

2020-21

ANNUAL REPORT
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UCDAVIS | FACILITIES



OUR STORY

Facilities Management is the facility maintenance and repair provider for most buildings and much of the equipment on the UC Davis campus. The Facilities Management team of experts consists of seven core units:

- Asset Management
- Building Maintenance Services
- Custodial Services
- Energy and Engineering
- Fleet Services
- Operations Support
- Utilities

Working together, the Facilities Management team is dedicated to campus facility needs for excellence in research and teaching. Our skilled employees have experience with the campus’s full range of advanced research and teaching facilities — from high-tech classrooms to bio-safety labs and historic barns. We know how our facilities are built, their functions and what to look for when repairing or altering our campus spaces.

We are:

- Leaders in our industries
- Excellent communicators
- Customer service professionals
- Innovative problem solvers

We are focused on providing expert maintenance service to UC Davis. In order to meet the dynamic needs of our customers, we continually use their feedback to refine our administrative efficiency to deliver a quality experience. Our UC Davis campus consists of over 1,000 buildings exceeding 12-million square feet. Our skilled tradespeople tackle over 15,000 work requests each year, excluding preventive maintenance. The diversity of buildings and space often require staff to approach repairs or maintenance needs with an innovative methodology.

CORE VALUES

- Help our colleagues succeed
- Challenge the status quo
- Trust each other
- Debate for the betterment of the organization
- Listen to opinions and ideas
- Compromise when necessary
- Remember why we are here



A MESSAGE FROM ASSOCIATE VICE CHANCELLOR **ALLEN** TOLLEFSON

During the 2020-2021 fiscal year, Facilities Management faced two extraordinary events. The first event occurred in March 2020, when Chancellor May announced that the UC Davis campus would suspend operations in response to the shelter at home order issued by Yolo County to slow the spread of the coronavirus pandemic. Classes were reconfigured for online instruction, and campus personnel who could work from home were instructed to do so.

This dramatic shift in occupancy levels allowed Facilities Management staff to tackle tasks more efficiently while assuring we met recommended safety protocols related to physical distancing and face coverings. Our custodial staff implemented new cleaning procedures for disinfecting common areas, and when we received a call for help from the UC Davis Health campus, nearly 40 custodial staff volunteered to relocate to assist. This level of commitment by staff demonstrates our ability to be nimble and proactive to assure our campus can continue the important work of research and learning.

The other event occurred in August when heavy smoke from the Lightning Complex Fires, one of which was located in the Capay Valley, settled into the Sacramento valley. In addition to the hazardous smoke, a similar event in 2018, the Camp Fire in Paradise, led to PG&E implementing what is now known as the Public Safety Power Shutoff (PSPS) policy. This policy when enacted, would result in a loss of power in service areas affected by a high fire danger alert. Because UC Davis utilizes PG&E transmission lines for our power supply, we have a low probability of being affected by a PSPS event unless it were a regional or statewide outage.

However, as a world-renowned research institution, we are acutely aware of the need to protect our assets and resources, so although it is unlikely the campus would experience a large-scale power outage, Facilities Management is proactively developing a long-term plan to address campus needs should a power outage occur. A full list of recommendations will be presented to campus leadership in late summer 2021.

CAMPUS PROFILE



BUILDING SPACE
+14M Square Feet



BUILDINGS ON CAMPUS:
1,200+



MILES OF STEAM &
CHILLED WATER PIPELINES:
27



ELECTRICAL USAGE ANNUALLY:
211,951,517 kwh



TOTAL ACRES:
5,300



AVG. AGE OF BUILDING:
40+ years old



TOTAL STAFF/FACULTY:
31,489



SOLAR FARM:
62 acres
generating
13.5% of
campus power



WATER SUPPLY FOR CAMPUS:
575 million gallons
FOR AG:
528 million gallons



STUDENT POPULATION:
37,581

FACILITIES LEADERSHIP



John Zertuche
Director, Building Maintenance Services

The Building Maintenance Services (BMS) team operates, repairs and maintains the research, academic and classroom facilities on the UC Davis campus. BMS employees are multi-skilled trades personnel who are experienced in all building mechanical, electrical, plumbing and structural systems.



Joshua Morejohn
Energy and Engineering Manager,
Energy and Engineering works collaboratively to find ways to save energy at the building level so that we can meet our carbon neutrality goals and practice sustainable stewardship on our beautiful campus.



Christina Blackman
Operations Manager
Operations Support offers internal and external support to Facilities Management related to safety, training, employee engagement, development, internal and external communications, quality assurance, and campus customer satisfaction.



Michael Fan
Director, Utilities
The Utilities unit operates all the UC Davis campus large scale utility infrastructure to keep the campus functioning, much like a small city. There are several individual sub-units within Utilities. They include the Central Heating and Cooling Plant, Data and Engineering, Power and Lights, Instrumentation and Controls, Solid Waste, Waste Water and Water and Gas.



Finis Jones
Director, Custodial Services

Custodial Services strives to provide a clean, safe and healthy environment for the UC Davis campus. This dedicated team works around the clock to prepare laboratories, classrooms and indoor spaces for the rigors of research and teaching on a daily basis.



Fred Gallardo
Interim Director, Fleet Services
Fleet Services supports the campus community by providing safe, reliable, economical and sustainable transportation options that are responsive to the needs of our customers. We are responsible for the maintenance, repair, inspection and reporting related to all vehicles within the university's fleet.

