initiate public information and advertising campaign • Publicize suggestions and requirements to reduce water use • Adopt water shortage ordinance prohibiting nonessential uses • Step up enforcement of water waste • Coordinate conservation actions with other City Departments, green industry	• Voluntary water conservation requested of all customers • Adhere to water waste ordinance • Landscape irrigation restricted to early morning and evening • Non-essential water uses banned • Shutoff nozzles on all hoses used for any purpose • Encourage conversion to drip, low volume irrigation
Stage 2: Water Shortage Warning (5-15%)	• Intensify public information campaign • Send direct notices to all customers • Establish conservation hotline • Conduct workshops on large landscape requirements • Optimize existing water sources; intensify system leak detection and repair; suspend flushing • Increase water waste patrol • Convene and staff appeals board	• Continue all Stage 1 measures • Landscape irrigation restricted to designated watering days and times • Require large landscapes to adhere to water budgets • Prohibit exterior washing of structures • Require large users to audit premises and repair leaks • Encourage regular household meter reading and leak detection
Stage 3: Emergency Water Shortage (15-25%)	• Expand, intensify public information campaign • Provide regular media briefings; publish weekly consumption reports • Modify utility billing system and bill format to accommodate residential rationing, add penalty rates • Convert outside-City customers to monthly billing • Hire additional temporary staff in customer service, conservation, and water distribution • Give advance notice of possible moratorium on new connections if shortage continues	• Institute water rationing for residential customers • Reduce water budgets for large landscapes • Require all commercial customers to prominently display “save water” signage and develop conservation plans • Maintain restrictions on exterior washing • Continue to promote regular household meter reading and leak detection
Stage 4: Severe Water Shortage Emergency (25-35%)	• Contract with advertising agency to carry out major publicity campaign • Continue to provide regular media briefings • Open centralized drought information center • Promote gray water use to save landscaping • Scale up appeals staff and frequency of hearings • Expand water waste enforcement to 24/7 • Develop strategy to mitigate revenue losses and plan for continuing/escalating shortage	• Reduce residential water allocations • Institute water rationing for commercial customers • Minimal water budgets for large landscape customers • Prohibit turf irrigation, installation in new development • Prohibition on on-site vehicle washing • Rescind hydrant and bulk water permits
Stage 5: Critical Water Shortage Emergency (35-50%)	• Continue all previous actions • Implement crisis communications plan and campaign • Activate emergency notification lists • Coordinate with CA Department of Public Health regarding water quality, public health issues and with law enforcement and other emergency response agencies to address enforcement challenges • Continue water waster enforcement 24/7	• Further reduce residential water allocations • Reduce commercial water allocations • Prohibit outdoor irrigation • No water for recreational purposes, close pools • Continue all measures initiated in prior stages as appropriate

8.4 Prohibitions on End Uses

As identified above, the City's water shortage regulations and restrictions include a variety of temporary prohibitions on various end uses of water, which vary according to the stage of shortage. These prohibitions fall into four main categories:

- Landscape irrigation
- Washing of outdoor surfaces, structures, and vehicles
- Commercial end uses
- Swimming pools, spas and water features

These restriction and prohibitions are summarized in Table 8-6 below:

Table 8-6. Restrictions and Prohibitions on End Uses (continues on next page)

Stage	Restrictions and Prohibitions on End Uses	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1-3	Landscape - Limit landscape irrigation to specific times		Yes
1-3	Landscape - Restrict or prohibit runoff from landscape irrigation		Yes
2,3	Landscape - Limit landscape irrigation to specific days	1-2 days per week	Yes
2-4	Landscape - Other landscape restriction or prohibition	Limit on duration of watering with automatic irrigation systems	Yes
4	Landscape - Prohibit certain types of landscape irrigation		Yes
5	Landscape - Prohibit all landscape irrigation		Yes
3	Landscape - Other landscape restriction or prohibition	within 48 hours of measureable rainfall	
2-4	Landscape - Other landscape restriction or prohibition	Require large landscapes to adhere to water budgets	Yes
4,5	Landscape - Other landscape restriction or prohibition	Prohibit installation in new development	Yes
1-5	CII - Lodging establishment must offer opt out of linen service		Yes
1-5	CII - Restaurants may only serve water upon request		Yes

