

Sustainability 2028 Planning Workshop: Water & Transportation

October 14, 2019, 1:30pm-3:30pm

Meeting Notes

Recorded by Elias Platte-Bermeo

Meeting Attendees

Mark Ewalt, Farris Sukkar, Elias Platte-Bermeo, Martin Howell, Seth Strongin, Nichelle Mitchell-Huizar, Tony Mazza, Shawn Chavira, Jacqueline Torres, Nina Harvey, Dan Mazmanian, Vanessa Thompson, Sophia Lee, Karen Reed, Hilda Blanco, Paul Adler, Brooke Bell, Tianna Shaw-Wakeman, Jeremy Kagan, Ann Close

Meeting Agenda

1. Introductions and meeting goals
 - a. Specific costing discussions shared today should be kept to the SSC for now as these will go through many iterations
 - b. Mark posted on One Drive the University's entire vehicle fleet list; vehicles owned by all the disparate campus departments
2. Progress to date in 2028 Sustainability Plan process
 - a. This is the fourth SSC meeting of the fall. Future meetings will focus on waste, procurement, and engagement.
3. Organizational structure and overview of proposed initiatives
 - a. ARUP has created several approach "wheel" diagrams comprised of various wedges
 - i. Projects previously discussed in SSC meetings have been assigned to specific wedges of these wheels
 - b. Most of today's discussion will be centered on goals as opposed to specific initiatives
 - c. For transportation, most initiatives fall under Tier 1 and Tier 2 as opposed to Tier 3
4. Goal setting
 - a. Water
 - i. **Goal #1: Reduce potable water use by 25% by 2028 and 30% by 2030**
 1. Key Performance Indicator: Gallons per square foot (gal/sqft)
 2. City of LA goal: reduce by 22.5% by 2025
 3. UC System goal: reduce by 20% by 2020, 36% by 2036
 4. UNC Chapel Hill goal: become water neutral, date not specified
 5. Southern California climate makes goal-setting inherently different here than in other climates
 6. Dan asked the extent to which landscaping decisions will dictate goals

- a. ARUP pointed out that water goals are dictated by baseline data and metrics. For USC, this baseline date of water data collection is 2014
7. Other universities have already met this proposed USC goal, but many have particular characteristics that have made this possible, like a strong partnership with a municipal water supplier
8. Karen believes the interim goal of 25% reduction by 2028 is realistic, since we are not entirely sure that recycled water will arrive at USC by 2024
9. There is currently not a plan to meter every building at UPC, but Karen's team will be able to estimate water usage from un-metered buildings based on current data and trends. They can also calculate UPC water use as a whole through 3 LADWP water meters.
10. Buildings are the largest user of water (41% in 2013), followed by central plants (23% in 2013), followed by landscape (16% in 2013), fountains (2% in 2013) & other sources
 - a. Karen believes that behavioral change will be crucial in seeing actual water usage reduction, because operational change can only achieve so much
 - i. Housing has implemented all low-flow fixtures, so increased reduction in water usage will largely need to come from behavior change
 - ii. Karen believes the community needs to be reminded of the importance of water conservation; much of the sustainability education at USC and nationwide has focused on waste and energy reduction in recent years
11. Hospital and labs are large users of water in terms of gal/sqft. Many public health regulations dictate how aggressive of a goal USC can set.
12. Paul believes we should look into how much water we would need to conserve in order to meet the demands of our planet
13. These reduction goals are at a university-wide scale, not just UPC campus which is the focus of many of the current initiatives
14. Dan believes we should be clear about the distinction between which areas of water reduction are variable and which cannot necessarily change
15. Jeremy Kagan believes there should be a greater focus on resilience in setting water goals

- ii. **Goal 2: Install purple pipe supply infrastructure throughout UPC to maximize future use of recycled water**
 - 1. The vast majority of this installation has been finished, but there will be a lag time between when recycled water arrives to USC from LADWP and when it will actually begin to be used
 - a. Karen’s team can’t necessarily design a program or installation schedule until the recycled water gets here
 - b. The design, construction, and execution of the projects will take a lot of money and time
 - 2. This goal is attempting to get at how to reduce this lag time. It could be altered to something closer to “Streamline a process to ensure smooth design, construction, and execution of fully connecting to purple pipe infrastructure”
 - a. The goal may reference the 2020 plan for recycled water and how USC will complete installation to cooling towers and field irrigation
- iii. **Goal 3: Implement additional green infrastructure and low impact development Best Management Practices across the campus to manage stormwater**
 - 1. Key Performance Indicator: commitment to build green infrastructure to manage stormwater
 - 2. This helps increase visibility of sustainability initiatives, reduces taxes paid on impervious surfaces, and prioritizes local sources of water
 - 3. There are tools to project the intensity of water demand based on changing climate
 - 4. This goal can incorporate flexible commitment types and prescriptive parameters. The goal could focus on:
 - a. Creation of a monetary fund, quantity (sf area) of green infrastructure, quality of water (measured by pollutants), type of green infrastructure (multi-benefit, aesthetic)
 - 5. Mark believes there may be opportunities to expand current infiltration sites to multiple buildings grouped around new construction sites as opposed to building completely new sites. This would tie new green infrastructure projects to new construction projects
 - 6. Tianna believes it may be more useful and impactful to promote “native” landscaping than “drought-tolerant” landscaping
 - a. This discussion may be more relevant to the waste portions of SSC discussions as there are concerns

from the FMS Grounds team regarding changing campus landscaping

- b. Tianna pointed out that experts at the Natural History Museum may be valuable in this discussion
- c. Mark will be scheduling a sidebar goal-setting discussion in this area.