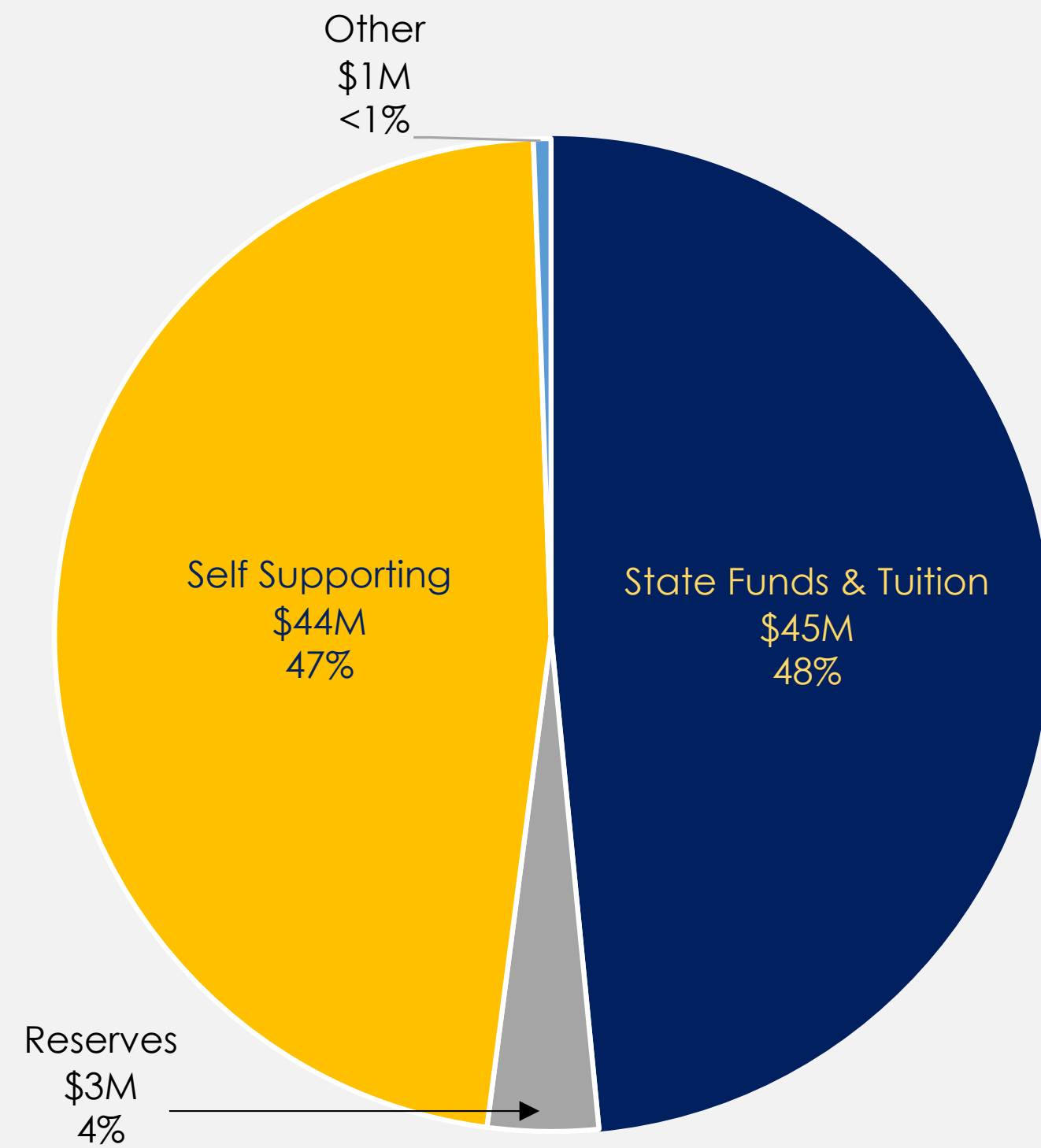


Peter Lentino
Asset Manager
Asset Management's mission is to ensure the success of UC Davis through a proactive life-cycle management of our campus infrastructure and facilities. We provide overall facility condition assessment to over 80,000 maintainable assets, develop preventative maintenance programs and manage our deferred maintenance needs.

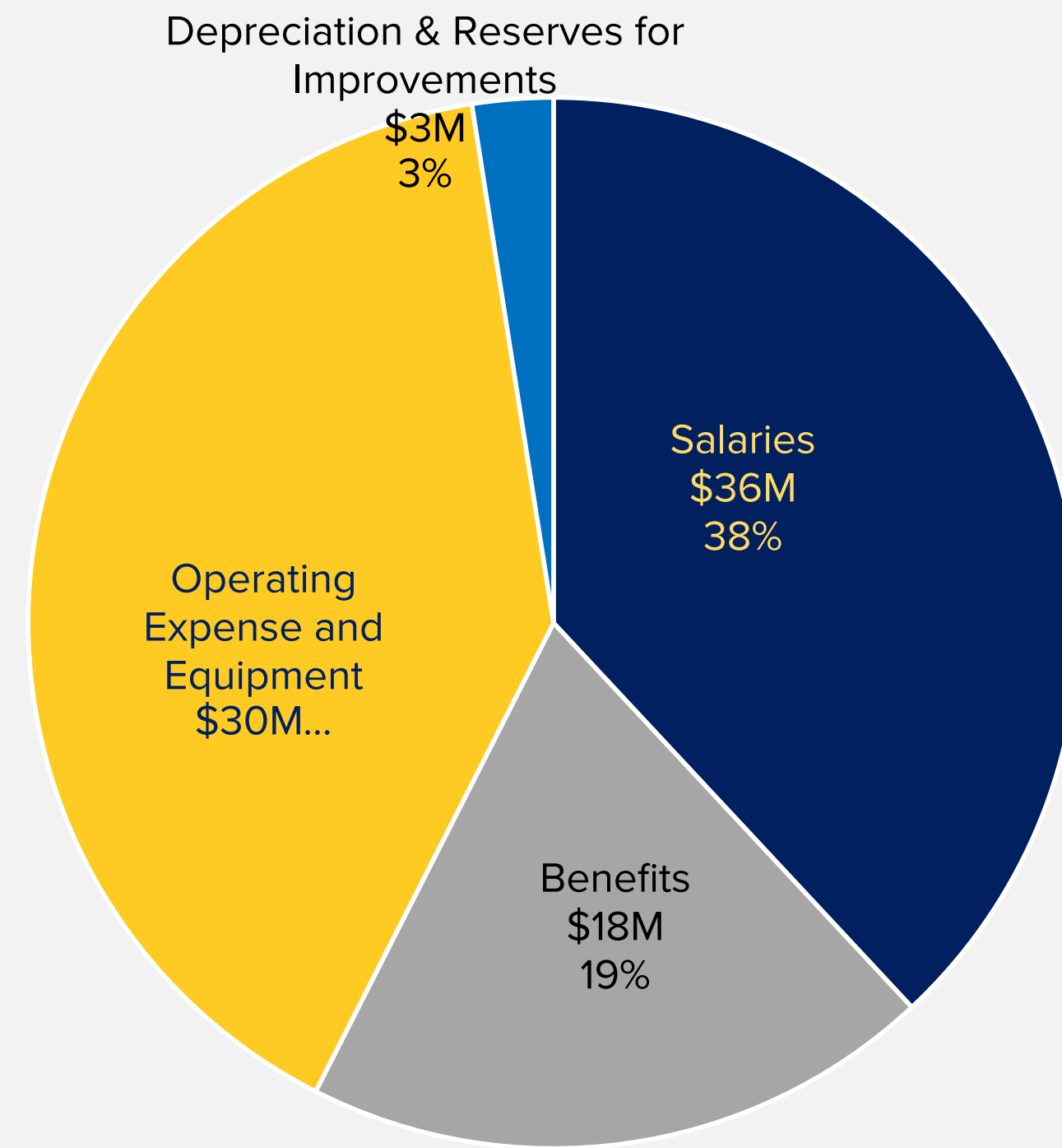
We recognize that our most valuable, intangible, asset of all is our people.

FISCAL YEAR BUDGET

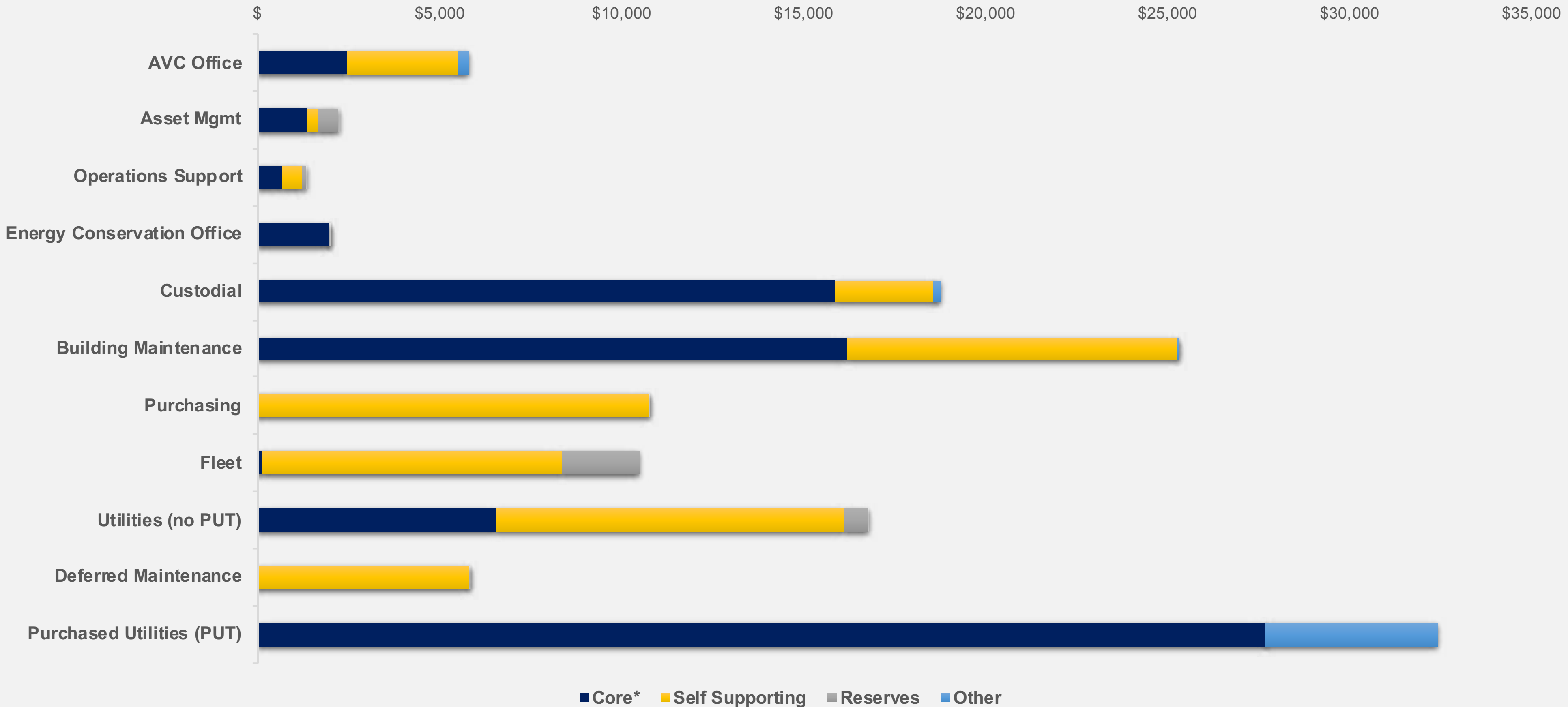
2020-21 SOURCES - \$93M



2020-21 USES - \$98M



SOURCES BY UNIT (\$K)