Stage	Restrictions and Prohibitions on End Uses	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2-5	CII - Other CII restriction or prohibition	Mandatory water conservation plans for large businesses	
3-5	CII - Other CII restriction or prohibition	Business water conservation plans required	Yes
3-5	CII - Other CII restriction or prohibition	Mandatory water waste signage for all business establishments	Yes
1-2	Other water feature or swimming pool restriction	Prohibit initial filling or draining and refilling of residential swimming pools	Yes
2-5	Water Features - Restrict water use for decorative water features, such as fountains		Yes
3	Other water feature or swimming pool restriction	Prohibit initial filling or draining and refilling of all swimming pools	Yes
4-5	Other water feature or swimming pool restriction	Prohibit filling or topping off swimming pools and outdoor spas	Yes
1-5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		Yes
1-5	Other - Require automatic shut of hoses		Yes
4-5	Other - Prohibit use of potable water for construction and dust control		Yes
4,5	Other	Prohibit vehicle washing, except at commercial car washes that use recycled water	Yes

8.5 Penalties, Charges, Other Enforcement of Prohibitions

The City's water shortage regulations and restrictions ordinance contains provisions for enforcing water use rules and regulations, and processes for issuing exceptions and hearing appeals. Administrative enforcement methods include the following:

Administrative Penalties These penalties are for failure to comply with water waste prohibitions and mandatory water use restrictions and are applied to the customer's

next utility bill. The object of imposing increasingly significant penalties is to assure compliance by creating a meaningful disincentive to commit future code violations. When a violation occurs, the Water Department first provides a written notice and gives the customer an opportunity to correct the situation. Additional violations are penalized as follows:

2nd Violation $100
3rd Violation $250
4th Violation $500

Large users (defined as using over a million gallons per year) are penalized at triple the amounts listed above.

Excessive Water Use Penalties These penalties are assessed when a customer uses more water in a given billing cycle that their rationing allocation provides. Excessive use penalties are in addition to ordinary water consumption charges, as follows:

1% to 10% over customer rationing allotment:	$25.00/CCF
More than 10% over customer rationing allotment:	$50.00/CCF

In addition to any administrative penalties and excess water use penalties, a flow restrictor and/or discontinuation of service may be ordered for willful violations of the City's water shortage regulations and restrictions ordinance.

The ordinance contains an exception process and that allows the Water Department, upon making specified findings, to provide for special or exceptional circumstances that otherwise would create undue hardship for an individual customer or class of customers. It also allows any water service customer who considers an enforcement action to have been erroneously undertaken to appeal their case before an independent hearing officer. The hearing officer considers the evidence presented by the customer and by the City and decides whether to uphold the enforcement action or to provide relief.

In 2014 and 2015, the City created and administered a "Water School" to provide one-time relief from excessive use penalties in exchange for customers attending a 2-hour evening class about the drought and ways to save water. More than 1,200 penalties totaling over $800,000 were waived through Water School during this time.

8.6 Consumption Reduction Methods

Refer to Section 8.3.2 and Table 8.5 above for a discussion and summary of the primary consumption reduction methods used by the City at various stages of water shortage. The City also implements measures listed in Table 8-7 below:

Table 8-7. Stages of Water Shortage Contingency Plan - Consumption Reduction Methods

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference *(optional)*
1-5	Expand Public Information Campaign	
3	Increase Frequency of Meter Reading	The City permanently changed to monthly meter reading in 2014 to facilitate water rationing
1-5	Provide Rebates on Plumbing Fixtures and Devices	Increased marketing of ongoing programs
1-5	Provide Rebates for Landscape Irrigation Efficiency	Increased marketing of ongoing programs
1-5	Provide Rebates for Turf Replacement	Increased marketing of ongoing programs
1-5	Decrease Line Flushing	
1-5	Increase Water Waste Patrols	
5-Mar	Implement or Modify Drought Rate Structure or Surcharge	
NOTES:		

8.7 Determining Water Shortage Reductions

Under normal water supply conditions, water production and gross consumption are recorded daily and monthly by treatment plant operators and reported to the Production Superintendent. Metered water consumption is reported on a monthly basis through automated sales reports generated by the utility billing system.

During a water shortage, a monthly production forecast and budget are developed for each source of supply. Actual production and the lake level are closely monitored on a daily and weekly basis to verify that the budgeted goals are being met. Consumption by large users is monitored and reported on a frequent basis. In severe stages of a water shortage, production and consumption data would be evaluated daily and the status reported to the Water Director's office. If the trend in consumption is such that the rate of drawdown at Loch Lomond is greater than anticipated, the City Manager and Council

are notified so that corrective action (such as increased publicity and enforcement or consideration of declaring the next higher stage) can be taken.

