

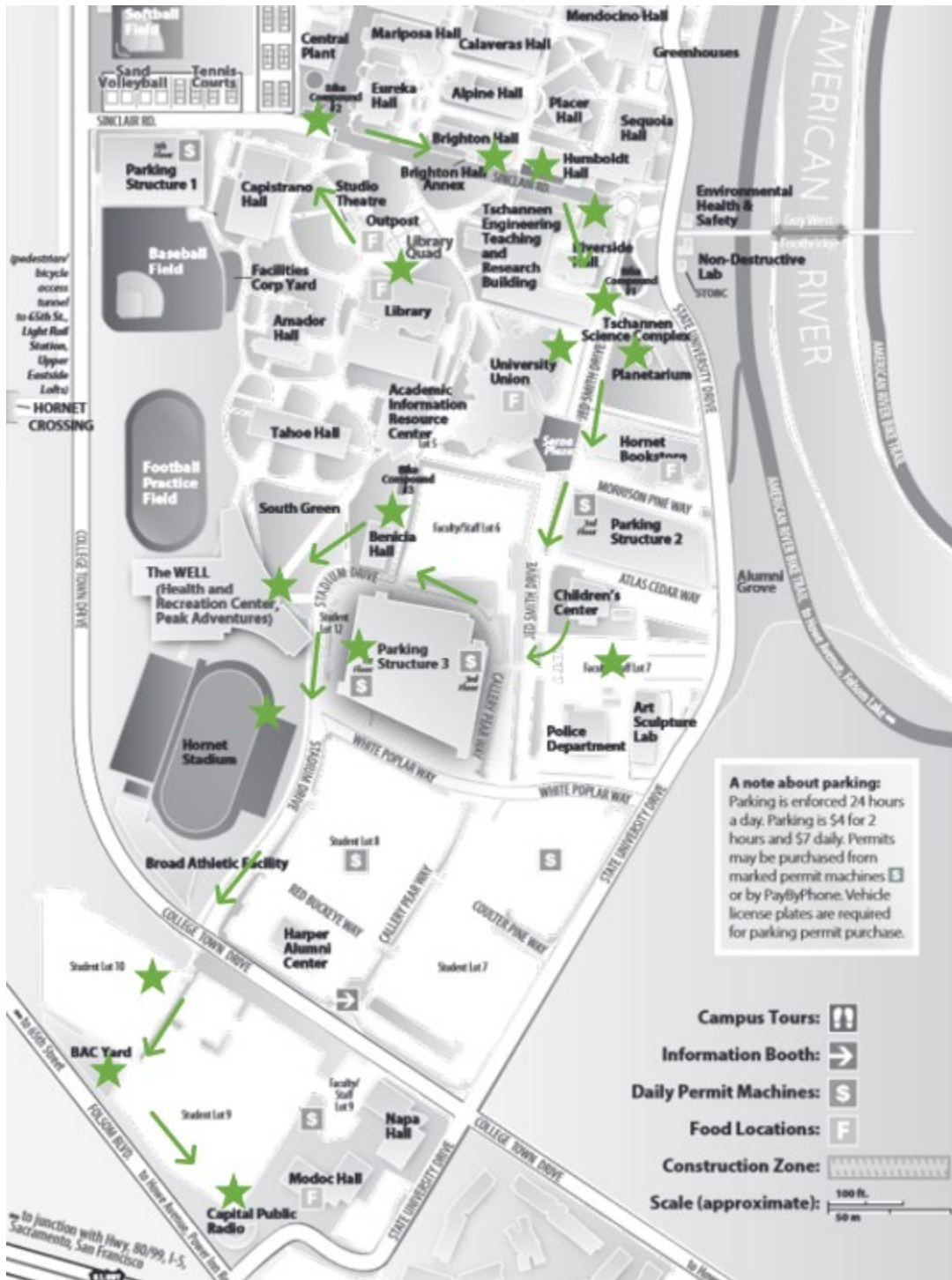
Sac State Campus Sustainability Walking Tour – 1 hour