FISCAL YEAR 2020-21 CURRENT FTE

<i>FOA Unit</i>	<i>Sub Unit</i>	<i>FY20 Actual FTE</i>	<i>FY21 Budgeted Career FTE</i>	<i>Filled (Total)</i>	<i>Vacancies (Total)</i>	<i>Student (Headcount)</i>	<i>Student (FTE)</i>
Facilities	AVC	2	2	2	0	0	0
Facilities	Operations Support	13	13	13	0	2	1
Facilities	Asset Management	16	11	16	0	1	0
Facilities	Fleet	24	28	22	4	10	5
Facilities	Custodial	195	202	243	2	0	0
Facilities	BMS	167	204	179	26	0	0
Facilities	Utilities	85	94	87	10	1	0
Facilities	Energy & Data	12	12	13	1	14	4
FM Total	FM Total	514	566	575	43	28	10



STICKY SITUATION

Facilities Management technicians from pest control and other Building Maintenance Services divisions, work together to relocate hives of honey bees when a hive is located in an area that could cause safety concerns. In fact, the Facilities Management teams relocate on average eight hives each year. This challenging process often requires that it be completed early in the morning when the bees are most docile. The relocation typically begins on an early Saturday morning while the campus is largely empty and temperatures are low, providing the best opportunity to minimize impact on the bees and on the campus. When needed, staff wear bee suits, which include a long jacket, veiled hat and gloves to keep them safe.

“With the ongoing decline of honeybees, relocating these hives safely is essential.”

Dan Mulhern

SERVING DURING COVID-19

Soon after the shelter in place order was enacted and the Davis campus suspended operations, the UC Davis Medical Center realized they were in need of help in the cleaning and disinfecting of high traffic areas. The request was quickly answered by our Custodial Services unit who temporarily assigned 44 of their staff to relocate to the Sacramento campus, working a variety of shifts to accommodate the 24-hour need.

Approximately 15 custodial staff members have been permanently reassigned to UC Davis Health.

“This level of teamwork is an important part of our culture. We couldn’t be more proud of our staff and they deserve high praise for their efforts in supporting the health campus.”

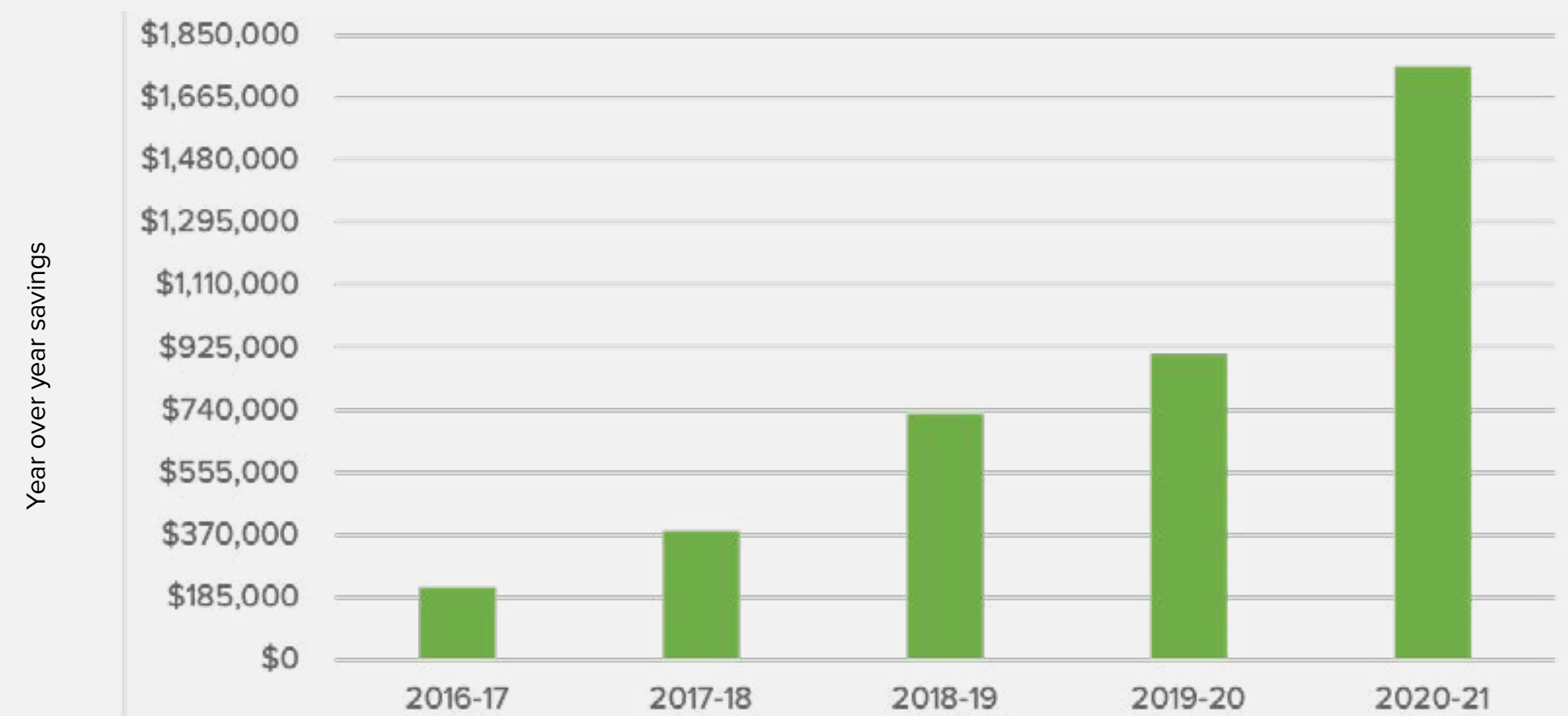
Finis Jones, director, Custodial Services





MAXIMIZING ENERGY EFFICIENCY

Facilities energy engineers work to improve energy efficiencies on campus using various strategies to reduce energy consumption, costs and ultimately our carbon footprint. With many of the projects supported by student interns, the team is able to provide hands-on experience while working collaboratively to develop innovative solutions. One of these projects focused on heating, ventilation and air conditioning (HVAC) scheduling to maximize efficiency. This includes matching the schedules to real-life occupancy patterns. As an example, HVAC systems would often run on weekends or holidays even though the buildings were mostly vacant. Since the beginning of the program, the team has saved the campus over \$3.9 million. Fiscal year 2020-21 was the highest savings to date at \$1.7 million.



