

REPORT ON CAMPUS AIR CONDITIONING

Background

During the fall of 2015 the Santa Monica area had record high temperatures and humidity due to a tropical storm off of Baja California. Although there is frequently hot weather in September, the combination of higher nighttime temperatures and the humidity made this year far more uncomfortable. See the chart below showing high and low temperatures and dew point for September 10, 2015 over several years. The dew point is an indication of comfort level with humidity and any reading over 60 degrees is uncomfortable. Please note that Santa Monica usually has higher humidity than inland areas due to the proximity to the coast, but with cooler temperatures it is not noticeable.

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
HIGH	90	80	72	82	72	69	68	73	73	73	73
LOW	75	64	61	71	63	55	59	64	59	59	62
DEW	65	58	57	63	57	54	54	58	55	56	56

Santa Monica in the past has had overnight low temperatures in the low 60's or even the high 50's during this period, which means a naturally ventilated classroom cools overnight even if there is a higher daytime temperature. However, last week it never cooled at night.

The college has successfully operated the Liberal Arts and Letters & Science buildings for almost 60 years with minimal complaints about comfort. What has changed more recently that has resulted in more complaints:

- The average daily temperature in Santa Monica has increased over the years.
- Classes are now more full, meaning there are more warm bodies in a room at the beginning of the school year.
- Air conditioning is now almost universal, meaning more people expect air conditioning and are used to the comfort that it provides compared to the past when air conditioning was rare, especially on the Westside.

District Response

For several years now the Facilities Department has provided fans to the classrooms where there have been complaints about the heat to try and mitigate the problem. Because of the unusually high heat and humidity this year, the fans have provided only limited relief.

We have also looked at providing small window mounted or portable air conditioners for each room that would be small enough to plug into existing electrical outlets. Due to the capacity of this type of unit a minimum of two would be required to provide basic cooling. However upon further investigation there is limited electrical service to these classrooms, with one electrical circuit being shared across several classrooms.

We have also looked at installing large-scale temporary air conditioning systems with generator power. A test system was installed at the Counseling Complex in October 2015 and successfully provided cooling.

In fall of 2015 the District contracted with P2S Engineering to provide a feasibility study to determine if it is possible to install permanent or temporary air conditioning systems in all major facilities that are currently without cooling. The study is due in January of 2016 and it is the intent of the District to implement any feasible solutions by fall of 2016.

Humanities and Social Science

HSS is the one newer building where we receive significant complaints about the heat. The project was designed starting in 2002 before the effects of global warming were well known. There was a trend at that time for naturally ventilated classrooms throughout California. As the college's first LEED certified building, our environmental groups here on campus strongly supported using natural ventilation. However, we soon discovered that when the temperature goes over 80 degrees and there are 45 or more students in a building, natural ventilation (even with mechanical fans) cannot cool a building. UC Santa Barbara had a similar experience about the same time with a naturally ventilated building that was built right along the coast.

The difference between HSS and the older buildings is this building can be more easily converted to air conditioning. The building already has a mechanical system, with fans and ductwork. There is a plan that is in progress to connect this building to the new Central Plant and convert to air conditioning. It is expected that this work will take place in summer 2016.