

USC SUSTAINABILITY ANNUAL REPORT 2018



Tutor Campus Center
LEED Gold



Broad CIRM Center, Health Sciences Campus
LEED Gold



Engemann Student Health Center
LEED Certified



Fertitta Hall
LEED Gold



USC Fire Station #15
LEED Silver





USC SUSTAINABILITY ANNUAL REPORT 2018

**CREATING NEW PROGRAMS AND PARTNERSHIPS TO
ADVANCE THE USC SUSTAINABILITY 2020 PLAN**

SUSTAINABILITY AT USC

As a preeminent research institution with over 60,000 faculty, staff, and students, and as one of the largest private employers in the City of Los Angeles, USC is in a unique position to significantly influence sustainability in our urban ecosystem while developing groundbreaking sustainability solutions on the global stage. Our collective actions have enormous environmental impact – not just on campus but across Los Angeles and around the world.

Accordingly, USC is working to implement sustainability best practices across all facets of campus, including operations, student life, education and research. The university is developing the necessary teams, tools, systems, and processes to help it become more sustainable. Our road-map for progress is the 2020 Sustainability Plan, a comprehensive set of goals across seven core areas, with specific strategies for how we will attain them. The 2020 Plan is a baseline tool for understanding USC's sustainability opportunities and challenges, and the foundation for a sustainable future.

The 2018 Sustainability Annual Report provides an update on the progress we've made this year toward achieving our 2020 Sustainability Plan goals. The information is broken out by goal and supporting programs.

USC SUSTAINABILITY 2020 PLAN GOALS



Education and Research

Encourage the development of environmentally literate students and faculty

Develop degree programs that train students to be practitioners of sustainability studies and sciences with a curriculum that embodies breadth and depth

Develop excellence in research that includes cross-disciplinary studies, promotes competitiveness in grant applications, and produces transformative findings



Engagement

Strengthen awareness of existing campus sustainability practices and set targets to increase activity

Establish the USC campuses as living laboratories for sustainability

Engage the community in the principles of sustainability



Energy Conservation

Reduce greenhouse gas emissions per square foot by 20 percent from 2014 levels by 2020

Capitalize on energy risks and opportunities



Transportation

Reduce the number of single-occupancy vehicles (SOVs) travelling to and from the USC campuses

Increase student, faculty, and staff participation in alternative transportation programs



Procurement

Engage 75 percent of USC departments and offices in responsible purchasing practices by 2020

Purchase 20 percent of food from sustainable sources by 2020



Waste Diversion

Achieve 75 percent waste diversion levels by 2020

Increase education on waste reduction and recycling; expand diversion and recycling programs



Water Conservation

Decrease potable water use 25 percent by 2020

Increase awareness of current water conservation practices

Implement audience-appropriate educational campaigns designed to modify behavior and increase conservation

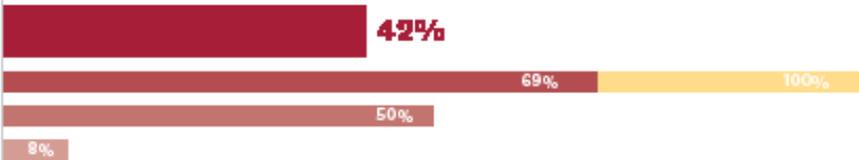
USC Sustainability 2020 Goals: January 2019 Progress Report

EDUCATION & RESEARCH

Several proposals for research centers are being developed and considered.