FUTURE LEADERS

In 2019, Facilities Management leadership reviewed our workforce demographics to identify potential challenges we could face with a significant number of middle and upper management likely to retire within 3-5 years. The program was designed to identify, cultivate and transition existing staff and prepare them for career pathway opportunities, including leadership roles as they become available. The program uses a combination of training and mentoring focused on the following areas:

- Finance/Budget
- Strategic Planning
- Organizational Development
- Risk Management
- Relationship Development
- Communication Skills

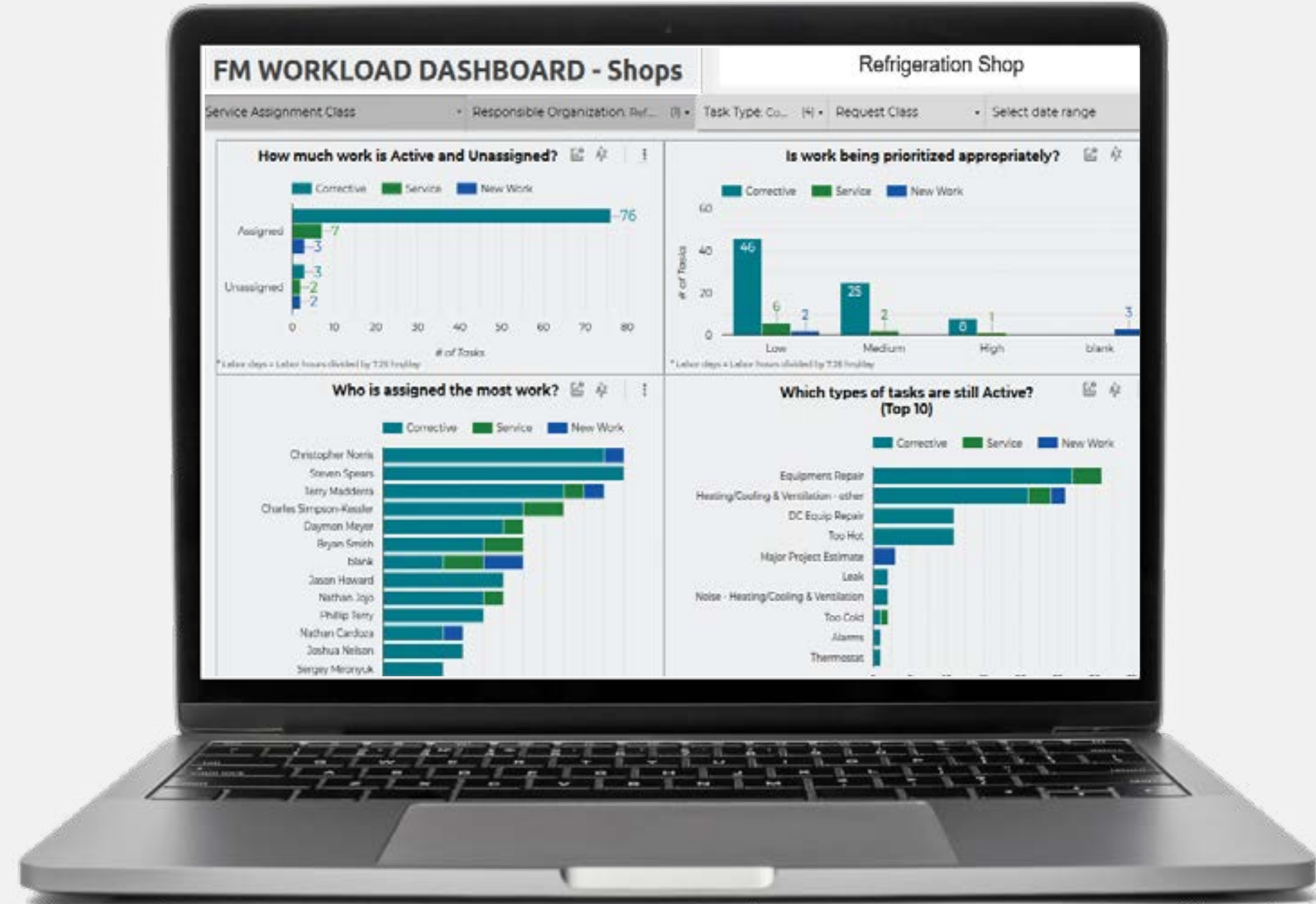
During this past fiscal year, we hosted two cohorts of future leaders (25 total) who are participating in this 2-year program. Cohort Members:

- Jeff Airehart, Building Maintenance Services
- Jasmine Aranda, Custodial Services
- Chad Bartlett, Building Maintenance Services
- Bobbie Boozer, Custodial Services
- Amy Burns, Energy and Engineering
- Cristina Dalton, Utilities
- Joel Del Rio, Utilities
- Robert Deman, Operations Support
- Robert Dominguez-Gadson, Asset Management
- Courtney Doss, Utilities
- Edward Johnson, Asset Management
- Martin Kim, Utilities
- Justin Lewis, Energy and Engineering
- Michael Lindquist, Utilities
- Bill Lonsdale, Building Maintenance Services
- Shaid Martinez, Custodial Services
- Joel McCoy, Utilities
- Horacio Mendoza, Building Maintenance Services
- Dan Mulhern, Building Maintenance Services
- Tamsila Nosheen, Custodial Services
- Jason O'Campo, Utilities
- Tom Ryan, Energy & Engineering
- Lisa Short, Custodial Services
- Refik Smlatic, Building Maintenance Services
- David Trombly, Utilities
- Joe Yonkowski, Utilities

WHY METRICS MATTER

Peter Drucker, management consultant and author once said, “What gets measured gets done.” While measurement is critical to the success of any organization, the Facilities Management team recognizes the importance and value of using metrics for our business operations. In late 2020, our team launched a new workload dashboard which provides a snapshot view for the foreman and supervisors to assess the workload and forecast workforce needs to accommodate timelines and expectations for customer satisfaction.

Facilities Management has implemented similar dashboards for other units such as the Customer Experience Center to provide ongoing analysis of our various programs. This has helped us to pivot and adapt more quickly in this ever-changing environment.



CUSTOMER SATISFACTION

Over the past three years our Building Maintenance, Custodial, and Fleet Services units have been included in the annual Academic and Staff Satisfaction Survey. This survey, developed by UC San Diego, was adopted by UC Davis to benchmark and then measure annually the effectiveness of our services.

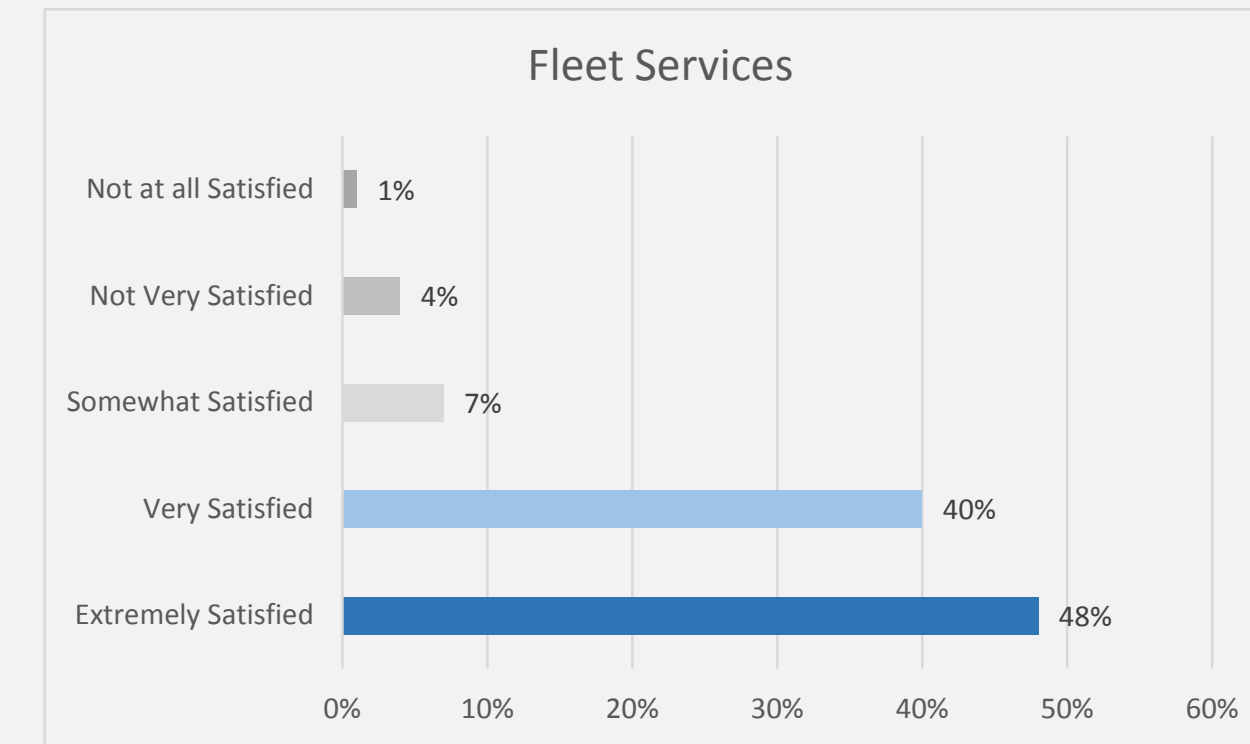
Facilities Management analyzes the responses and feedback to identify opportunities for improvement with a focus on customer satisfaction. We are pleased to report that each year we have shown continued improvement for the units surveyed. All three units achieved good (above 3.5) or excellent (above 4.0) on their average scores. Congratulations to these hardworking teams.



