CSUDH | SUSTAINABILITY

Fume Hood Campaign Case Study

www.csudh.edu/sustainability | sustainability@csudh.edu | ph: 310-243-2303 | Cal State Dominguez Hills, 1000 E. Victoria St. Carson, CA

Above: Example fume hood conservation sticker

During the 2018 fall semester (November), the CSUDH Office of Sustainability measured the height of all accessible fume hoods (55) in the Natural Sciences & Mathematics (NSM) building which, at the time, housed all the laboratories on campus. During these initial baseline measurements, the largest recorded sash height was 20.5 inches, and the average recorded height was 6.9 inches. Following these findings, Office of Sustainability interns and staff placed an energy conservation sticker on the side of all the fume hoods to remind users to lower the sash. Additionally a joint email from campus EHOS and the Office of Sustainability went out to the department chairs (Biology and Chemistry) of the departments that use these labs to inform them of the need to reduce fume hood height. These department chairs were tasked with notifying their respective faculty and lab staff about this important conservation behavior.

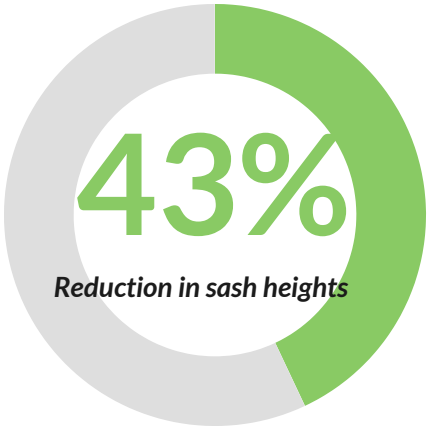
One month later in December, the Office of Sustainability conducted a second round of measurements to evaluate the impacts the stickers and email had on lab user behavior. The results of the second measurements showed the sash heights being lowered on average by an extra 2 inches, reducing the average height of all fume hoods to 4.9 inches.

Above: CSUDH Sustainability Interns conducting sash height measurements

No other measures were pursued, and a third round of measurements was conducted over six months after the initial trial (July 2019) to see if the stickers had created a lasting behavior change in students and staff who use the fume hoods, or if they had begun leaving fume hoods open again after not being reminded to close the sashes.

The results showed that the stickers had a lasting impact and the average sash height had decreased even further, this time decreasing to 3.9 inches, **2.96 inches lower than the baseline** and an inch lower than after the e-mail and initial sticker installation.

On university campuses, one of the biggest consumers of energy in laboratory spaces are fume hoods which can use the same amount of energy as 3.5 homes daily! For variable air volume (VAV) hoods, users can have a direct impact (upwards of 40%) on the energy consumption by lowering or shutting the fume hood sash when not in use.



Summary Data

Stickers & E-mail Distributed (11/13)

Measurement	Date	Average Sash Height
Baseline	November 2018	6.9
Post Measurement 1	December 2018	4.9
Post Measurement 2	July 2019	3.9

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