Start at the Library Quad, exterior

1. Library Solar Panels
2. Ground to Grounds – Grumpy Mule Library breezeway
3. Library Fountain – Turned off for water conservation
4. Library Quad – LID – Low Impact Development Project: rain gardens, bio swales, OWP water grant info
5. Redwoods – Mulching
6. Redwoods – Tree Campus USA, Arboretum
7. Library Quad – Bike compound
8. Capistrano – Lighting Retrofit
9. Central Plant – Smart Grid
10. Brighton Hall – Sustainability plants, retaining wall
11. Humboldt – Toilets/bathroom fixture replacements
12. Riverside – Engineering dept., Sr. students projects
13. Tri-Bin Receptacles
14. Guy West Bridge – River, bike path, mile 7 adoption
15. EH&S – Stormwater management
16. Peak Adventures Bike Shop
17. Tschannen Complex
18. Art Sculpture Lab
19. Benicia Hall Bike Compound
20. Benicia Hall Drought Tolerant Landscape
21. The WELL – LEED gold, pharmacy Rx disposal
22. Solar panels PS3 and PS5 & The WELL Solar Panels
23. Induction Lighting Poles
24. Horn Stadium – artificial turf

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- 25. Lot 10 – Solar
- 26. Bioconversion & Agricultural Collaborative Yard
- 27. Capital Public Radio – Garden (beehives, aquaponics, tiny home)



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1. **Library Solar Panels (spoken at: walking toward Library Breezeway, referencing the roof)**

There are 1134 panels atop the Library and can be seen from the 5th floor of Amador Hall. The system has been operational since April 2013. The total combined solar from the WELL and Library combined is approx. 440 kilowatts with an annual approx. production of 700,000 kilowatt hours per year. Our carbon footprint will be reduced by approx. 216 metric tons of CO₂ per year because of it.

2. **Ground to Grounds – Grumpy Mule Library breezeway (spoken at: inside Library Breezeway in front of Grumpy)**

To your left is Java City one of this campus' many coffee houses. Last Spring Sac State Sustainability launched the Grounds to Grounds program. Working together with our Dining Services department, we collected used coffee grounds—which are great for plants and lawns—and handed them over to our Grounds department to use on the campus grounds. Students from the STORC Center have since taken over the program to use for their experiments.

3. **Library Fountain – Turned off for water conservation (spoken at: Library Fountain)**

Another measure of water conservation, we turned off both fountains have been turned off to prevent unnecessary water waste from evaporation, both here in the Library Quad and the second fountain located near the Bookstore. Even small measures make a difference.

4. **LID – Low Impact Development Project: rain gardens, bio swales, OWP water grant info (spoken at: after Library Fountain, walking through the Quad)**

Last summer the City of Sacramento and our own Office of Water Programs were awarded a \$3 million dollar grant to help design and create low-impact measures to conserve water on the Sac State campus. The grant money was used to create bioswales and other rain garden features throughout campus. These low impact development best management practices (LID BMPs), are intended to reduce stormwater impacts to the American and Sacramento Rivers. In addition to removing pollutants, the LID BMPs will reduce volumes of runoff that are discharged into the American River. This will prevent erosion and replenish groundwater supplies used for campus irrigation. In addition to removing pollutants and recharging groundwater supplies, the project will provide energy savings; all campus runoff is currently pumped over the levee into the American River, so capturing the runoff will reduce this need.

5. **Redwoods – Mulch (spoken at: Redwoods corner)**

The campus adds different types of mulching agents such as wood chips, organic compost and even used coffee grounds to trees and plants to reduce the need for water. As you know, mulch keeps more moisture in the soil which means less watering overall. We also place educational signage in the places we have mulched. Since 2012, we have hosted Mulching Mania here on campus, a student volunteer opportunity to spread mulch around campus. We partner with the Sacramento Tree Foundation and use it as an educational opportunity for students.

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6. **Tree Campus USA (spoken at: in front of the Arbor Day planted tree, across the street from Eureka)**

There's nothing greener than a tree and this campus has over 3,000 of them including 1200 located in our University Arboretum at the North end of campus. Here, however you can see our first Arbor Day tree. This tree and the successive trees that have been planted each year since this tree have helped us to qualify as a Tree Campus USA!