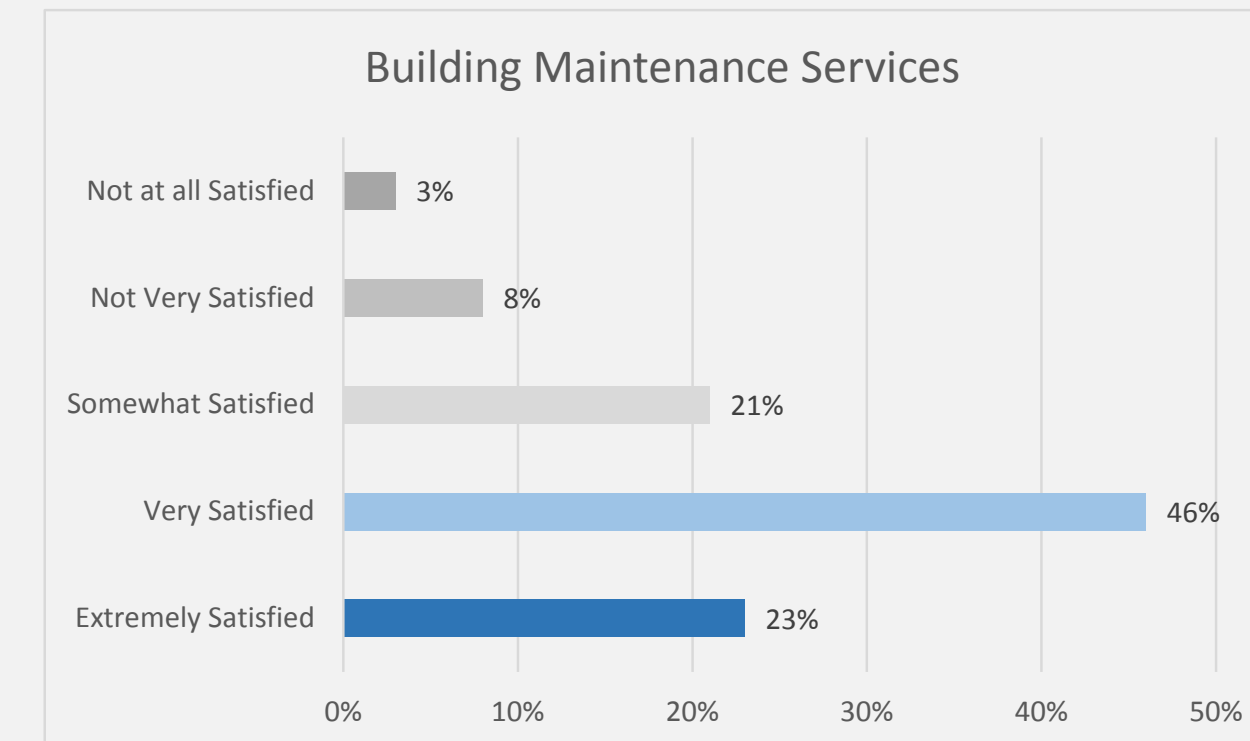
2020 Overall Satisfaction

Thinking of your OVERALL experience with this department, how would you rate your satisfaction with it during the past 12 months?

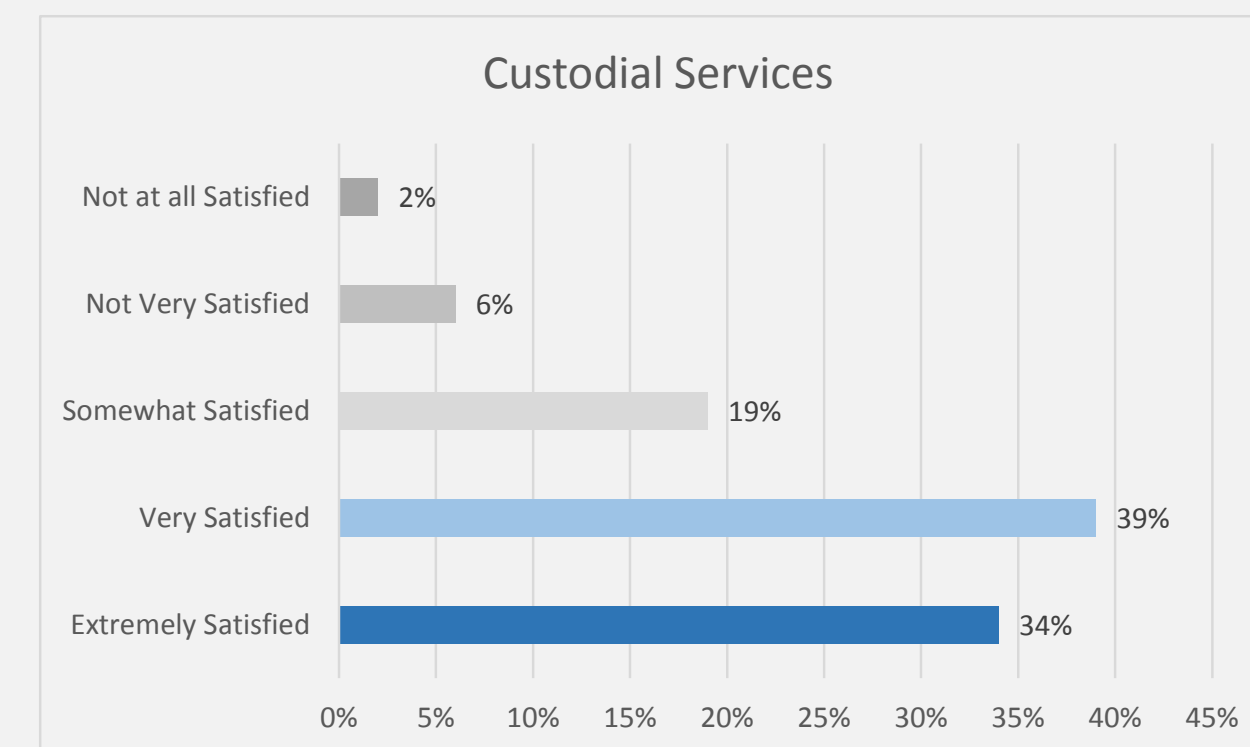
4.30
average score



3.78
average score



3.95
average score





HONORING THE PATWIN TRIBE

In 1999, when the Mondavi Center began construction, Patwin skeletal remains were found on site with a second set found a few months later. The campus notified the Native American Heritage Commission and worked with a tribal representative to assure that the remains were removed and relocated with care and respect to the deceased.

The university began planning a project to honor the Patwin Tribe, but it wasn't until 2011 when designs were discussed and developed. The team, led by Bill Lonsdale and Kristin Ehnat discussed options for the best material to use as well as how to secure it to the building. Kristen used all the original drawings she had and identified one for campus leadership approval. The team worked with Professor Emeritus Eldridge Moores, a world-renowned geologist, to ensure that the stone used for the plaque was indeed a California granite as requested by the Patwin Tribe.

"This team pulled together to complete this memorial that met the requests of the tribal elders," said John Zertuche, director of Building Maintenance Services.

*Photograph taken at the installation, prior to the COVID-19 pandemic.

“We are honored and humbled to be part of the installation of this marker titled ‘Voices, Drums, Whistles. Sing, Dance, Remember.’ It commemorates and reminds us of the Patwin who resided on the banks of Putah Creek where UC Davis stands today.”

Allen Tollefson, AVC

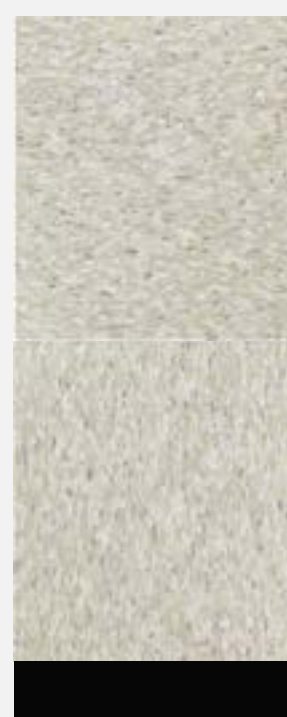
OFFICE REFRESH

Building Maintenance Services started the office refresh program in 2015, providing an affordable and efficient way for campus staff and faculty to update their office space. The program provides six preset design palettes to choose from. Most projects are completed within five days and include paint, flooring, new blinds, LED lighting and ceiling tiles. In the 2020-21 fiscal year, the team completed 23 office refresh projects that were completed on time and on budget.

