

The Regents of the University of California

PUBLIC ENGAGEMENT AND DEVELOPMENT COMMITTEE

September 29, 2021

The Public Engagement and Development Committee met on the above date by teleconference meeting conducted in accordance with Paragraph 3 of Governor Newsom’s Executive Order N-29-20.

Members present: Regents Guber, Lansing, Leib, Lott, Reilly, Sherman, and Torres; Ex officio member Drake; Advisory members Blas Pedral, Cochran, and Timmons; Chancellors Block, Larive, May, Muñoz, and Wilcox; Staff Advisor Tseng

In attendance: Regents Hernandez and Kounalakis, Assistant Secretary Lyall, Managing Counsel Shanle, Provost Brown, Executive Vice President and Chief Financial Officer Brostrom, Senior Vice President Colburn, Vice President Humiston, and Recording Secretary Li

The meeting convened at 1:35 p.m. with Committee Chair Reilly presiding.

Committee Chair Reilly welcomed Senior Vice President Colburn to his new position at External Relations and Communications, and she invited him to make a few comments. Mr. Colburn stated that he looked forward to connecting with Regents in order to support the University’s advocacy efforts at the State and federal levels, as well as UC’s engagement efforts across California.

1. APPROVAL OF MINUTES OF PREVIOUS MEETING

Upon motion duly made and seconded, the minutes of the meeting of July 21, 2021 were approved, Regents Drake, Guber, Lansing, Leib, Lott, Reilly, Sherman, and Torres voting “aye.”¹

2. CONVERSATION WITH STATE SENATOR ROBERT HERTZBERG

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Committee Chair Reilly introduced State Senator and Senator Robert Hertzberg, noting his efforts in water dispute negotiation, energy reform, and health insurance expansion. Under his guidance as Speaker of the Assembly, legislation and ballot measures passed in 2002 and 2004 that provided billions of dollars toward improving and expanding education in California, with over \$1 billion in construction bond funding for UC alone. Committee Chair Reilly underscored Senator Hertzberg’s persistent advocacy of the establishment of UC Merced. He also co-authored legislation to expand the Cal Grant and has written bills co-sponsored by the University for breast cancer research and carbon neutrality.

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code §11123(b)(1)(D)] for all meetings held by teleconference.

Committee Chair Reilly expressed gratitude for Senator Hertzberg's support of the University.

President Drake welcomed Senator Hertzberg and stressed the importance of State legislators who understood the University. In his previous position in the Office of the President, he had worked with Senator Hertzberg on the establishment of UC Programs in Medical Education (PRIME), a program which had grown from eight students when it launched in 2004 to the hundreds of students in the program today.

Senator Hertzberg began his remarks by recalling his experiences working with various Regents throughout his career. He praised the current Board for its engagement and involvement and regarded President Drake as a "rock star" leader. From his travels, Senator Hertzberg learned that many regions around the world wished to have a university system like UC. In fact, the University's brand was very popular in China. In his view, everyone in the State government should support UC's endeavor. Given the impact of upward mobility on young people and the economy, he expressed disappointment in the amount of effort it took to support the University, such as the number of legislative bills it took to establish UC Merced. Senator Hertzberg expressed his commitment to the University for the rest of his term. He was hopeful that this Board's engagement could build a strong relationship with the Legislature.

Regent Torres expressed pride in Senator Hertzberg's advocacy of the University, his leadership in the Legislature, and the challenges he has taken on throughout his career.

Staff Advisor Tseng asked Senator Hertzberg how UC could better portray itself as an employer of choice in order to grow and retain staff. Senator Hertzberg praised the University for keeping staff employed early in the pandemic, when State government was facing furloughs. In his view, UC employment policies were very generous and responsive. He believed that the cause of UC was just and its impact was extraordinary, particularly its international impact. He suggested that the University continue expanding its intellectual property.

Regent Leib asked about the direction of next year's State budget with regard to the University. Senator Hertzberg, recalling the billions of dollars in federal stimulus from both the Trump and Biden administrations to California, explained that a percentage of the State's \$80 billion surplus had to be set aside for the K-12 system per Proposition 98 and for the rainy day fund. Typically, budget surplus dollars could either be returned to taxpayers, used for infrastructure, or used to pay debt, but the State had more flexibility because of federal stimulus. The California Legislative Analyst's Office anticipated a \$15 billion budget surplus in addition to the existing surplus. Senator Hertzberg believed that there would be high demand for every surplus dollar regardless of the amount of surplus and was optimistic about the University's position, noting the obligation to justify expenses to taxpayers and the pressure to reduce tuition. He predicted that there would be a sense of relief in State government following the failed attempt to recall Governor Newsom and as the COVID-19 pandemic eased, and he underscored the importance of in-

person interaction in government. Senator Hertzberg encouraged the University to keep up its advocacy efforts and anticipated continued flexibility in the State budget.

