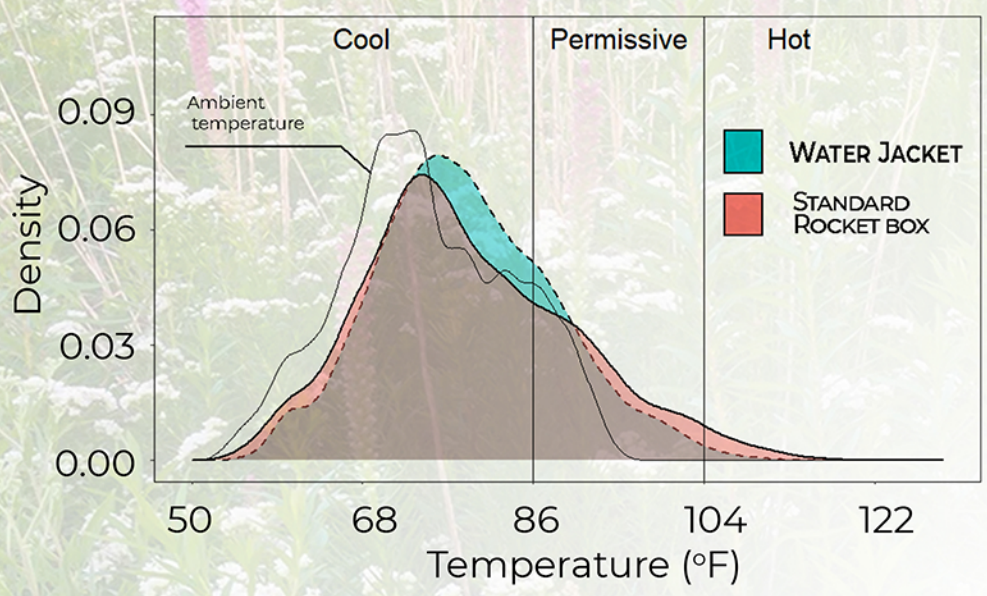
Water Jacket Rocket Box

Human-Wildlife Interactions Lab

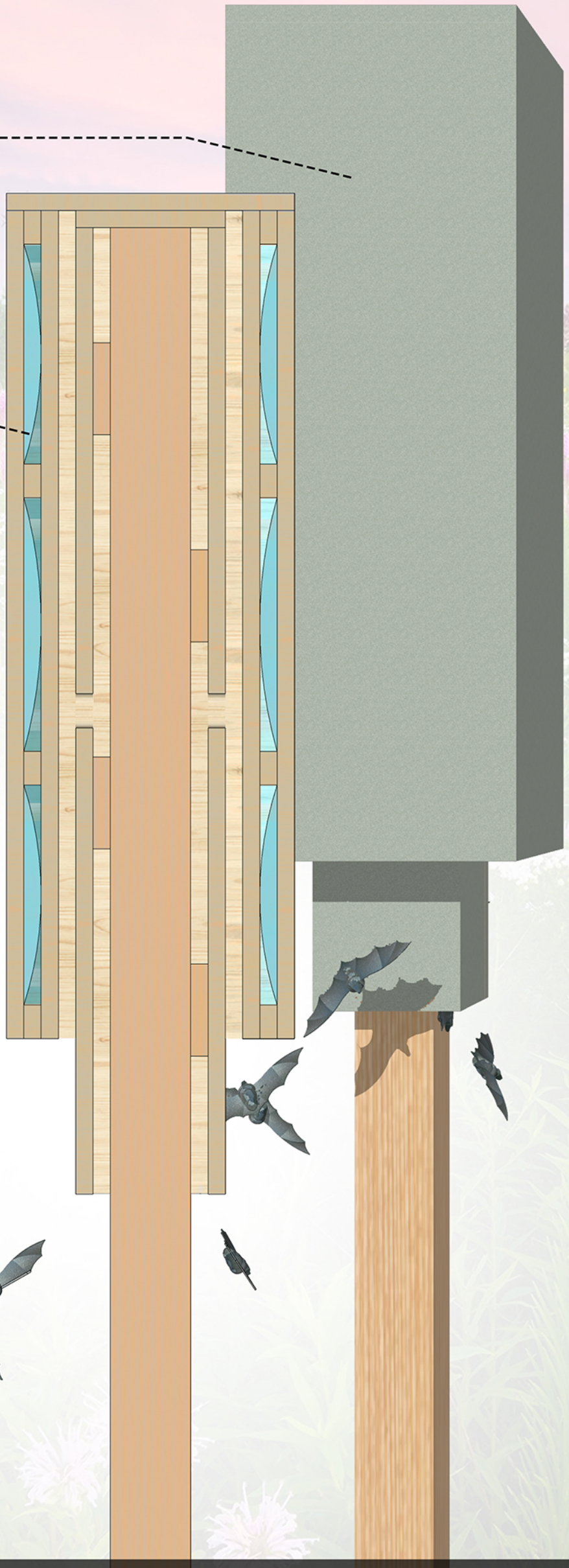
Lighter paint color reduces overheating risk [1]

Vacuum-sealed water packets stabilize & buffer external temperature extremes [2,3]



Temperatures in the water jacket box are not as cold and not as hot as in a standard two-chamber rocket box[2]

*measurements from light-brown, unoccupied box



* It's essential to monitor box temperatures[2]

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https://wildlife.nres.illinois.edu/tips-for-making-bat-boxes-safer-for-bats/

1. Griffiths SR, Rowland JA, Briscoe NJ, Lentini PE, Handasyde K, Lumsden LF, et al. 2017. Surface reflectance drives nest box temperature profiles and thermal suitability for target wildlife. PLoS One. ;12: 1–22. doi:10.1371/journal.pone.0176951

2. Tillman FE, Bakken GS, O'Keefe JM. 2021. Design modifications affect bat box temperatures and suitability as maternity habitat. Ecol Solut Evid. ;2: e12112. doi:10.1002/2688-8319.12112

3. Bakken GS, Tillman FE, O'Keefe JM. 2022. Methods for assessing artificial thermal refuges: Spatiotemporal analysis more informative than averages. J Therm Biol. doi:https://doi.org/10.1016/j.jtherbio.2021.103150