

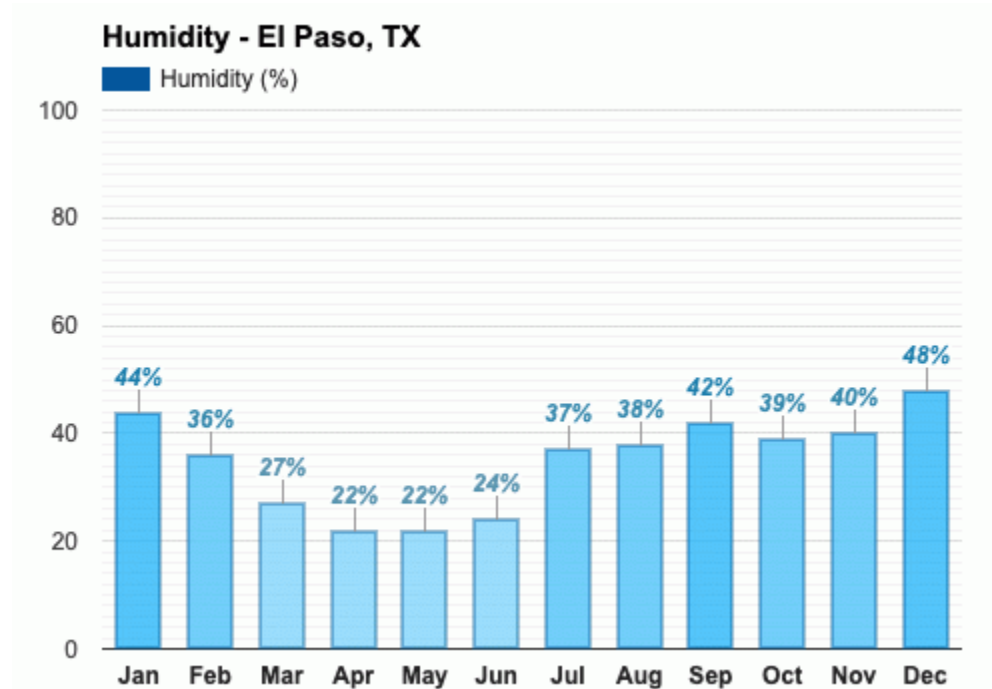


THE UNIVERSITY OF TEXAS AT EL PASO  
Institutional Animal Care and Use Committee

## Exception to the “Guide” Humidity Level \*

The The University of Texas at El Paso, hereinafter referred to as Institution, will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy)<sup>1</sup> and the *Guide for the Use of Laboratory Animals (8<sup>th</sup> edition)*<sup>2</sup>. Chapter 3 of the *Guide: Environment, Housing, Management* states “Relative humidity should also be controlled, but not nearly as narrowly as temperature for many mammals; the acceptable range of relative humidity is considered to be 30% to 70% for most mammalian species. Microenvironmental relative humidity may be of greater importance for animals housed in a primary enclosure in which the environmental conditions differ greatly from those of the macroenvironment (e.g., in static filter-top [isolator] cages)”. “In mice, both abnormally high and low humidity may increase preweaning mortality (Clough 1982). In rats, low relative humidity, especially in combination with temperature extremes, may lead to ringtails, a condition involving ischemic necrosis of the tail and sometimes toes (Crippa et al. 2000; Njaa et al. 1957; Totten 1958).” “In climates where it is difficult to provide a sufficient level of environmental relative humidity, animals should be closely monitored for negative effects such as excessively flaky skin, ecdysis (molting) difficulties in reptiles, and desiccation stress in semiaquatic amphibians.” Chapter 5 of the *Guide: Physical Plant - Heating, Ventilation, and Air Conditioning (HVAC)* states “Ideally relative humidity should be maintained within +/- 10% of set point; however, this may not be achievable under some circumstances”.

The average humidity levels for El Paso<sup>3</sup>, Texas are shown below:



\* Approved by the IACUC as exceptions to the Guide

06/27/2022

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## **Exception to the “Guide” Humidity Level \***

Due to the high desert conditions of low humidity in El Paso, Texas, the humidity levels in multiple vivarium animal housing rooms at The University of Texas at El Paso do not always fall within the acceptable range of 30% to 70% relative humidity specified in the Guide. However, animal health is monitored and no evidence of preweaning mortality, ringtail in rats, flaky skin, ecdysis in reptiles, and desiccation stress in semiaquatic amphibians has been noted. Based on assessments by the UTEP Facilities Services it is not possible to ensure that the levels of humidity will consistently meet the Guide standards without affecting the temperature levels in each room. A formal exception from the IACUC was requested and approved by the IACUC on June 27, 2022, with the stipulation that if any issues are noted in animal health based on low humidity levels, each room will be addressed, and humidity modified on a room-by-room basis per the attending veterinarian’s recommendations.

### References:

1. Public Health Service Policy on Humane Care and Use of Laboratory Animals. Office of Laboratory Animal Welfare (OLAW) <https://olaw.nih.gov/policies-laws/phs-policy.htm>
2. The *Guide for the Care and Use of Laboratory Animals*: 8<sup>th</sup> Edition. (*Guide*). National Research Council. 2011
3. "Climate and monthly weather forecast El Paso, TX." Weather Atlas, [www.weather-atlas.com/en/texas-usa/el-paso-climate#humidity\\_relative](http://www.weather-atlas.com/en/texas-usa/el-paso-climate#humidity_relative). Jun. 2022.

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