Beginning in August 2014, the Water Department began reporting its monthly water production on a statewide database used to keep track of urban water use in response to emergency water conservation regulations. These reports include the amount of potable water produced in the preceding month, an estimate of the gallons of water used per person per day by its residential customers, and various enforcement statistics. This reporting is expected to become a permanent requirement in 2016.

The University of California, the City's largest customer, closely tracks its consumption on campus and meets regularly with the City to ensure it is meeting its reduction target.

Figures 8-1 and 8-2 below show two examples of charts used by the Water Department to track production and water savings goals in the 2014 and 2015 drought and to publicize the community's success in meeting water reduction goals.

Figure 8-1. 2015 Water Production Goals (mgd)

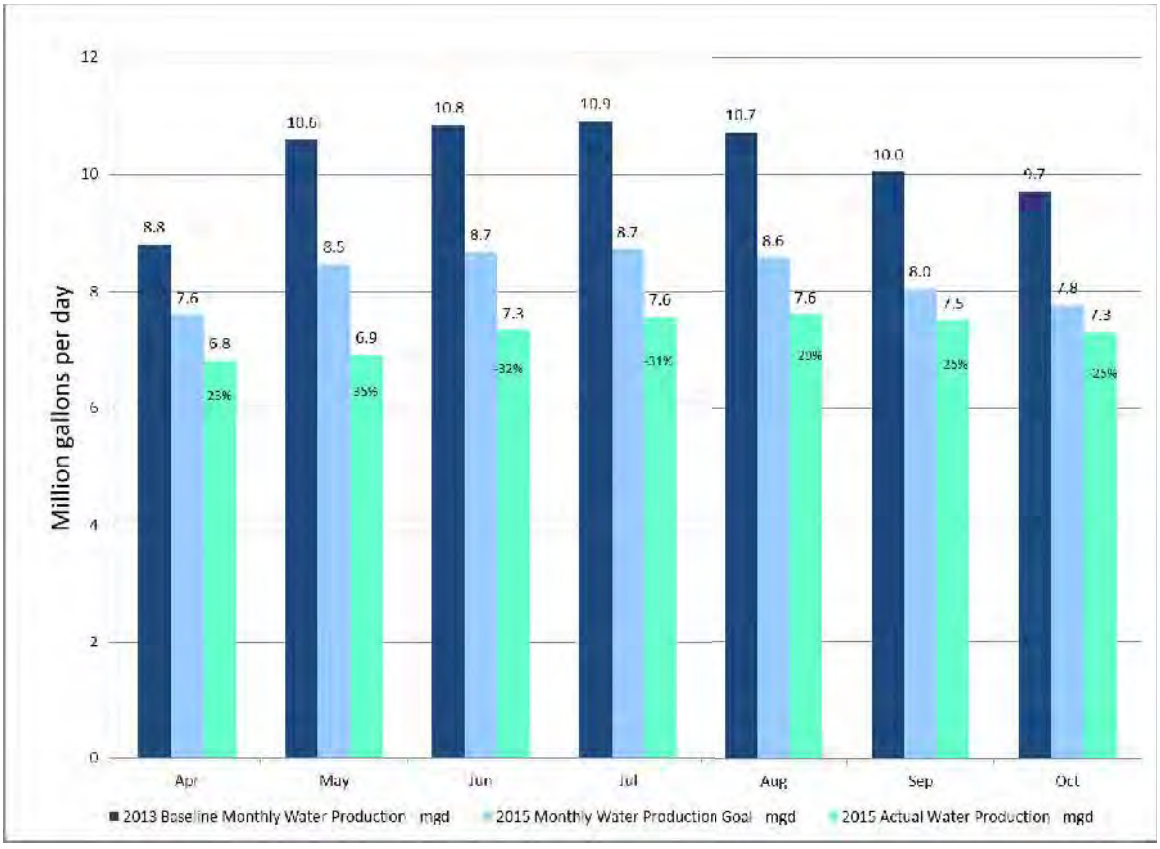
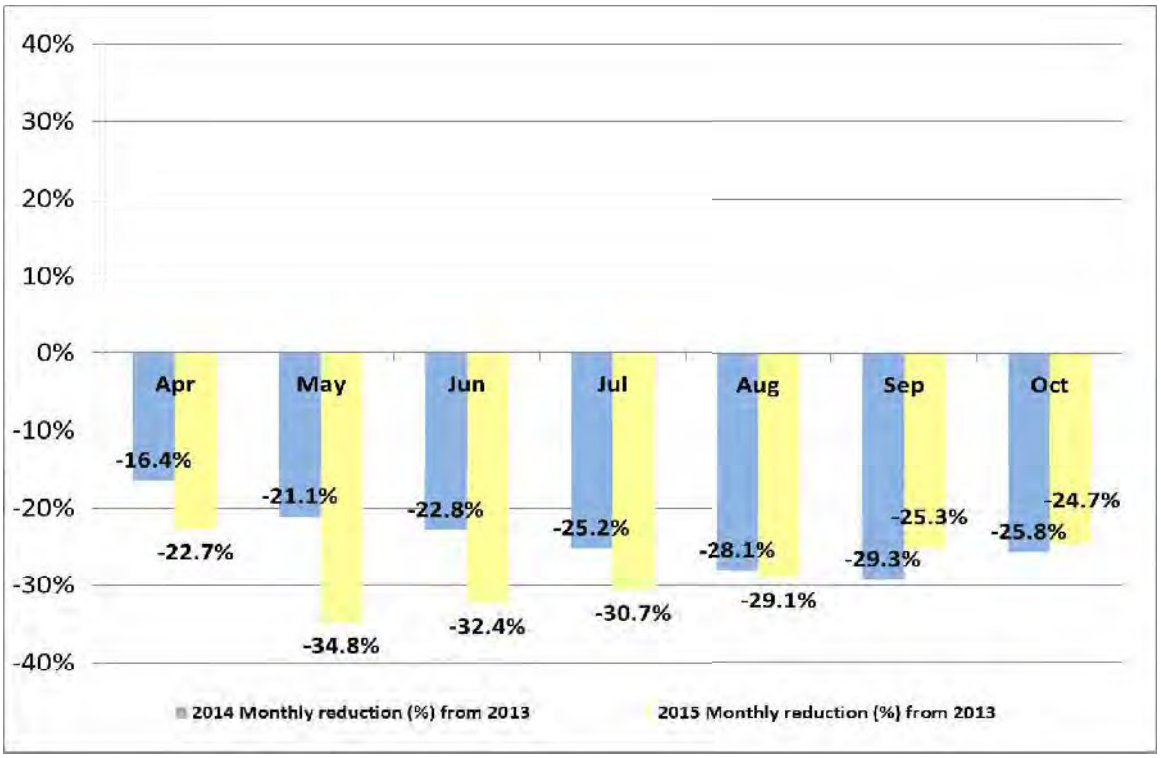


