# The Greater Harrington Historical Society Environmental Monitoring Policy



# **Environmental Monitoring Policy**

The Greater Harrington Historical Society is committed to providing preservation-level conditions in spaces where objects are exhibited or stored. Although the Curator leads the efforts in managing these environments, it is the entire Museum staff's responsibility to uphold standards as well as address and report issues.

Environmental monitoring documentation is essential for understanding the outside weather fluctuations and the ability of the building heating, ventilating, and air conditioning (HVAC) system to control and minimize the change inside the building. Change is to be expected with seasonal fluctuations, but to preserve the collections of GHHS, it is important to minimize fluctuations. Environmental measurements will be recorded with data loggers. Records will be kept for a minimum period of three years.

The HVAC system allows tight humidity control (+/- 2% in storage, +/- 5% in offices and galleries) in Collections Storage and all the exhibit galleries. The Curator oversees the automated systems. The Curator monitors the climate with dataloggers in critical areas.

In 2009, the American Institute for Conservation (AIC) developed a working group to recommend new environmental requirements for loans (as requested by the American Association of Museum Directors) that reflect current research in this area. The AIC group established interim guidelines in 2010, which will be further refined in the coming years. The interim range guidelines are:

Recommended Goal Recommended Range

Temperature 70 F 59 - 77 F

Relative Humidity 45 - 55% +/- 5%

Keep in mind that these are broad and general guidelines. While it is important to be aware of these specifications, even more vital than reaching ideal temperature

and relative humidity set points is to have an environment that does not have extreme fluctuation.

Extremes in relative humidity (below 40% and above 60%) can potentially cause irreversible physical damage in many objects. Some artifacts will be better preserved in low RH ranges; for example, most photographic materials should ideally be stored at 20-40% RH. Complex objects that are constrained (e.g. scrolls with their composite layers of materials, furniture, and wooden frames) require tighter parameters, as the different materials will expand and contract at different rates. Variations in temperature are generally better tolerated than variations in RH. However, higher temperatures increase the rate of chemical reactions, including those that decay paper-based materials.

### **Environmental Monitoring**

Monitoring, recording, and analyzing existing environmental conditions for the collections is an essential step in instituting and maintaining a stable environment that meets conservation standards. Monitoring helps to establish baseline temperatures and relative humidity for building spaces. Monitoring is also a useful tool in gathering hard data on the environmental extremes in areas where collections are used and stored.

To achieve these goals, GHHS has implemented the following policies effective July 1, 2023

- GHHS has begun to conduct environmental monitoring throughout its buildings. Each building has one monitor with plans to purchase more as funds permit. These are in the following locations:
  - 1. Annex Bank Teller Counter, left inside shelf
  - 2. Church Top shelf of lectern
  - 3. Block Tower First Floor, right side of display shelves.
- Each Data logger stores information for 30 days. The Curator will retrieve the data on or about the 1<sup>st</sup> Sunday of every month.
- The data gathered will then be analyzed when it is retrieved. The information will include systematic recording of weather conditions and events in the building that would affect environmental conditions, such as a pipe leak or

system shut down. (See the Appendix for the form used for data collection. The master form can be found on the curator's computer desktop)

- Actions will be taken should that data indicate that HVAC systems are functioning outside the desired set points.
- Once a new full year of data has been collected for the spaces, have the information analyzed, if any noticed significant issues are noted, an environmental specialist familiar with the care of museum, library, and archives collections materials shall be contacted to review the data and make recommendations regarding upgrades or modifications that can be made to the HVAC systems. Even if it is unrealistic to modify the HVAC systems, the data will give GHHS the information necessary to make decisions regarding more stringent housing for sensitive materials and determine if materials need to be moved within the building or to a more reliably climate controlled offsite storage facility. If system upgrades are made or new systems are installed, staff will continue to collect data to ensure that the systems are working to specifications.

This policy shall be reviewed every three years for accuracy and changes.

**Document Status:** Final **Prepared by:** Doug Poore

**Reviewed by:** Strategic Planning Committee

**Approved by:** Membership **Date Approved:** 06/01/2024 **Revision Cycle:** 3 years

Last reviewed: Next Revision:

**Primary Policy Steward:** Curator

## Appendix

## Sample Data Logger Sheet

# Spot Readings for Temperature and Relative Humidity - Instructions

Meauring Temp and RH in a room or a case (please highlight)

Name of room or case: Annex

Material types present: Various

Temperature to be achieved: 70 F

RH level to be achieved: 40%

			Other information	
Date	Temperature C	Relative Humidity %	Time of day	Weather Condition
05.01.23	70.5	39.6	10.30am	Sunny
05.05.23	69.8	38.1	10.30am	cloudy
05.12.23	69.2	40	10.30am	light rain
05.18.23	70	37.9	10.30am	raining
05.25.23	72.9	38.5	10.30am	raining
05.31.23	71.1	40.2	10.30am	heavy rain