ENGAGEMENT

- INCREASE AWARENESS
- CAMPUS AS LIVING LAB
- ENGAGE COMMUNITY



ENERGY CONSERVATION/ GREENHOUSE GAS MITIGATION

- GHG GOAL: **REDUCE 30%** *
- MANAGE RISKS + OPPORTUNITIES



TRANSPORTATION

- REDUCE SOVs
- INCREASE PARTICIPATION



PROCUREMENT

- FOOD GOAL: **30% SUSTAINABLE** *
- OFFICE PURCHASING GOAL



WASTE DIVERSION

- WASTE GOAL: **75% DIVERSION** *
- EXPAND PROGRAM + ENGAGEMENT



WATER CONSERVATION

- WATER GOAL: **25% USE DECREASE** *
- ENGAGEMENT
- EDUCATION



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Projected Status by end of year





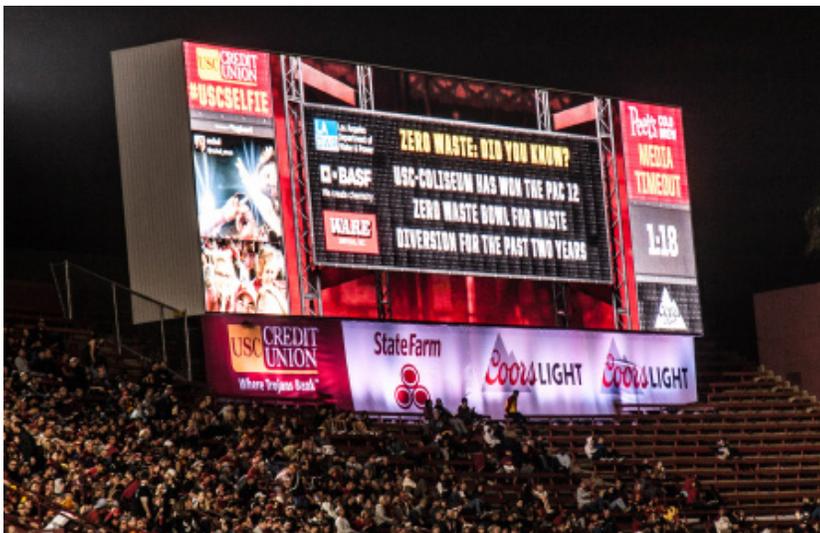
In 2018, USC faculty, staff, and students continued working together to determine how sustainability research and teaching can best be expanded and strengthened within and across schools. A few highlights of our efforts over the past year include:

- Launched in 2018, the **USC Center for Sustainability Solutions** is a university-wide center that leverages, elevates, and enhances USC's existing sustainability-related teaching, research, and outreach. Its unique mission is to advance the application of basic science and technological solutions to specific urban contexts, with an eye toward developing practical solutions and sound public policy for a sustainable and equitable future. The Center's first research "rapid-assessment" study was published in fall 2018.
- Throughout 2018, the **USC Institute on Inequalities in Global Health** has been working with the office of Los Angeles Mayor Eric Garcetti and other partners on the application of the UN global sustainability goals to homelessness and other "wicked" problems in the City of Los Angeles.
- In 2018, the **USC Chan Division of Occupational Science and Occupational Therapy (Herman Ostrow School of Dentistry)** continued to provide the undergraduate elective course OT 312 "Creating a Sustainable Lifestyle." As part of their coursework, students utilized the USC Urban Garden and created proposals on how to make the campus and student experience more sustainable.
- In 2018, the graduate program at the **USC School of Architecture** pursued a sustainability agenda on two fronts: operations and education. On the operations side, the program has invested in screen-based electronic presentation media to replace traditional print-based media. On the education side, it has implemented syllabus changes in all design studio courses to emphasize architecture's particular responsibility for producing healthy and sustainable environments. The School of Architecture offers a Graduate Certificate in Sustainable Design, a multidisciplinary program available to USC graduate students in many disciplines.
- In 2018, the **Master of Landscape Architecture + Urbanism** program expanded student and faculty research in the areas of sustainability and resiliency to include national and local competitions. It also supported the City of Los Angeles with design research efforts in storm-water and water-resource management, bio-diversity, and coastal sea-level-rise adaptation. In an integrated studio, students and faculty worked with the City Planning Department to develop a comprehensive vision for sea-level rise and flooding in Playa del Rey and Venice Beach.
- The **USC Wrigley Institute for Environmental Studies** has been a hub for environmental and sustainability issues on campus since 1995. In 2018, the Institute continued to promote academic sustainability engagement across all levels, including a range of interdisciplinary research and academic-industry partnerships investigating sustainable solutions; Year 2 of the Wrigley Sustainability Prize; undergraduate research internships; community K-12 education programs; and planning the first in a series of climate conferences with the USC Dornsife Center for the Political Future and the USC Price Schwarzenegger Institute for State and Global Policy. It will be held April 2019 with a keynote by former Secretary of State John Kerry.
- Since 1993, the **USC Environmental Studies Program** has offered Bachelor's and progressive Master's degrees, minor programs, general education courses, and field study courses with an environment and sustainability focus. Programs are offered at Andros Island in the Bahamas, Catalina Island, Berlin, Bonn, and Amsterdam. Internships place students in non-profit organizations and government offices. In 2018, the Environmental Studies Program partnered with the Wrigley Institute for Environmental Studies to launch the Sustainability Speaker Series, and with USC Sea Grant to offer a California Naturalist Training course at the UPC campus.