Regent Kounalakis stated that Senator Hertzberg was a great partner of public higher education. She asked if the current Board, having made significant policy changes such as eliminating the SAT in admissions requirements, had made progress in demonstrating its new profile to legislators. Senator Hertzberg replied in the affirmative, adding that this Board had built good bridges with the Legislature.

Regent Kounalakis asked what Senator Hertzberg saw for the future of UC and what the University should consider. Senator Hertzberg remarked on the extraordinary rate of change in technology. For instance, carpenters needed to know advanced math to use the tools now available. He believed that social sciences would also become more important given the shifts in technology, artificial intelligence, and an unprecedented integration of cultures. He did not believe that learning would happen exclusively online, as human interaction on campus was very important. UC was in a competitive environment and must stay on the cutting edge of these challenges.

Regent Lansing thanked Senator Hertzberg and praised his responsiveness, candor, and the time he has taken to collaborate with Regents and provide advice.

Committee Chair Reilly asked what top challenges the state would face in the next decade and how UC could meet those challenges. Senator Hertzberg replied that challenges included climate change, the wealth gap, and the future of democracy. Social media was accelerating polarization, which affected the political process, and the impact of the COVID-19 pandemic on essential workers demonstrated the wealth gap. Expressing concern about authoritarianism in other parts of the world, Senator Hertzberg underscored the importance of civil discourse and the survival of democracy, because the political process took time. Electrical cables needed to be moved underground to prevent wildfires, a significant source of air pollution. Currently, he was envisioning a sovereign wealth fund, which would be partially funded by UC intellectual property. He also planned to introduce a \$25 billion bond measure for home ownership in the November 2022 election.

Committee Chair Reilly noted that Senator Hertzberg's ideas regarding climate change aligned with those of the University, which was poised to make a big impact.

3. **UC DIVISION OF AGRICULTURE AND NATURAL RESOURCES: ENGAGING COMMUNITIES TO BUILD WILDFIRE RESILIENCY**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Committee Chair Reilly stated that the University, a vital source of research and best practices for forest management and wildfires, regularly engaged with government agencies and communities on these matters, expanding its reach beyond its ten campuses.

UC Agriculture and Natural Resources (ANR) Vice President Glenda Humiston shared that she also served as Director of both UC Cooperative Extension and the Agricultural Experiment Station. She explained that the University was created via land grant in 1868, and every state's land grant was organized differently. The U.S. Congress had passed laws authorizing federal funding and setting program requirements for ANR, which was a national system that frequently convened universities to share information. There were UC Cooperative Extension specialists at six campuses, nine ANR Research and Extension Centers across the state, and hundreds of researchers at UC Berkeley, UC Davis, and UC Riverside who were part of the Agricultural Experiment System. UC ANR had 13 Statewide Programs and Institutes and over 19,000 volunteers who helped expand UC ANR's research and messaging. During the COVID-19 pandemic, UC ANR Master Gardeners helped homeowners with fire safety and drought tolerance.

Ms. Humiston stated that healthy forests reduced the risk of wildfires, which has cost California over \$1 trillion in the last five years. According to research from UC Davis, UC Berkeley, and UC Merced, healthy forests could produce up to 16 percent more water for the state; over 60 percent of the water consumed in California came from upper forested watersheds. Healthy forests supported more diverse and healthier wildlife ecosystems and a significant outdoor recreation industry. Ms. Humiston presented a chart depicting ANR's role in mission-oriented research at UC, from basic scientific discovery and applied research to Cooperative Extension, where research and new technologies were shared with local communities, State agencies, Native American tribes, and other partners. Multiple solutions were needed for forest resiliency and fire management, such as climate change mitigation and adaptation, community well-being and resiliency, decision support tools for allocating resources, economic development and job creation through seeking new uses for biomass, and community-based fire management.

