



Trailing Questions
HVAC Installation, Renovation, and Collections Environments
An Introduction

Estelle: QUESTION: Do you know if the IPI's Guide to Sustainable Preservation Practices for Managing Storage Environments has ever been tested out of the US? Thank you for all the info provided

ANSWER: While I'm not sure of specific examples of the IPI Guide being used outside of the US, I would say that the concepts discussed therein are generally accepted by the international community as appropriate strategies provided that adequate testing and assessment have been carried out. Standards and guidelines such as "ISO/TR 19815:2018 Information and documentation -- Management of the environmental conditions for archive and library collections" and the "American Society for Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) 2019 HVAC Applications Handbook, Chapter 24: Museums, Galleries, Archives, and Libraries" have adopted similar operational recommendations based on risk-managed application.

S Peterson [Iowa]: If institutions move away from standardized climate levels, do we need to be more concerned with acclimating loaned object?

ANSWER: I think it's best to address this in two parts – the first is what are considered "standardized" climate levels, and second is what we've learned about acclimation.

"Standard" environmental conditions have changed significantly in the last decade or so. Rather than offering a single prescribed T/RH condition that institutions should meet (or that collections require), most standards/professional organizations have recognized that many collections are safe within a broader range of environmental conditions than we previously recognized, that sustainability must be considered, and that the building's capability, the geographic region where the collection is located, and other factors play a large part in what environmental conditions are possible/reasonable. Standards/guidelines from the Bizot Group (which influenced guidance from American Institute for Conservation, the International Council of Museums – Committee for Conservation, and the Association of Art Museum Directors, among others), ISO 11799 (focused on Library/Archives), and ASHRAE (noted above), and others now provide ranges of appropriate conditions, which may include room/cool/cold/frozen temperatures depending on the purpose of the environment and the need of the collection, and RH ranges as wide as 40-60% or 30-60% depending on material types and outdoor climate (as well as other factors, such as previous conditions experienced, or "proofing"). It is up to the institution to choose a range of environmental conditions that match its preservation and sustainability needs, and which its building/systems are capable of providing.

Loan agreements are still an evolving area, as many agreements still contain language referring to the old 70F, 50% RH conditions. Until loan practices generally catch up with preservation practices and guidance, the best approach may be to have an open discussion between loan partners to settle on a range of conditions that are both safe according to current research, but also within the borrowing institution's capacity to provide.

As for acclimation and greater concern – put simply, not necessarily. While individual materials behave differently, and we must remain vigilant with media that is particularly sensitive to RH extremes, our current understanding is that the “safe” range of RH is just that, and that is at the extreme dry and damp conditions where the largest threat occurs. As long as materials are moving with their safe range of RH, acclimation should not be a major concern. Risk still exists when we introduce materials to a condition outside of their safe range, and no amount of acclimation will minimize the risk.

Robin Gabriel: Any thoughts on best practices for 18th C historic house in coastal SC? Our collections are all on display.

ANSWER: It's difficult to say too much without more information to go on – historic houses are tricky, especially when it comes to appropriate mechanical solutions (and sometimes the answer is a non-mechanical solution). The key to keep in mind is that the house/structure is likely the largest single object in your collection (if preservation of the building is a priority), and any decisions related to using HVAC must first and foremost consider the health/risk to the building. In historic settings, our environmental goals generally shift from “control” to “management” – in other words, the primary goal is to minimize risk of mold, and to do as well as we can with other degradation factors. The two webinar links provided in the resources should give a good introduction to moisture management concepts (by far the biggest challenge); from there it's a matter of considering specific risks to the collections (datalogging is a huge help) and exploring means of minimizing risk over time. The Getty “Hot and Humid” book in the resources may also provide some useful examples/strategies depending on the specific issue you're experiencing.

Please don't hesitate to contact me offline with other questions, or for further clarification.

Jeremy Linden

Linden Preservation Services, Inc.

www.lindenpreservation.com