

Date: November 4, 2022

To: UF Housing Department

From: Ellie Applegate

Cc: Alexander Slotkin

Re: Installing Dehumidifiers in Dorm Halls at the University of Florida to Reduce Mold Growth

MEMORANDUM

Whether you consider it a pro or a con of the University of Florida, there is no denying that the climate here is incredibly humid. Unfortunately, a byproduct of this humidity is mold (Wu & Wong, 2020). While mold growth can be somewhat suppressed by cooler temperatures, this alone is not enough to kill mold spores because temperature does not affect humidity. Consequently, the school should install dehumidifiers in dorm buildings to more effectively prevent mold growth.

In the following proposal, I will discuss the recurring issue of mold in dorm halls and the advantages of installing dehumidifiers as an alternative solution to current preventative measures. The purpose of these dehumidifiers, therefore, would be to reduce mold completely and allow students the freedom to set their own comfortable room temperatures.

WHAT IS MOLD? WHY IS IT A PROBLEM?

Mold is a prolific fungus facilitated by moisture (“What is Mold?”, 2022). While few species are toxic, mold can nonetheless cause or aggravate respiratory issues like asthma; furthermore, it can also trigger allergic reactions in those exposed (Bush et al., 2006).

Given that Florida is the ninth most humid U.S. state, mold has proven to be an unwelcome visitor in many dorm buildings (Brettschneider, 2022). Just last year, Rawlings Hall suffered its own serious bout of the fungus; window units reportedly harbored colonies of black mold, causing students to develop cold-like symptoms (Taylor, 2021). Students like Nduka Mbadugha, 18, described “[feeling] weak and [having] trouble breathing”, and he—like others—blamed the poorly-managed mold spread.

Other students living on-campus have reported the following symptoms (Taylor, 2021):

- Stuffy nose
- Sore throat
- Coughing
- Worsening asthma

DEHUMIDIFIERS AS A SOLUTION

Because mold is primarily produced by moisture, dehumidifiers would easily keep both at bay. Dehumidifiers are appliances that capture and store airborne moisture, thus removing it from the air (“Dehumidifiers and Mold”, n.d.). By reducing humidity to levels below the 60% mold needs to survive (typically to approximately 40%), the probability of mold growth is greatly diminished because mold cannot obtain the water it needs (Aire Serv, 2020). Considering these benefits, the University of Florida should install small versions of this appliance in each dorm room; this solution would both eliminate mold growth—thus sparing students from adverse health symptoms—and render the need to blast air conditioning useless.

POSSIBLE OBJECTIONS

Hasn't UF Housing addressed this problem already? Why install dehumidifiers instead?

Despite the dangers of mold—as well as its displeasing odor and appearance—the issue has been inadequately addressed by the university. The current solution has been to establish room temperature requirements that are both uncomfortable and ineffective.

To prevent mold, students are forced to keep their rooms set at maximum air conditioning (around 65° F), which can feel exceedingly cold. According to sophomore Jia Chen of Broward Hall, “It’s freezing. I feel like I need gloves when I’m typing at my desk.” More alarming than student discomfort, however, is that these standards fail to ultimately eliminate the problem.

Although mold is most profuse above 77° F, mold spores are only truly exterminated at temperatures around freezing; this is well below required standards, so the university’s current solution is obsolete (“At What Temperature”, n.d.). Because the university has elected only to combat the issue by controlling temperature, the issue of humidity remains untouched, and the fungus is largely able to persist. While the risk of mold growth is almost 90% at humidity above 60%, humidity levels still reached 68% in Rawlings Hall last September (Wieringa, 2020). This is well over the Environmental Protection Agency’s advised index and led to the discovery of mold despite adherence to temperature requirements (Taylor, 2021).

Overall, dehumidifiers would be a superior means of eradicating mold in student dorms. As facility manager Gary Lott stated, “A dehumidifier...can be a better way to solve moisture problems than running the cooling all the time” (Gahran, 1992). It is time the University of Florida heeds his advice.

RESEARCHER CREDENTIALS

Name	Qualifications
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Ellie Applegate	• On-campus student at the University of Florida • Broward Hall resident (has encountered fellow residents who witnessed mold growth) • Has experienced firsthand the chilly room temperatures and been instructed not to change them
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CONCLUSION

Mold growth in student dorms at the University of Florida, which poses a serious health risk, can be effectively treated by dehumidifiers. As such, the UF Housing Department should consider phasing out their current policy of room temperature requirements and by instead installing dehumidifiers in each dorm room.

Thank you for your time. If you have any further questions, I can be reached via email (ellieapplegate@ufl.edu).

Works Cited

- Brettschneider, B. (2022, October 12). *Oh The Humidity. Which State Is The Most Humid?* Forbes. Retrieved November 4, 2022, from <https://www.forbes.com/sites/brianbrettschneider/2018/08/23/oh-the-humidity-why-is-alaska-the-most-humid-state/?sh=165f6993330c>
- Bush, R. K., Portnoy, J. M., Saxon, A., Terr, A. I., & Wood, R. A. (2006). The medical effects of mold exposure. *Journal of Allergy and Clinical Immunology*, 117(2), 326–333. <https://doi.org/10.1016/j.jaci.2005.12.001>
- Centers for Disease Control and Prevention. (2022, February 25). *What is Mold?* Centers for Disease Control and Prevention. Retrieved November 4, 2022, from <https://www.cdc.gov/niosh/topics/indoorenv/whatismold.html>
- Dwyer Franchising. (2020, July 14). *What Is the Best Humidity Setting for a Dehumidifier?* Aire Serv. Retrieved November 4, 2022, from <https://www.aire.serv.com/about/blog/2020/july/what-is-the-best-humidity-setting-for-a-dehumidifier/>
- Gahran, A. (1992, February). Heat pipe dehumidification saves energy, improves air quality. *Energy User News*, 17(2), 32+. <https://link.gale.com/apps/doc/A12043551/AONE?u=tall22798&sid=googleScholar&xid=66ae3a5e>
- Mold Remediation. (n.d.). *At What Temperature Does Mold Grow?* Mold Remediation. Retrieved November 4, 2022, from <https://moldremediation.io/what-temperature-does-mold-grow/>
- Oransi. (n.d.). *Dehumidifiers and Mold*. Oransi. Retrieved November 4, 2022, from <https://oransi.com/blogs/blog/dehumidifiers-and-mold#:~:text=A%20dehumidifier%20makes%20the%20external,mildew%20to%20create%20new%20colonies.>
- Taylor, M. (2021, September 27). *Rawlings Hall: Mold-Related Sickness and Viral “Horror Bathroom.”* The Independent Florida Alligator. Retrieved November 4, 2022, from <https://www.alligator.org/article/2021/09/rawlings-hall-dorm-sickness>
- Wieringa, S. (2020, May 29). *Relative Humidity and Mold*. Indoor Science. Retrieved November 4, 2022, from <https://indoorscience.com/blog/relative-humidity-and-mold/>
- Wu, H., & Wong, J. W. C. (2020). Current challenges for shaping the sustainable and mold-free hygienic indoor environment in humid regions. *Letters in Applied Microbiology*, 70(6), 396–406. <https://doi.org/10.1111/lam.13291>