Ryan Tompkins, UC Cooperative Extension Forest and Natural Resources Advisor for Plumas, Sierra, and Lassen Counties, stated that his research pertained to forest restoration, post-wildfire recovery and reforestation, and community wildfire preparedness. He and other Cooperative Extension specialists were academics embedded in the community, experiencing real-world problems firsthand. Forest management issues transcended private, public, and State boundaries, and UC ANR crossed those boundaries to provide community-scale solutions informed by regional perspectives, conventional wisdom, and scientific innovation. California forests were now denser, more homogenous, and younger, and therefore more vulnerable to high-severity fire. Mr. Tompkins presented a map of the high-severity fires from the last two decades in the regions he served. The 2021 Dixie Fire, which burned nearly one million acres, followed the 2020 North Complex Fire, which burned 185,000 acres in 24 hours. UC ANR collaborated with the U.S. Forest Service and community partners on a burnout operation during the Dixie Fire in order to save Quincy and Greenhorn Creek. Mr. Tompkins and others recently published an editor's choice paper on fire management in the *Journal of Forestry*. Along with local organizations, UC ANR was educating local communities about home hardening, defensible space, and evacuation planning, and activities were tracked using applied research. After a fire, UC ANR was often the first to provide homeowners with science-based advice, technical assistance, and help with navigating complex assistance programs, all while not trying to sell a service.

Mr. Tompkins underscored the importance of helping Californians after wildfires because these landscapes would burn again. High-severity fire beget high-severity fire, so UC ANR was applying research and working with industry and public land managers to develop reforestation techniques that might be more resistant to burning. For example, the Upper Feather River Watershed was one of the largest contributors to the State Water Project and burned in the Dixie Fire.

Celeste Cantú, Chair of San Diego Water Quality Control Board, member of the UC ANR President's Advisory Commission, and volunteer UC Master Gardener, stated that wildfire spending in the state more than tripled since 2006, surpassing \$3 billion, but most of that money was spent on putting out fire instead of preventing it. This year saw unprecedented investment in forest management. Under the Forest First Program from the Santa Ana Watershed Project Authority, water districts allocated funds to the U.S. Forest Service for forest management and the prevention of catastrophic wildfire, thus protecting water quality and quantity downstream. The watershed approach treated the hydrologic system as part of the landscape. Extreme heat from wildfires rendered soil unable to absorb water, which reduced aquifer replenishment, caused flooding that moved toxic sedimentation from wildfires, and threatened dam safety. Catastrophic wildfire destroyed natural infrastructure; water must be protected from pollution so that it could be used again and again. This required collaboration and coordination across political boundaries and silos, as well as evidence-based science. Using a science-based curriculum informed by the work of UC Cooperative Extension, UC Master Gardeners were showing Californians how to use native plants to address the synergistic threats of drought, flood, biodiversity issues, heat, and fire. Residents were learning how to use defensive space guidelines to protect their homes. Small rural communities and communities of color across California were ill-prepared for drought. From 2012 to 2016, at least 2,600 well-dependent households experienced water shortages, and about 150 small water systems needed emergency assistance. This year, wells were failing on a daily basis. UC ANR was investing funds, time, and expertise to fortify regional organizations that bring together diverse communities, professions, and agencies to solve these complex challenges.

Daniel Sanchez, Assistant Cooperative Extension Specialist and UC Berkeley faculty member, stated that his research focused on the role of innovative wood products in reducing the risk of catastrophic wildfires. These products ranged from energy or transportation fuels to engineered wood products with high structural value, all of which could support forest restoration and store carbon. Forest restoration typically involved two approaches. One was prescribed fire, or proactive treatment with low-intensity fire to reduce surface fuels. The other was mechanical vegetation removal, where thinned trees are piled and burned or left to decay, and merchantable trees are used to produce houses, furniture, and electricity. For the last several years, he had been working with the Joint Institute for Wood Products Innovation to identify wood products best suited for California markets, fund applied research and development of these products, and advance collaboration in order to scale up these industries. The Joint Institute's 2020 review of wood products found that there was a potential market for mass timber and that liquid or gaseous transportation fuels could be low-carbon or carbon-negative replacements for diesel. The Joint Institute recently worked with Oregon State University and the University

of Oregon to fabricate and test wood from a white fir species prevalent in California for commercial use. Mr. Sanchez was leading a working group from various disciplines examining how the production of low-carbon and carbon-negative fuels from forest biomass could be scaled to achieve the state's forest restoration goals.