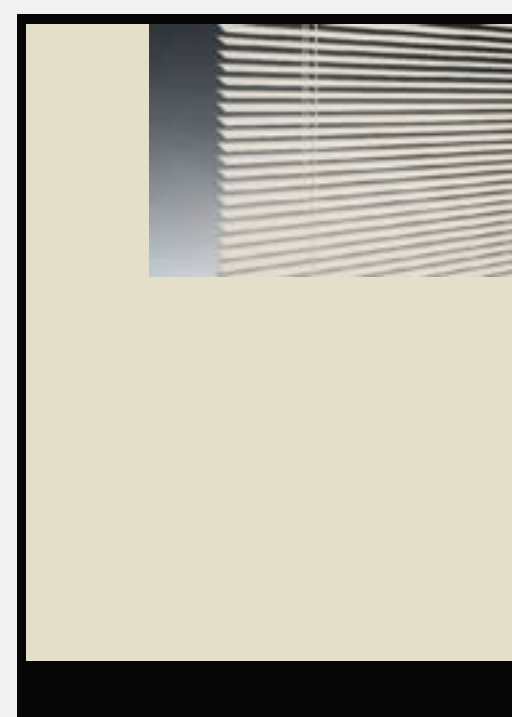
Visit [facilities@ucdavis.edu/office-refresh](https://facilities.ucdavis.edu/office-refresh) to see our time-lapse video of a refresh project in action.



CARPET / BASE

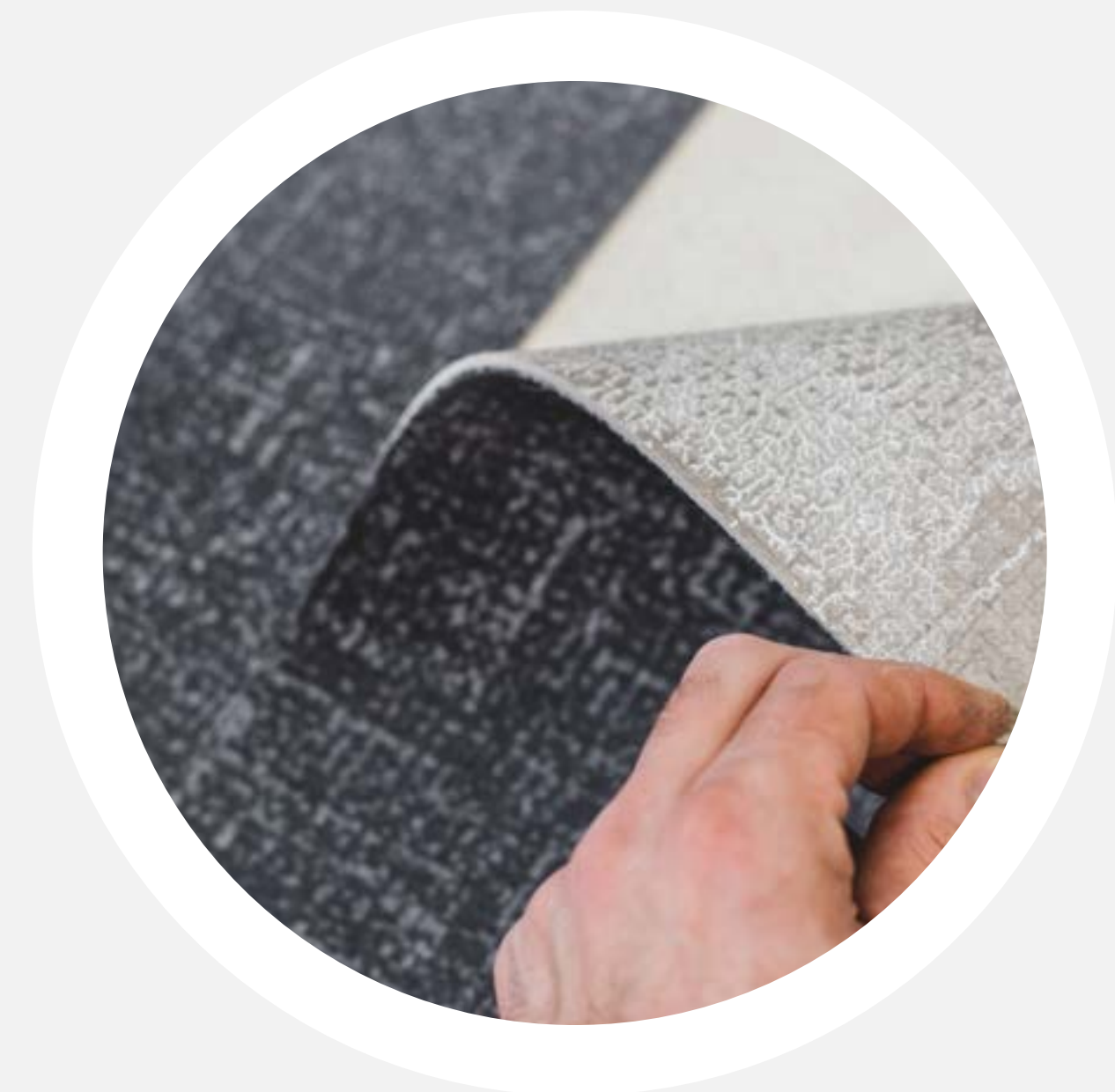


VINYL TILE / BASE



PAINT / BLINDS

Option 1 – “Gunrock Fields Forever”



DEFERRED MAINTENANCE

The campus deferred maintenance program is designed to ensure annual investment that can help extend the life of our buildings and other assets and address maintenance needs before systems fail. With the launch of the Integrated Capital Asset Management Program (ICAMP) initiative from the University of California Office of the President in January 2018, the program addressed the fundamental need to establish a systemwide facilities asset condition assessment program to standardize capital renewal and deferred maintenance definitions and classifications. This program has assured that continued progress will be made on buildings identified on the list and assure that long-term funding for ongoing maintenance will be established before new facilities are commissioned.

Currently, Facilities Management has 10 projects estimated at \$3.7 million. While state funding for the 2020-21 fiscal year was initially lagging due to the pandemic, we have received the expected funding and anticipate continued funding in 2021-22.



INNOVATION DURING COVID-19

In an effort to reduce the spread of COVID-19, our Utilities team began taking samples of wastewater from specific buildings to identify if the disease was present starting in November 2020. Working with campus researchers, the team first identified testing locations across campus and deployed eight auto-samplers twice weekly, expanding to a total of 24 test locations. With the success of the program, staff and researchers helped the City of Davis implement its own detection program, with samples sent to UC Davis researchers for processing. This was a truly innovative and proactive approach to help keep our community safe both on- and off-campus.





FLEET SERVICES RECOGNIZED

The Fleet Services division was recognized with several awards in 2020. They received the 100 Best Fleets in the Americas program for ever-increasing levels of performance improvement and innovation. The second award, sponsored by Ford Motor Company, recognizes fleet operations that perform at a high level in leadership, competitiveness, efficiency, planning and overcoming. The Green Fleet Award honored the unit along with other University of California fleets for increasing their options of electric and alternative fuel vehicles.