ENGAGEMENT

In 2018, the Office of Sustainability worked with stakeholder groups across campus to elevate the visibility of the 2020 Plan through targeted communications and programming initiatives. Efforts included:

- Overhauling the USC Sustainability website, USC’s primary communication channel for sustainability information, and re-launching it in August
- Continuously evaluating, updating, and disseminating 2020 Plan progress reports, as a commitment to full transparency in sustainability reporting
- Convening the USC Sustainability Steering Committee in April, July, and November, and publishing meeting notes on the website
- Working with the Environmental Student Assembly to support the April and November Sustainability Forums
- Hosting the first annual “Sustainability SCelebration” in April
- Supporting the award-winning Coliseum Zero Waste program throughout the Trojans and Rams football seasons
- Creating the Trojan Trash Talkers program to educate guests about recycling at campus tailgates throughout football season, and manage game day waste diversion efforts
- Overseeing a comprehensive media campaign in support of the Pac-12 football “Green Game” against Colorado in October
- Creating the “Trojans Recycle Right” education campaign featuring ads in the Daily Trojan and on more than 50 digital screens throughout campus
- Working with Daily Trojan staff on their first sustainability special issue, “A Speck of Green,” in November
- Working with USC Communications on the USC News feature “Green Guru and Sustainability Myths” in December
- Creating the 2018 Annual Report in December