Maggi Kelly, UC Berkeley professor and Cooperative Extension Specialist, stated that her interests were in the use of mapping and remote sensing to manage fires. She shared several UC-developed projects for pre-fire, active fire, and post-fire situations. Downscale climate change modeling by LeRoy Westerling at UC Merced has been made publicly available via Cal-Adapt, an online portal that provides data on fire risk by region and scenario. UC ANR has developed the Wildfire Fuel Mapper to help landowners understand the vegetation on their land and make decisions about fuel treatments. Ilkay Altintas at UC San Diego created computer infrastructure that provided decision support during active fires and next-generation fire modeling. UC ANR has also developed web-based active fire maps using real-time satellite imagery. Yufang Jin at UC Davis was innovating the use of post-fire satellite data to understand fire intensity, and UC ANR advisors used unmanned aerial vehicles, also known as drones, to monitor forest restoration. The UC ANR Informatics and Geographic Information System Program was gathering data from the Landsat, a joint program from the National Aeronautics and Space Administration and U.S. Geological Survey; Planet Labs satellite data; and drones for post-fire mapping.

Lenya Quinn-Davidson, UC Cooperative Extension Fire Advisor and Director of the Northern California Prescribed Fire Council, shared that her work included bridging the gap between scientists and land managers through fire science delivery. This ensured that researchers were asking relevant questions and land managers had access to the latest scientific knowledge. Along with groups like the Fire Learning Network and the Nature Conservancy, Ms. Quinn-Davidson was also working to shift the fire culture to one of living with fire. This work was national in scope and encompassed fuels management, prescribed fire, community planning and home hardening, workforce development, and diversity, equity, and inclusion (DEI) in fire management. She hosted an annual Women-in-Fire Prescribed Fire Training Exchange that was open to all but focused on women and other underrepresented groups. Ms. Quinn-Davidson was trying to grow the program, which received about 120 applications every year but could only accept 25 participants. About four years ago, prescribed fire was infrequently used in California and occurred almost entirely on federal lands. As a result of UC ANR outreach and training, there were now 15 community-based prescribed fire groups around the state that were bringing together ranchers, environmentalists, university students, Native American tribes, fire departments, and regulators. Ms. Quinn-Davidson has also worked closely with tribal practitioners on training events, policy, and several legislative bills that ensured that prescribed fire represented the best cultural and scientific understanding of the issues. An unlikely coalition made up of the Karuk Tribe, California Cattlemen's Association, and Defenders of Wildlife has advocated for prescribed fire policies. This legislative session, Ms. Quinn-Davidson worked with State Senator William Dodd on Senate Bill 332, which would provide liability protections for prescribed fire, and she advised on Assembly Bill 642, a bill pertaining to workforce development training and tribal sovereignty that

Governor Newsom recently signed. She also helped develop a plan for a \$20 million, State-backed prescribed fire claims fund.

Ms. Humiston added that there was much more to UC's fire resiliency efforts, including those at the National Laboratories, UC Health locations, and the campuses. For instance, one UC Cooperative Extension advisor created Match.Graze, a software application that matched livestock owners with landowners whose land needed to be grazed in order to reduce fire risk. Vice President Maldonado also organized a series of workshops on fire issues.

Committee Chair Reilly asked what has been learned in the last five years that has helped the state better fight wildfires and hopefully prevent them. Ms. Kelly replied that mapping technology now enabled early fire detection and path prediction. More data was now available, and new satellites from private companies were producing daily, high-resolution imagery. Active sensors could analyze particulates in smoke emissions during fires. Despite these technological advances, this was still a human issue that required collaboration prior, during, and after fires.

Committee Chair Reilly asked if the use of wildfire camera technology, presented by former Governor Gray Davis at a previous Committee meeting, was widespread. Ms. Kelly responded in the affirmative. Cameras were deployed throughout the California wilderness, but large fires were in remote areas that were hard to reach even if they were detected. Due to weather conditions and dry fuels, fires were growing very quickly. Ms. Humiston added that challenges were often in the areas of funding, political will, and willingness of jurisdictions to collaborate. She emphasized the importance of policy work; different regions in the state had different needs, but policies tended to be one-size-fits-all. Ms. Cantú stated that threats and challenges were accelerating faster than the state could learn from them. More people and research were needed. Institutions had been designed to protect against waste, fraud, abuse, and inefficiency in an isolated manner, and collaborations had previously been discouraged. In the 21st century, problems could not be solved within silos. Collaboration, communication, negotiation, and problem-solving were once regarded as soft skills but were actually the most difficult to learn, especially among the most technically astute. Institutions were now creating key relationships because challenges were much bigger than individual institutions' skill sets. Ms. Humiston stated that there was not enough public money to achieve forest health, so finding profitable uses for forest biomass could help the state achieve its forest health goals.

The meeting adjourned at 3:10 p.m.

Attest:

Secretary and Chief of Staff