FACILITIES CONDITION ASSESSMENT

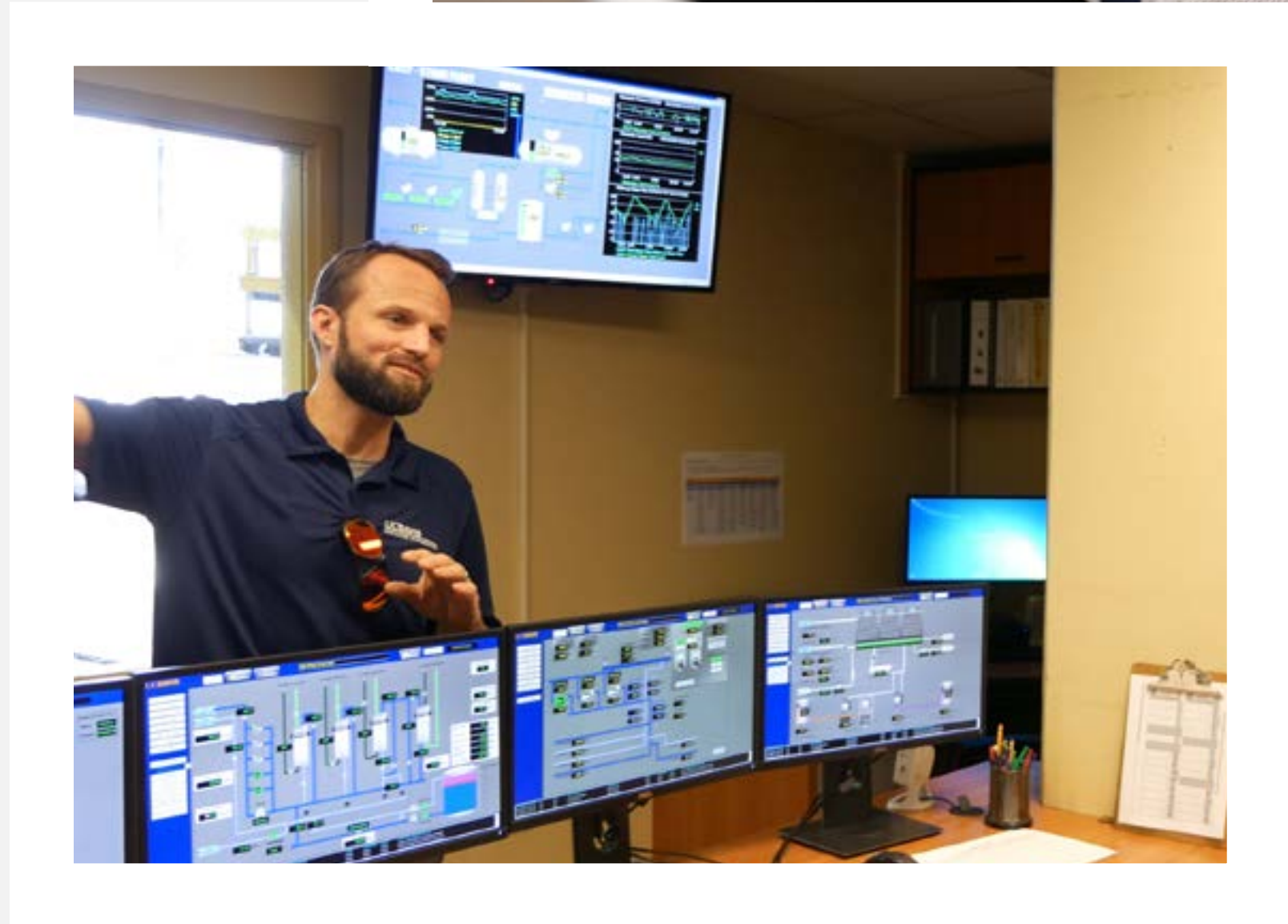
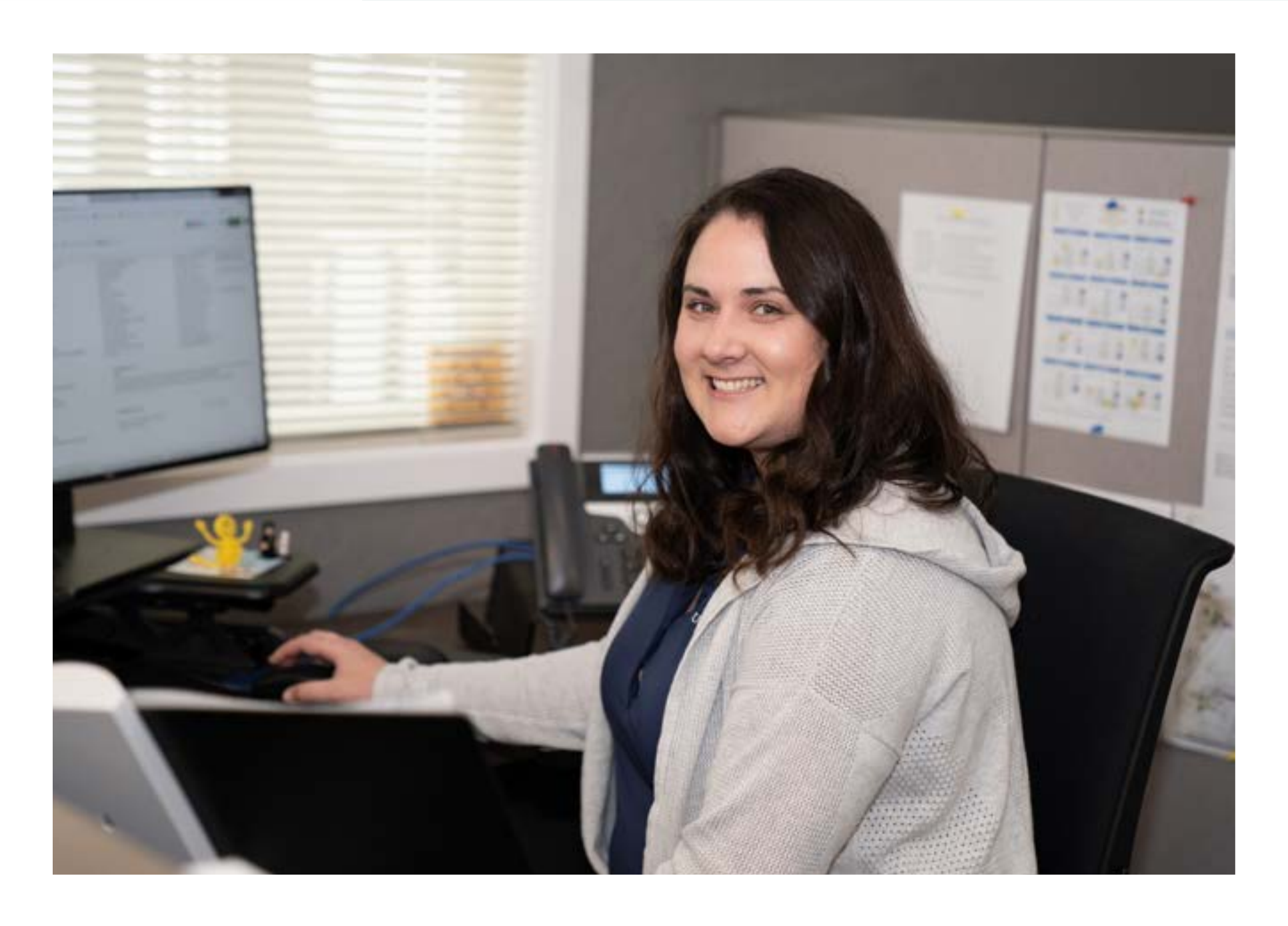
Facilities Management started a program with the University of California Office of the President (UCOP) to create a systemwide program to evaluate infrastructure, property and equipment on UC campuses. The evaluation would inspect and report on the current condition, potential failure and identify its level of importance to the mission. Today, 10 UC campuses utilize this program to accurately assess deferred maintenance needs, prioritize projects to manage risk and identify long-term funding to maintain campus assets.

During this fiscal year, the Facilities Condition Assessment team was able to incorporate facilities managed by UC Davis Student Housing and Dining as well as UC Davis Health into this program, to assure that all UC Davis buildings on both campuses are fully included in planning and funding considerations.



ENHANCING THE CUSTOMER EXPERIENCE

Facilities Operations Support is home to the Customer Experience Center. These teams process all work order requests to the appropriate shop, process shutdown notifications and provide alarm monitoring to protect animals and research. The team launched our Customer Advisory Board comprised of facility managers across campus. Today, the board has 26 members that represent 23 campus departments. The team also launched the customer tour to provide a behind-the-scenes look at Facilities Management, allowing customers to tour our shops, central heating and cooling plant, and the wastewater treatment plant. Both initiatives have been extraordinarily helpful in enhancing communication and transparency for our organization. While the pandemic did halt our in-person gatherings, we took advantage of online meetings and virtual tours.