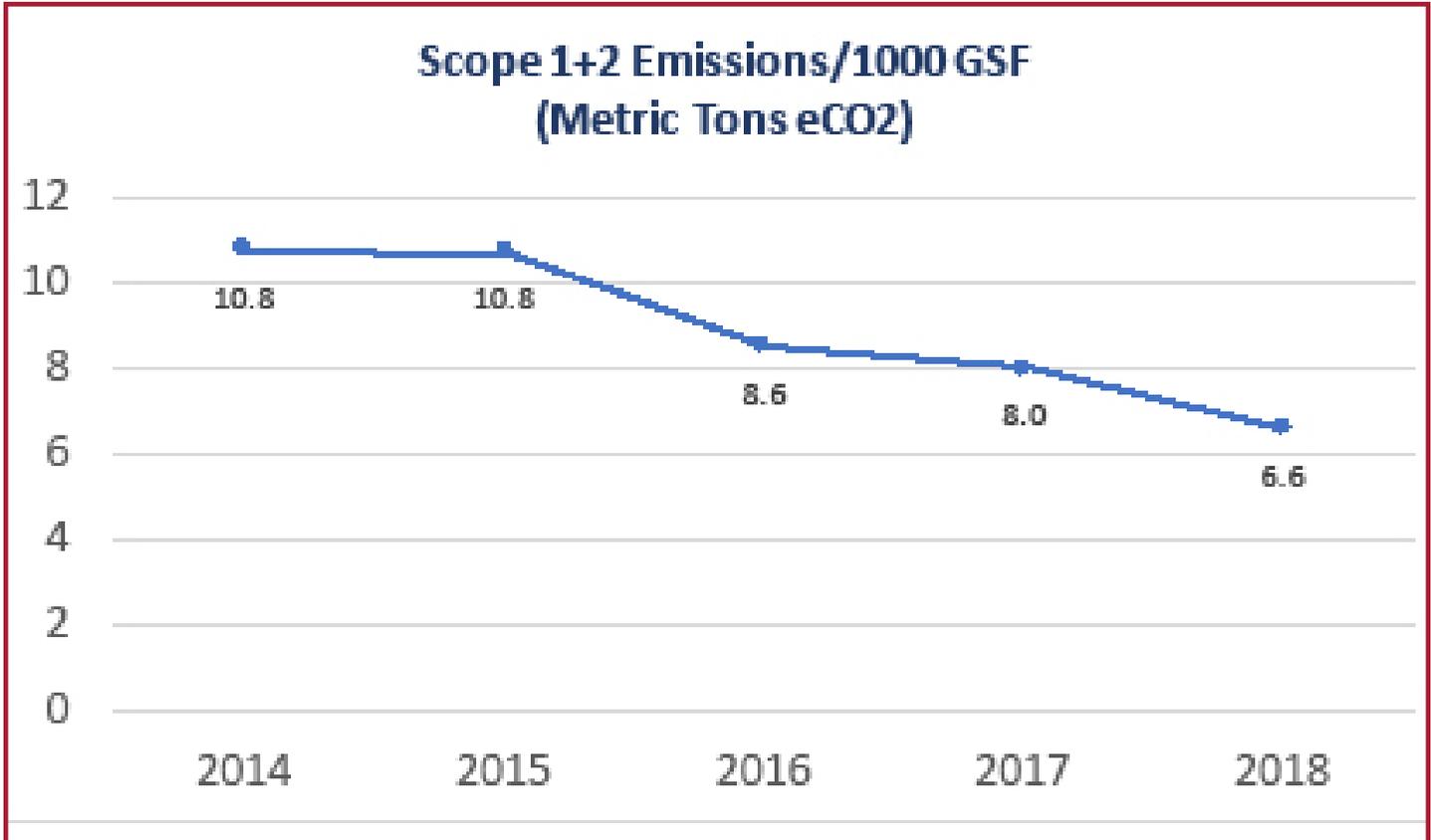




ENERGY CONSERVATION

In spring 2018, Facilities Management Services and the Office of Sustainability released the results of the university's first Greenhouse Gas Emissions Survey. It indicated that USC has reduced its GHG emissions by approximately 10 percent compared to the 2014 baseline, and is on track to reduce emissions by 20 percent by 2020.

USC 2017 Greenhouse Gas Emissions Survey Results



In 2018, FMS announced schedules for the following 2020 Plan energy projects:

- **HVAC Automated Scheduling Software** – Project is in progress, with 15 buildings and 242 classrooms completed; the platform will be extended to an additional 259 classrooms. In one month alone, this project saved over 42,000 kWh
- **LED Lighting Installation** – The most recent project began in December 2018 at Popovich Hall (JKP), and more projects are under review at Lewis Hall (RGL). LED installations will be coordinated with retro-commissioning studies when possible in buildings throughout campus
- **Existing Building Retro-Commissioning (RCx)** – The first RCx and Energy Audit pilot project launched in January 2019 at Irani Hall (RRI) and the School of Cinematic Arts (SCA). The project is projected to include up to 150 buildings





TRANSPORTATION

Last year, USC completed both of its 2020 Plan Transportation Goals – two years ahead of schedule.

AQMD Survey

USC Transportation surveys all USC commuters annually to track how they travel to and from campus and reports the results to the South Coast California Air Quality Management District, as required by law. The data reveals a 7 percent drop in single-occupancy vehicle use between 2014-2018. Other survey highlights are shown below:

	Drive Alone	Carpool	Rail	Walk	Bike	Bus	EV
2014	56%	6%	7%	3%	-	6%	0.12%
2018	49%	10%	9%	12%	5%	7%	1%

In 2018, USC Transportation rolled out a new Mobility Hub in USC Village. Powered by Traveler, a proprietary mobility management platform, the Mobility Hub enables trip-planning focused on multi-modal, alternate transit-oriented options. Through strategic partnerships with Metro, Metrolink, Enterprise, Maven and other stakeholders, the Mobility Hub reduces the use of SOVs on campus.