7. **Library Quad Bike Compound (spoken at: New bike compound at the corner of Eureka Hall, standing on the Eureka Hall side of the street)**

This is the largest of the new bicycle compounds that were added last year. The compounds added over 400 new bicycle parking spots, 80 new skateboard parking spots and, as you can see, Public Safety Officers are on duty to help ensure that all bikes and skateboards go home with their rightful owners.

8. **Capistrano Hall – Lighting Retrofit**

Capistrano Hall is one of our newest buildings to be included in the lighting retrofit project that has been part of the push to lower GHG emissions on campus since 2017. The purpose of the project is to replace old florescent lights with LED lighting and advanced lighting controls. The retrofit in the library alone decreased annual greenhouse gas (GHG) emissions by approximately 386 metric tons and help the University meet the state's goal of reducing GHG emissions to 1990 levels by this year.

9. **Central Plant & Smart Grid grant (spoken at: the corner of Eureka Hall, standing on the Eureka Hall side of the street, facing the big green water tower tank)**

Central Plant is the heart of the campus. The big green tower is a thermal storage tank. The water is chilled at night in the cooling tower, located next to the big green tank, and then is stored in the thermal storage tank so that it can be dispensed during the day to help cool the buildings. Technology at Central Plant, implemented through the Smart Grid project completed in 2013, is the central control center and monitors the chiller system (air conditioning), boiler system (heating system), electrical system and metering for utilities. The Smart Grid project also financed 14 campus electric vehicle charging stations and each unit has its own electric meter to track electrical usage. Locations are Lot 1 (qty 3), PS 1 (qty 4) and PS 2 (qty 7).

10. **Brighton Hall Sustainable Landscaping (spoken at: the corner of Brighton Hall, in front of retaining wall)**

Here is another example of sustainable landscaping: these retaining walls have been constructed around trees all over campus. Aside from adding seating to the campus, they keep people from walking near the base of the trees and therefore compacting the soil. Compacted soil is less permeable to water and therefore requires much more water to stay green. You can also see this long strip of decomposed granite which does not require watering at all.

11. **Humboldt – Toilets/bathroom fixture replacements (spoken at: side of Humboldt)**

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Starting last summer, Facilities Management swapped out Sac State's pre-1992 restroom plumbing fixtures for water efficient fixtures in all older buildings, such as this one. The new toilets use only 1.28 gallons compared to the older models which use 4-6 gallons. The new model urinals use only 0.5 gallons while the older models used 3-4 gallons. Additionally, Facilities is installing faucet aerators to Sac State's bathroom sinks that will decrease the water output to just 0.5 gallons per minute down from 2 gallons per minute!

12. **Tri-Bin Receptacles (spoken at: in front of Riverside at the trash and recycling bins)**

The University has installed nearly 500 “three-stream” recycling bins that provide the campus community a place to dispose of post-consumer food waste, commonly known as “compost,” along with trash and mixed recyclables. The bins also allow the University to comply with a statewide organics recycling mandate. The University’s organics recycling program is expected to divert approximately 60 tons of food waste from the landfill each year.

13. **American River (spoken at: walking from Riverside, pointing to Guy West Bridge)**

The Guy West Bridge is a campus landmark—one that connects us to the American River and the American River Parkway which of course has a bicycle path and makes Sac State a destination of bicyclists from throughout the region. Last summer, Sac State Sustainability adopted Mile 7 South of the parkway and now acts as the official steward for what is now known as the Hornet Mile. We coordinate volunteers to help keep the parkway free from litter and invasive plant species.

14. **EH&S – Storm water mgmt.**

Environmental Health and Safety periodically monitors the drainage into the river to make sure the University is maintaining high standards of cleanliness in its storm water run-off.

15. **Peak Adventure Bike Shop**

The ASI Peak Adventure Bike Shop provides support for alternate commuting on campus. They not only sell bikes but also serve as a full-service bike shop. They provide bike rentals and bike lockers for long term bike storage.

16. **Tschannen Science Complex**

Ernest E. Tschannen Science Complex serves as the most sustainable building on campus. Some of the sustainable features of this building are: a living roof, usage of recycled wood from fallen campus trees, large windows for natural light accessibility, and energy efficient fume hoods. These features, along with many more, are notated with building-wide signage, allowing students to learn more about the sustainability practices on campus. Additionally, an interactive guided tour is offered to engage students in the sustainable attributes of the building.