“I have been a member of the facilities customer advisor board (CAB) since January 2019. I have served on many committees during my 14+ years here at UC Davis, but I can’t think of any that were more constructive or necessary than this one. I believe this committee has been extremely rewarding and beneficial to both myself and the two departments I serve.

The CAB has done an amazing job opening up lines of communication and improving transparency between Facilities Management and faculty, staff and research lab personnel in my two departments. This committee has made significant strides toward a better workplace here at UC Davis. however, we still have work to do in order to provide all employees with the optimal work environment we all desire.”

Andrew Ross
Plant Pathology, Entomology and Nematology



OAKVILLE STATION

Some projects require special scheduling to avoid disrupting education, training, research and the daily operations of a facility. The Oakville Station project was five years in the making. The Oakville Station, located in the heart of the Napa Valley, is a 40-acre vineyard used for UC Davis research. Once the work started, it all had to happen quickly and painlessly for the customer. True teamwork between Utilities, Building Maintenance Services (BMS), and Design and Construction Management (DCM) was required to make this happen. And we delivered!

Staff members from Utilities' Water Division, Utilities' Instrumentation and Controls shop, BMS Alarm shop, BMS Plumbing shop and DCM Special Projects team worked together with a contractor to create a seamless plan to drain, re-grade and install a polyethylene liner for a pool. The team also had to replace the fire pump system and commission a new fire suppression system. Finally, the BMS Alarm team had to add additional fire detection and warning equipment in the buildings. The new monitoring system ensures that the fire suppression system and alarms meet the latest code requirements and prevents potential damage to the vineyard from fire or water loss. Another example of great teamwork!

UNUSUAL STORM

On Jan. 25, 2021, California was hit with a powerful atmospheric river where very heavy rainfall, snowfall and strong wind gusts were recorded, causing power outages and mudslides across the state. UC Davis was left reeling from toppled trees and power poles due to rain and high winds for the next week. Many staff members from Utilities Power and Lights braved the elements around the clock to keep and restore power, clean up downed trees and power poles, and repair buildings.

Joseph Carbahal, superintendent of Utilities Power and Lights says his staff was impressive during this event. “They all pitched in to get the job done,” he said. “We all recognize how critical power is to research and animal welfare. They were one unified team and worked tirelessly to get the campus restored.”

“The level of attention and support your team provided was exceptional.”

Kirsten DePersis, Director of Facility Services for Student Housing and Dining Services





SUPPORTING THE BIG SHIFT

Discussion about the need for a campuswide steam-to-hot-water conversion project began nearly a decade ago when it was determined that the current system was inefficient and its aging infrastructure could be replaced with an innovative new system that would put us on a path to carbon neutrality while saving operational costs.

bigshift

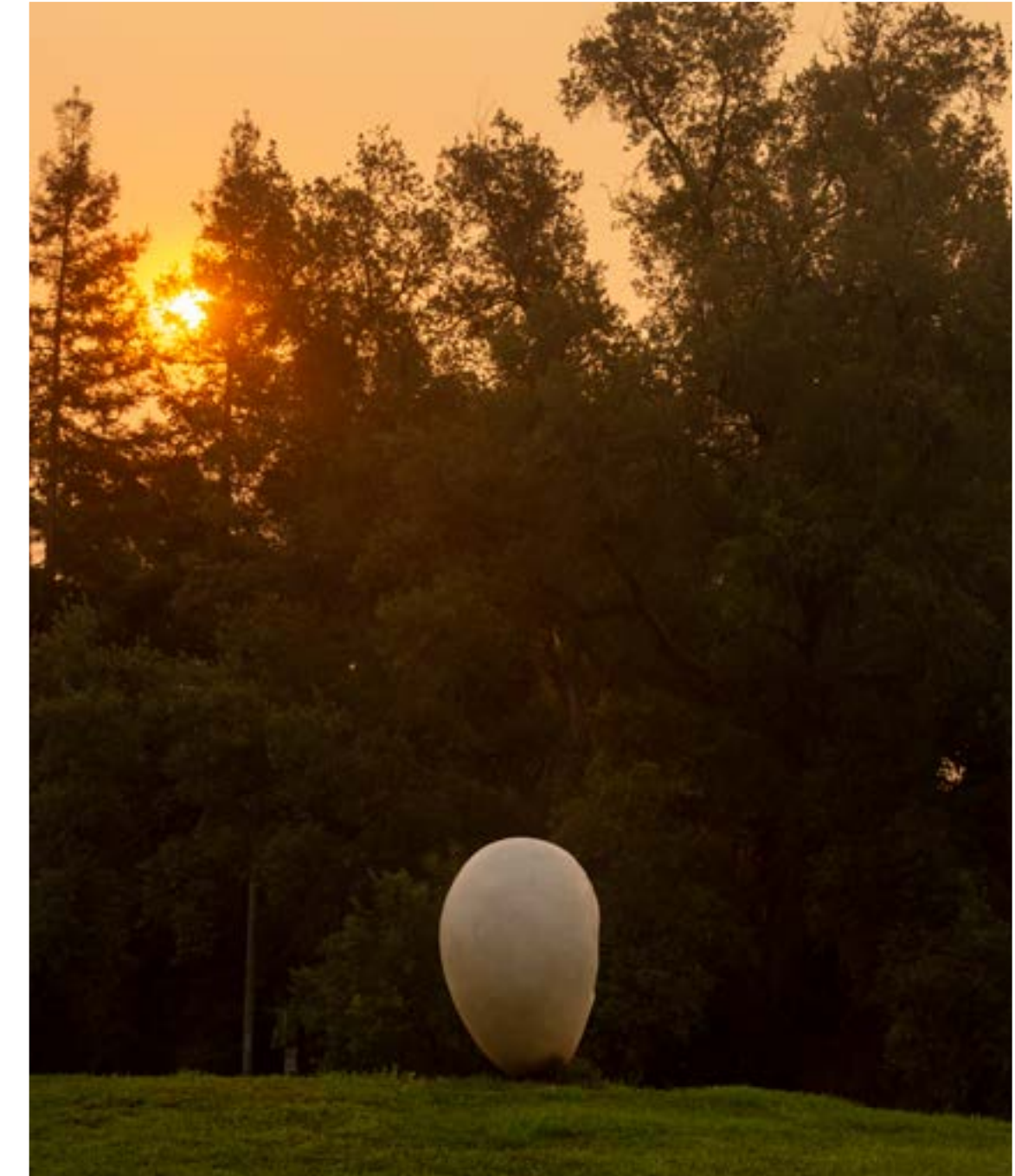
Early on, the Energy and Engineering team assisted with data collection which included energy metering in buildings and fine-tuning the hot water control systems. With help from Building Maintenance Services they reset maximum heating of water temperatures in buildings to test if we could still meet the demands with a lower temperature in the water supply. The good news is that it worked and allows the campus to leverage heat recovery, which is one of the major benefits of moving to the new hot water system. In the future, the hot water system will take advantage of the lower temperatures and use heat recovery chillers, storing the heat from the chilled water system and using it to heat buildings as needed.

As this project progresses, the Energy and Engineering team will continue to plan, collect data and optimize building systems to make campus heating and cooling as efficient as possible.

SMOKE EVENTS

On Aug. 16, 2020 approximately twenty wildfires were started by lightning and spread across five counties, eventually combining into the worst wildfire season California has ever had. These incidents brought unhealthy air quality to the UC Davis campus, particularly to those who work outdoors. To ensure staff members were educated on how to stay safe, the Facilities Management Safety Team ensured staff and supervisors were aware of the changes in air quality, providing updates using the Air Quality Index decision-making matrix.

The unhealthy air quality proved to be quite challenging when the wildfire smoke settled in because most N95 masks had already been distributed for the COVID-19 pandemic. Safety staff worked hard to acquire the necessary supplies so staff in the field were protected. In addition, other Facilities Management teams adjusted ventilation rates in HVAC systems, reducing outside air where feasible to preserve indoor air quality. As the fire seasons in California lengthen, Facilities Management continues to update our protocols and safety measures.



FACILITIES MANAGEMENT

ONE SHIELDS AVE

400 CROCKER LANE

DAVIS, CA 95616

(530) 752-1655

FACILITIES.UCDAVIS.EDU