In just three months in 2018, 364 Traveler users collectively searched more than 1,900 trips, took 759 alternative mobility routes (for over 19,000 alternative trip-distance miles), reduced CO2 emissions by over 5 tons, and saved \$13,000.



Sustainability at USC Village

Opened in 2017, USC Village was built to advance the university’s sustainability efforts in several ways:

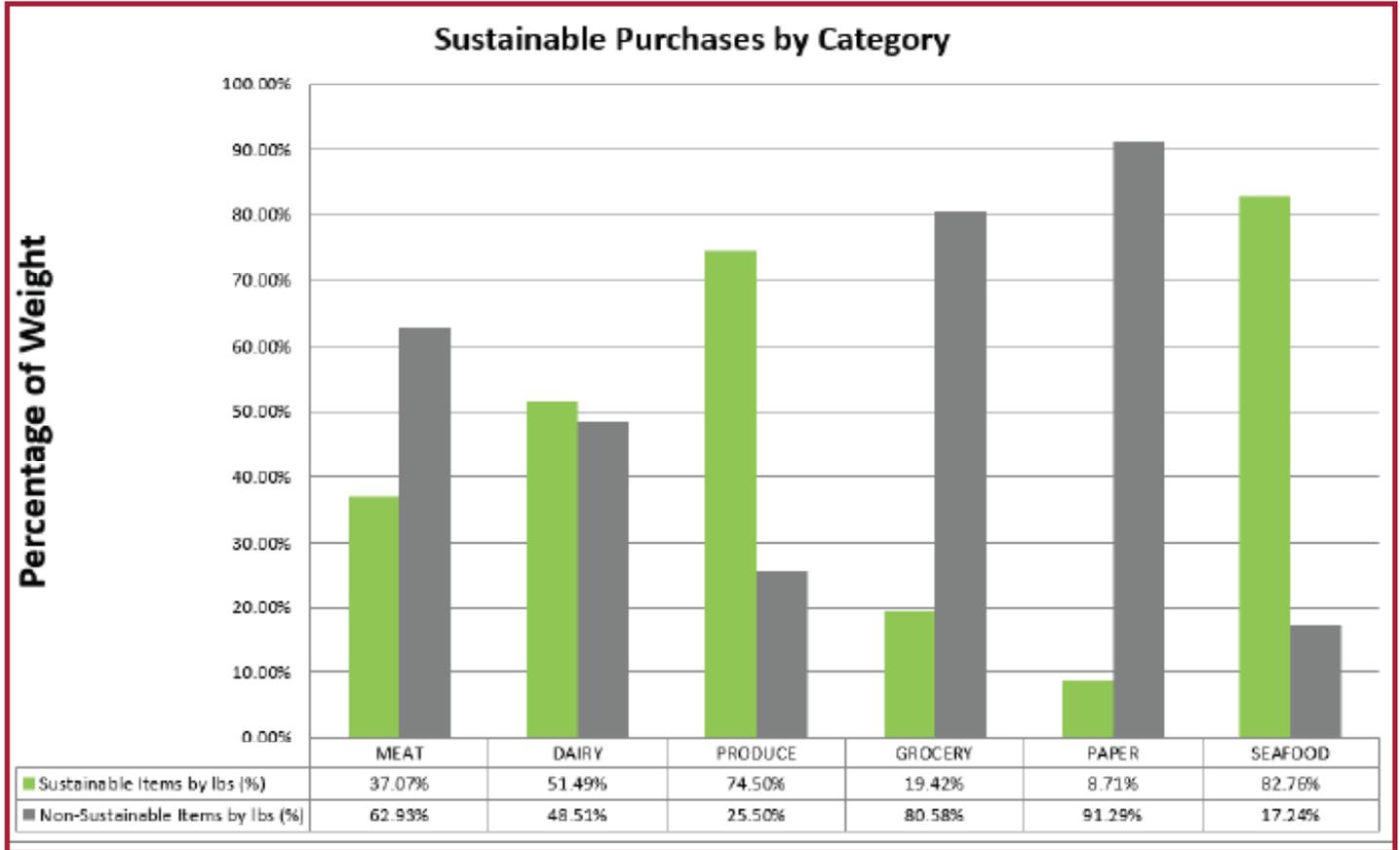
- Six dry wells capture storm water and filter it into the groundwater aquifer
- Each retailer has a separate meter for water, gas, chilled water, and electricity to enable individual energy monitoring
- A central chilled-water and heating/hot water plant increases energy efficiency
- All buildings feature pre-fabricated wall panels manufactured locally, low-VOC (volatile organic compound) paint, and sustainable carpet tiles