Figure 2. Monthly Water Savings Compared to 2013 (%)



8.8 Revenue and Expenditure Impacts

One of the negative consequences of using demand reduction to deal with water shortages is the corresponding reduction in revenue that occurs to the City's Water Fund as a result of reduced water sales. The full plan provides an analysis of the magnitude of revenue losses that the Water Fund might experience for each of the five stages, based on annual revenues at the time of just over $22 million.

The analysis assumes the "ready-to-serve" or fixed monthly service charge that is based on meter size would remain unaffected while the volumetric portion of the Department's revenue derived from water sales would vary by customer class in accordance with the allocation presented in Table 8-4 over the seven month period in which water shortage regulations are likely to be in effect.

The analysis shows revenue losses ranging from just under $0.6 million in a 5 percent water shortage situation to almost $5.8 million in a critical 50 percent water shortage. These estimates of losses were considered ballpark figures only and probably underestimate the problem. Actual revenue losses would be different for the following reasons:

- The spreadsheet did not model the effect of tiered pricing in the single family residential category, which would exacerbate revenue losses from this group;

- It is unlikely that system water use would immediately recover to normal levels in the months following a period of curtailment as modeled, thereby further depressing income;

- The table above does not include added operating costs of staff, equipment, and materials related to the water shortage response.

On the other hand, the time of year in which regulations would take effect is spread over two fiscal years, so the full effect of revenue losses of a single year drought would not impact the Department's annual budget to such a large degree. In addition, there would be relatively minor cost savings associated with reduced power and chemical usage at the Graham Hill water treatment plant, ranging from <$0.1 million in Stage 1 to about $0.4 million in Stage 5. Finally, some of the revenue loss would be offset by penalty and/or excess use fees. On the expenditure side, the major expense of implementing the water shortage plan identified was for added personnel costs for temporary field and office positions, which were estimated to range from approximately $100,000 in Stage 1 to $600,000 in Stage 5, and power cost for pumping water from Felton to Loch Lomond.