17. Art Sculpture Lab

The new Art Sculpture Lab is an all-electric building that is LEED Gold equivalent.

18. Benicia Hall Bike Compound (spoken at: Benicia Hall Bike Compound)

In Spring 2014 a Bicycle Task Force comprised of members of Facilities Management and University Transportation and Parking Services created a plan to transform Sac State into a more bicycle-friendly campus. These changes included three new bicycle compounds with over 400 new parking spots; two new skateboard towers capable of holding up to 40 skateboards and scooters; and new bicycle traffic lanes throughout campus consisting of designated "Pedestrians Only" zones to ensure the safe passage of both pedestrian and bicyclist.

19. Benicia Hall Drought Tolerant Landscape (spoken at: Next to Benicia Hall bike compound in front of new landscaping)

This is Sac State's newest sustainable feature, completed only a short few weeks ago. In order to save water Sac State has a continuing effort to identify areas of the campus in which grassy areas can be replaced with drought tolerant landscaping such as climate appropriate plants, which require little water, to decomposed granite and rocks which require no water at all!

20. The WELL – LEED gold, pharmacy Rx disposal

The WELL was awarded LEED Gold in 2010 for its many sustainable features like skylights and windows that let in natural lighting, gym wall panels made from the agricultural waste sunflower seeds and even—as you can see beneath your feet—broken Heineken bottles that were used as filler for the construction of the lobby floor. This building also features the Peak Adventures Bike Shop and our WELLness Center Pharmacy which features a collection bin for anyone in the Sacramento area to bring their unused or expired medication for responsible destruction ensuring that such items will not be flushed down the drain further polluting our drinking water.

21. Solar panels PS3 (.4MW) and PS5 (.7MW) & The WELL Solar Panels

There are 952 solar panels located on top of the WELL, visible from the Hornet Stadium stands. Currently, there are no solar panels located on top of Parking Structure 3, however the infrastructure was built to be solar-ready, with an estimated size of 2 megawatts of solar panels.

22. Induction Lighting Poles

There are 952 solar panels located on top of the WELL, visible from the Hornet Stadium stands. Currently, there are no solar panels located on top of Parking Structure 3, however the infrastructure was built to be solar-ready, with an estimated size of 2 megawatts of solar panels.

23. Horn Stadium – artificial turf

Because we understand lawn-watering is the largest source of irrigation water use, we have changed out the football field to artificial turf, which means it doesn't have to be watered.

24. Lot 10 – Solar 1.4MW

Sac States PPA helps support the campus's 2040 carbon neutrality goal while integrating more renewable energy into the campus grid. After this project is complete, our total power from renewable sources will be about 17-20% per year, and we will be 30% renewable when solar is at its highest production over the summer months.

25. Bioconversion & Agricultural Collaborative Yard

At the BAC Yard we compost a significant portion of the campus greens and food waste. Composting at the BAC Yard happens via Vermicomposting, Hot Composting or Windrow Composting. **Vermicomposting** is an in-vessel composting system which uses worms to break down food waste. The worms break down the waste and supply us with nutrient rich worm castings. **Hot Composting** mixes food waste from on-campus eateries and coffeehouses with leaves. The mixture is placed in small piles and turned regularly. **Windrow Composting** is the process of collecting campus leaves and other green waste in a long narrow row. The row is water and covered with a large tarp, then turned regularly with a tractor.

26. Capital Public Radio – Garden (beehives, aquaponics, tiny home)

In June 2014, Capital Public Radio, located right here toward the Folsom Blvd entrance of campus started building their new garden. The garden will have a series of raised beds, drip irrigation system, composting system, ADA compliant wheel chair accessible paths, and wrought iron arbors among other elements, will be installed. The garden will provide fresh fruit and vegetables to local Sacramento Food Banks, and work to support and enhance school lunch programs in select urban schools in zip codes of concern. A formal ribbon-cutting ceremony was held October 24, 2014 (National Food Day). The garden also plans for a beehive and a demonstration kitchen and they also hired a new Food and Sustainability Reporter to help promote all of this.