PROCUREMENT

By 2018, more than 37 percent of USC’s food purchases for dining halls came from sustainable sources, including 75 percent of produce and 83 percent of seafood.

Sustainable Purchases by Category as of July 2018



Sustainability in USC Hospitality

Last year, in response to strong student support, USC Hospitality launched new sustainability initiatives, including banning plastic straws from Residential Dining, and piloting a prepared-food recovery program with St. Francis, a local homeless services shelter. Between August and November 2018, USC Dining facilities and Trader Joe’s in USC Village diverted 53.73 tons of food from landfill.



WASTE DIVERSION

Currently, USC diverts approximately 54 percent of its campus waste from landfill. In step with RecycLA, LA City's mandate of 90 percent waste diversion by 2025, the university launched a program in 2018 to boost waste reduction. In partnership with its new waste hauler Republic Services, the program provides:

- a comprehensive, metrics-driven approach to measuring and managing waste diversion
- new multi-stream waste compactors in critical waste management enclosures
- placement of new exterior recycling bins on campus and at USC Village
- installation of multi-stream waste diversion bins in UPC administration and academic buildings

As of fall 2018, 106 trash bins, 84 recycling bins, and 15 composting bins are located at UPC and USC Village. Between August and November 2018, USC disposed of approximately 2,402 tons of solid waste, 624 tons of recycling, and 109 tons of compost.



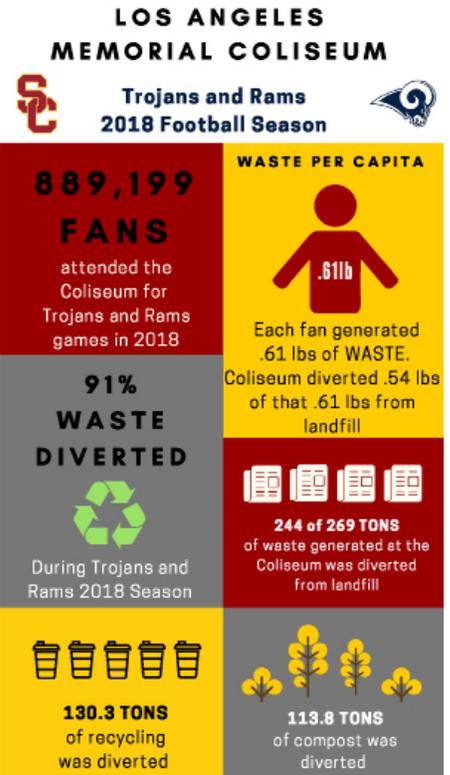
Waste Diversion Bin, USC Doheny Library



Zero Waste at the Los Angeles Memorial Coliseum

Last fall, the Office of Sustainability continued to support the award-winning Coliseum Zero Waste program throughout the Trojans and Rams football seasons. The program oversees vendor composting compliance and assists with facility waste diversion and reduction efforts.