The Water Department's total annual revenue has increased somewhat since the Water Shortage Contingency Plan was prepared in 2009, but the actual revenue impact of the recent drought was fairly close to the $2.9 million projected annual loss estimated for Stage 3.

To address this problem, the City in 2014 instituted a new Drought Cost Recovery Fee, which is a surcharge that is automatically triggered by City Council action declaring a water shortage and continues through the end of the fiscal year following the shortage (Appendix N). The fee is a fixed monthly amount that varies by meter size and stage of shortage. It is designed to mitigate the risk of revenue shortfalls associated with usage curtailment events. The maximum targeted cost recovery amount ranges from $1.0 million in Stage 1 to $7.5 million in Stage 5. Table 9-4 below shows the Drought Cost Recovery fees in effect in 2015 and 2016.

Table 8-8. Drought Cost Recovery Fee Rate (2015)	
Meter Size	Inside & Outside City (monthly)
5/8 & 3/4''	$7.37
1''	$18.43
1.5''	$36.85
2''	$58.96
3''	$110.55
4''	$184.25
6''	$368.50
8''	$847.55
10''	$1,046.54

8.9 Resolution or Ordinance

The City's water shortage regulations and restrictions were adopted as an ordinance and codified as Santa Cruz Municipal Code Chapter 16.01 (Appendix M). The water shortage regulations and restrictions were last updated in early 2015.

8.10 Plan Evaluation

In 2009, after a year's experience implementing a Stage 2 Water Shortage Warning, Water Department staff prepared a report to document the response and compile records for future reference. This report, entitled: The 2009 Water Shortage: An Evaluation of Water Management Strategies, Actions, and Results evaluates which aspects of the plan succeeded and which didn't, and why, and makes recommendations and refinements to the plan for the next time a water shortage occurs. Much progress was made with putting enforcement systems, procedures, and tools in place that were not in place prior to 2009 and will help in future events. Even so, there were numerous lessons learned from this experience and several areas where improvements could be made to better manage water shortages in the future.

It is recommended that the Water Department conduct a similar review and prepare an "After Action" report based on the lessons learned during the recent 2014/15 Stage 3 Water Shortage Emergency.

8.11 Catastrophic Supply Interruption

> ***CWC 10632***
>
> ***(a)(3)*** *Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.*

The City plans for and responds to emergency incidents, including floods, earthquakes, fires, and hazardous materials incidents in accordance with the Santa Cruz County Operational Area Memorandum of Understanding (MOU). The MOU ratifies local government agreements to follow the Standardized Emergency Management System or SEMS, as mandated under California law. The City maintains an Emergency Management Plan, which defines and describes the emergency management organization and guides the response of appropriate personnel to a major emergency. The City Manager, functioning as the City's Director of Emergency Services, would coordinate the emergency response to maintain water delivery and/or restore service as necessary. The Emergency Management Plan also addresses the integration and coordination with other government agencies and levels when required.

The Water Department maintains a mutual assistance agreement with other water agencies through the Water/Wastewater Agency Response Network (WARN) to share equipment, personnel, and supplies in times of an emergency. The City is within the California Office of Emergency Services Coastal Region II, which includes the counties in the San Francisco Bay region and northern California coast.

The Water Department has its own **General Emergency Plan and Emergency Response Plan for Terrorist Activity and Natural Disasters** in accordance with state and federal laws. This document sets forth the primary objectives of the Department in an emergency as follows:

- Maintain water service for domestic and firefighting purposes,
- Protect the water supply from possible contamination,
- Control the loss of water, and
- Keep the public informed

The plan outlines the roles and responsibilities of key Departmental personnel during an emergency at both the City Emergency Operations Center and Water Department

Operations Center. It also describes general actions to be taken to 1) assess situation status and extent of damage to the water system, 2) prevent contamination and loss of water, and 3) restore water service in response to the following types of emergencies:

- Earthquake
- Tsunami
- Flood
- Fire
- Suspected Contamination of Water Supply
- Civil Disorder
- Power Outage
- Treatment Plant Failure
- Damage to Distribution Storage Reservoirs or Booster Pumping Station
- Telecommunications Failure

The plan contains an emergency water rationing plan intended to preserve treated water supplies in the event a catastrophe results in impairment of the water system. The emergency rationing plan has two stages, which are defined as follows:

Serious shortage: This condition exists when the system is unable to meet normal demand, but can supply enough water for basic public health and safely needs. In this situation, not taking swift action to ration water could jeopardize available water in storage, or could leave the City vulnerable in the event of further outages.