b. Transportation

i. **Goal 1: Provide sustainable transportation infrastructure to support alternative and emerging modes of transport by 2025**

1. Peer university and government plans all prioritize active transportation
2. Goal objectives:
 - a. Ensure seamless multi-modal campus connections for all users
 - b. Enhance safety for pedestrians and cyclists
 - c. Develop an alternative/emerging modes infrastructure action plan
3. Mark believes it may be important to set the goal as a commitment to build EV charging stations *to annual projected demand + 5%*, since demand is currently unknown but not stagnant, and then roll into this goal the creation of a tool to project changing demand for EV charging
 - a. Transportation has received the cost analysis to put in ~140 chargers in 3 structures (Shrine, Figueroa and Flower). Free EV charging is also available if approved, however, peer universities do not provide this as a sustainability initiative.
4. This goal is structured loosely and is not prescriptive because of the variable nature of demand for different modes of transportation
5. Jeremy asked whether research into other universities reveals what the most effective investments are in terms of transportation infrastructure
 - a. Mark posed that we may need to move back even further to determine what our true goal is in terms of transportation. For example, should transportation goals be all about carbon reduction or some other driver? The analytics, strategies, and planned initiatives surrounding transportation will follow this.

ii. **Goal 2: Implement programs and encourage alternative modes of transport that reduce SOVs to at most 35% by 2028**

1. Dictating the exact desired percentage of SOVs to USC would require a large undertaking: developing a mode-share model that incorporates conducting commuter surveys,

calculating travel times and costs, validating the model, incorporating inputs for baseline tactics and forecasts, and then finally forecasting future mode shares for baseline and tactic scenarios. See ARUP slide deck.

- a. ARUP has created these models for other universities, but if USC doesn't have this information then benchmarking against other universities can be used to establish the goal (which is how the current 35% SOV goal was created)
 - b. Transportation would like to work with ARUP to setup the correct baseline
 2. Hilda believes USC has to take an active part in the plans of transit agencies like LA Metro, considering there are many dependencies between our campus and these agencies
 3. Mark believes creating TDM systems will be the driver of behavior change, since the TDM is a large and integrated program that validates transportation investments and tactics chosen through this plan
 4. Brooke asked if there is data to determine the "low-hanging fruit" of students/staff/faculty who drive SOVs very short distances to campus
 - a. This would come from parking permits, but currently permits are tied to the home addresses that students designate which may not be their addresses in Los Angeles
 - b. Transportation now has increased staffing and may be able to research this issue further
 5. Mark sees the creation of a comprehensive long-term TDM plan with an iterative modeling tool as a goal in the 2028 plan, since the time and resources required for this cannot be done right away.
 6. Goal Objectives:
 - a. Develop a comprehensive TDM strategy for UPC and HSC that is effective and sustainable
 - b. Effectively market all TDM program and alternative mode choices
 - c. Increase participation of alternative modes of transportation to campus that include: walking, biking, transit, micro-mobility and other sustainable modes
 - d. Enhance the pedestrian, cyclist and transit user experience
- iii. **Goal 3: Ensure that 100% of new vehicles for USC fleet are zero emissions by 2025. Full zero emissions transition complete by 2035**

1. By 2040, most Southern California transit authorities will need to be zero emission
2. Goal objectives:
 - a. Ensure UPC is aligned with state and local benchmark goals
 - b. Promote use of the use of cleaner vehicles such as plug-in hybrid, and CNG.
 - c. Develop a comprehensive approach to achieving zero emissions fleet
3. This goal applies to university-owned vehicles, not vehicles coming to campus (i.e. freight trucks, longer-term goals)
4. Cost estimates have not subtracted the net cost savings that will come from transitioning the fleet; they only outline capital investments
 - a. When full costing is undertaken in early spring, ROI from this investment will be included
5. Wrap up and close
 - a. Sophia Lee asked if ARUP has looked into how other universities have tackled sustainability problems at their hospitals
 - i. The SSC will be reconvened with hospital stakeholders down the line with a consultant that has the expertise to promote sustainability of hospitals
 - b. Reminder: this is iteration 1 of 3-4 cycles of dialogue and discussion by the SSC before the full plan is unveiled. These discussions will begin to be surfaced to senior administration in the coming weeks.