During the 2018 football season, 268.59 tons of waste was hauled from the Coliseum, with 244.18 tons diverted from landfill, for an overall seasonal diversion rate of 90.91 percent. By consistently diverting more than 90 percent of Trojans and Rams game day waste from landfill, in 2018 the Coliseum won the Pac-12 Zero Waste Bowl for the second year in a row.



The LA Memorial Coliseum is the two time winner of the PAC-12 Zero Waste Bowl for both the 2016 and 2017 Seasons.

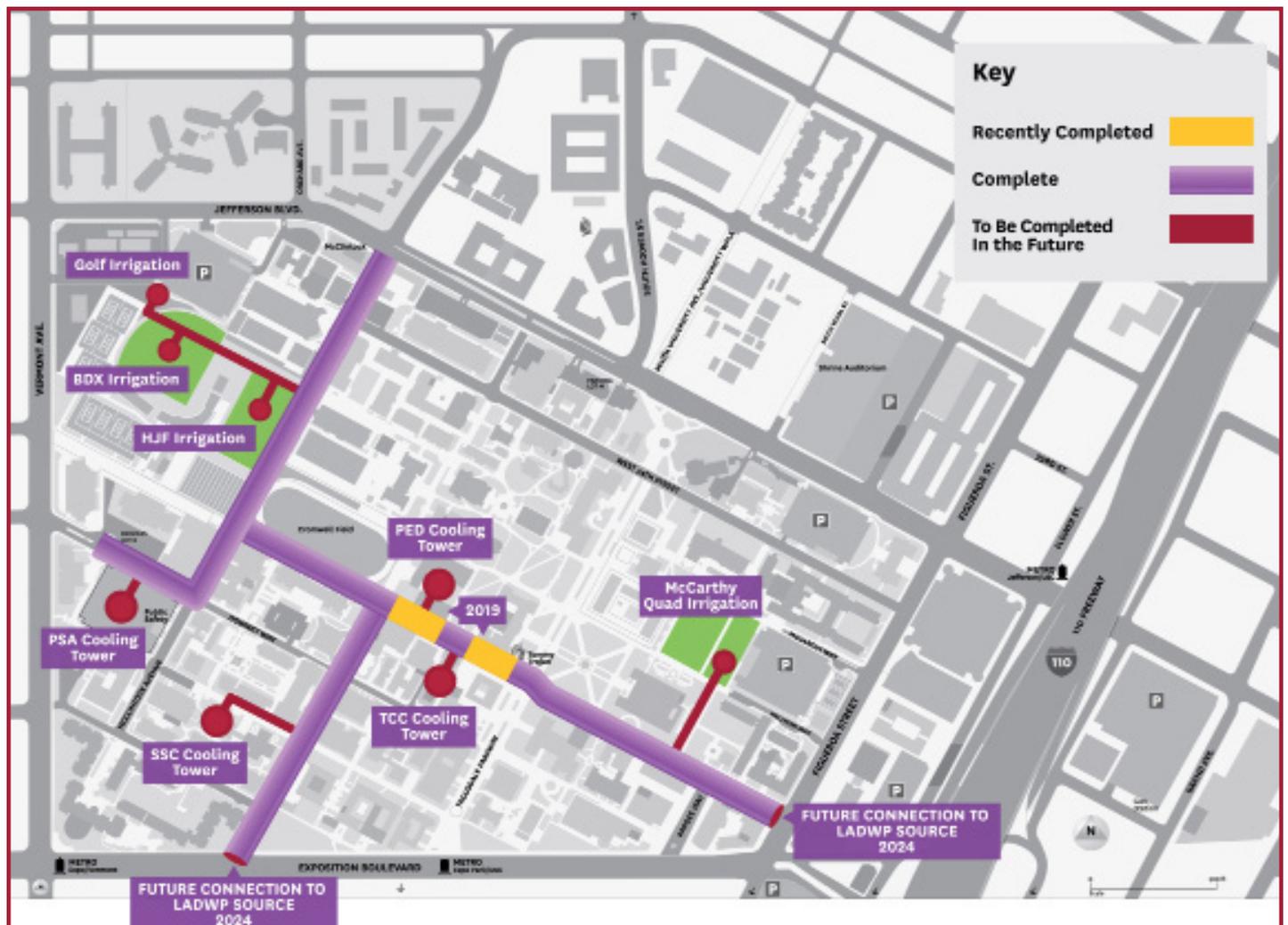
WATER CONSERVATION

USC has decreased its overall water usage in hundred cubic feet by 8 percent from 2014-2017. In 2018, the university's water conservation efforts primarily focused on the following core areas:

- USC Housing replaced approximately 6,800 old water fixtures, with the remaining 1,200 water fixtures in non-housing buildings to be replaced by 2020.
- FMS continued building out the “purple pipe” infrastructure required to receive City recycled water, and distribute it for irrigation and industrial use at UPC. USC now is waiting for the City to deliver recycled water to campus, at which point the university will complete the recycled water piping for site-specific irrigation and cooling tower distribution. Although LADWP has delayed completion of the City recycled water project until 2024, USC projects it will achieve the 2020 Plan 25 percent water reduction goal at that time.



USC Purple Pipe Water Conservation Project January 2019



SPOTLIGHT ON...

Students Working to Advance Sustainability at USC

In 2018, students from the Environmental Core (E-Core) and Environmental Student Assembly (ESA) continued working together to improve sustainability on campus, through both student-led initiatives and engagement with USC administration and faculty. In the beginning of the year, they successfully petitioned for the removal of plastic straws in Residential Dining. Backed by overwhelming student support, this petition resulted in the formation of USC's "Zero Waste Committee," a team of faculty and students working together to reduce food waste and move toward composting in dining halls.

In the spring, students rallied for USC to make a stronger commitment to sustainability. In the fall, students continued to fuel this discussion with an open letter, addressed to USC Interim President

Wanda Austin and Chair of the Board of Trustees Rick Caruso. The letter highlighted the urgency of the environmental crisis from students' perspective and asked that the university step up its commitment to sustainability. The Daily Trojan published this letter in its "Speck of Green" special issue before the second student sustainability rally of the year.

Additional ESA activities included:

- Sponsoring the Fall and Spring Sustainability Forums
- Sponsoring the second annual VegFest, a festival centered around sustainable diet and living
- Managing the USG and GSG-funded Green Engagement Fund grant program, which empowers students to develop projects that help to improve campus sustainability. For the 2018-2019 project cycle, \$23,000 has been awarded to expand native plant gardens, create a VR learning experience about ocean ecosystems, and develop a sustainability learning module for new students

Sustainability programming for students at Nemirovsky Residential College included:

- Piloting an apartment-level composting program in partnership with USG
- Cultivating plants in the Nemirovsky and Bohnett Community Garden
- Traveling to Costa Rica for Alternative Winter Break (AWB)





WOMEN'S 100M			WR	10:58
FINAL			OR	10:62
1	FELIX B	USA		10:75
2	JETER C	USA	SB	10:78
3	SAMPSELL D	JAM	SB	10:81
4	FRASER-PRYCE JAM		PR	10:85
5	MOLSON P	USA		10:88
6	BAPTISTE K	TRI		10:94
7	MHURU B	CUV		11:00
8	OKAGBARE B	NGR		11:01

1:11:05
LOS ANGELES

PLANNING FOR OUR FUTURE

Last fall, the Office of Sustainability began a dialogue with campus stakeholders to develop USC's 2028 Sustainability Plan, the critical next step in the university's sustainable evolution. Its goals—and the roadmap for achieving them—will be defined through a comprehensive, inclusive, and transparent planning process through 2019.

Broadly, the 2028 Plan will...

- Leverage USC's mission and strategic plan
- Align USC with the City's sustainability goals, including those for the 2028 Olympics
- Engage the university community on both campuses to focus on net zero waste, water, and energy operations
- Empower USC to control our impact on the environment





USC University of
Southern California