Critical shortage: This condition exists when production facilities are rendered incapable of meeting 50% or less of normal daily production levels and the current rate of consumption poses an immediate threat of draining Bay Street reservoir or other storage tank.

The restrictions that would be instituted in a serious or critical shortage are summarized in Table 8-9.

The City has four portable auxiliary generators to run booster pumps in case of an extended power outage. In addition, the treatment plant and major pump stations have stationary diesel-powered electrical generators as a stand-by source of power in case of a local or regional power outage.

Table 8-9. Emergency Water Rationing Plan	
Serious Shortage	
Prohibited Uses:	*Permitted Uses:*
1. Watering lawns, gardens or landscaping 2. Washing cars, boats, building exteriors 3. Washing sidewalks, driveways, or any exterior surfaces 4. No outdoor use for any reason 5. Car washes closed 6. Watering plants at nurseries, garden centers 7. Filling of swimming pools, hot tubs, decorative pools, or fountains (must be turned off) 8. Public showers closed	1. Normal domestic uses: drinking, cooking (paper plates and plastic utensils requested) 2. Toilet flushing, only when necessary 3. Limit showers to three minutes 4. Bathing only if absolutely necessary (no more than half full) 5. Minimize clothes and dish washing
Critical Shortage	
Prohibited Uses:	*Permitted Uses:*
1. Outdoor water use for any reason (garden, landscape, car washing, cleaning, maintenance) 2. Clothes washing and commercial laundering, except for health reasons 3. Janitorial cleaning 4. Businesses and institutions that use water in their operations may be forced to close or restrict operations: - Restaurants, bars, and coffee shops - Laundromats - Public and Private Schools - Manufacturing - Gyms and health spas - Beauty salons and barber shops 5. No water for construction 6. No water for crop irrigation	1. Water limited to health and safety only: drinking and cooking (paper plates and plastic utensils required) 2. Toilet flushing for solid waste only 3. Shower/bathing should be limited to every other day 4. Use water only when absolutely necessary

A separate Emergency Response and Public Notification Plan was developed in 2007 in anticipation of the deconstruction of Bay Street Reservoir. As part of this plan, communication and standard public notification procedures were put in place in the event a water emergency arose. This plan included developing the capability to trigger an automated call-out notification system (Reverse 911) to rapidly disseminate a generalized water emergency warning throughout the Santa Cruz water service area.

Finally, the Water Department has separate earthquake response procedures that outline responsibilities for inspection and reporting the status of critical structures, including Newell Creek Dam and other major water production facilities following an earthquake.

8.12 Minimum Supply Next Three Years

> ***CWC 10632***
>
> ***(a)(2)*** *An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.*

For this exercise, it is assumed that the next three water years spans the period 2016-2018. For water year 2016, more than half the year has already passed and conditions are fairly well known. The reservoir is currently at full capacity and the water year is classified as Normal. Accordingly, no water shortage is expected for the remainder of the 2016. It is assumed that the supply available under this circumstance is the same as in an Average year as listed in Table 7-1. But because system water demand continues to be low, the total annual supply available, 3.2 billion gallons, likely overstates actual production the City expects to see through the remainder of 2016.

For 2017 and 2018, water conditions are assumed to be as dry as they were in 1976 and 1977, corresponding with the first two years of the 3-year, multiple dry year sequence listed in Table 7-1. The supply available for those two years is substantially lower, and would likely require significant cutbacks to balance supply and demand, especially in 2018. For 2017, a production level of 2.4 billion gallons is close to what the City actually experienced in 2015 with a declared Stage 3 Water Shortage Emergency in place. For 2018, an annual production level of 1.9 billion gallons would represent a critical water shortage emergency and require a tough decision about whether to tap the 1.0 billion gallon reserve in Loch Lomond Reservoir to meet essential public health needs.

Table 8-10. Minimum Supply Next Three Years (mg)

	2016	2017	2018
Available Water Supply	3,252	2,430	1,969
NOTES: Reference Table 7-1.			