SECTION 3:
INSTITUTE SUSTAINABLE PRESERVATION PRACTICES

MAINTAIN AN OPTIMAL AND SUSTAINABLE PRESERVATION ENVIRONMENT

Section Three includes three chapters:

- Chapter 7: Create an Environmental Management Team
- Chapter 8: Specific Activities of the Environmental Management Team
- Chapter 9: Investigate Opportunities for Energy Savings

These chapters cover the steps involved in the process of instituting and maintaining effective environmental management in your institution including specific responsibilities and activities that will lead to an optimal and sustainable environment for preservation.

The final section of this guidebook includes additional information you can use to guide your institution toward sustainable preservation practices.

CHAPTER 7:
Create an Environmental Management Team

An ongoing, meaningful collaboration between facilities, collections, and administrative staff is the most effective way to achieve an optimal and sustainable environment for preservation.

Perhaps the single most important step toward this goal is the creation of a team within your institution to jointly address and negotiate the task of environmental management. The key stakeholders in creating and maintaining the environment should be represented on the team. These stakeholder groups include the people who provide the environment (facilities staff, building operators, energy and sustainability managers), the people who have preservation responsibility for the collections (conservators, preservation staff), the people who work in the building to perform its mission (collections and service staff, curators, librarians, etc.), and of course, the people who are responsible for the administration and finances of the institution (directors, administrators, budget officers).

The recommendations included in this chapter, as well as the other chapters in this section, are based on IPI's lengthy experience in developing and working with cross-disciplinary teams in a variety of institutions. The process began in 1997 while working with the Library of Congress and The New York Public Library on Optimizing Collection Life and Energy Costs in Cultural Institutions, a project funded by the Mellon Foundation. Projects involving optimization have continued at both of these institutions since that time. IPI has experience working with environmental management teams in small libraries, historical societies, records offices, research and public libraries, as well as major institutions like the National Museum of Denmark and the Folger Shakespeare Library. Although every organization is unique, there are enough common elements that the suggestions in this guidebook can be successfully adapted by any institution.

7A Develop an Effective Environmental Management Team

"An ongoing dialog between preservation and facilities, having the right players and accurate data, and following through – all are essential to the team process. We have fine-tuned our trouble shooting process and looked closer at equipment functionality thanks to this opportunity to look at systems holistically."

M. Hassan Kholdi, CEM, PE Senior Project Manager & Energy Liaison Office at The New York Public Library, and Member of IPI's IMLS-Funded Energy Saving Opportunities Project team, 2009-2013

Every decision about environment and facilities affects multiple aspects of institutional life (human comfort, collection health, budgets). That's why it's so important to put together a cross-disciplinary team. The most effective teams are not large groups, but do have a few motivated individuals who recognize the mutual benefits of the team process and have the trust of people in the departments they represent (in other words, they have the power to follow through on team decisions). It can be beneficial to have an individual leader or champion who will insure that the team is designed to be inclusive, that the group meets together frequently, and that decisions are made and followed up on.

IPI's experience shows that it tends to work best if the collections care function takes the lead in assembling and championing the team. The facilities representative on the team should have enough authority to carry out team decisions. The administrative representative has to let all staff know that the activities of the Environmental Management Team are important and that their decisions carry weight.

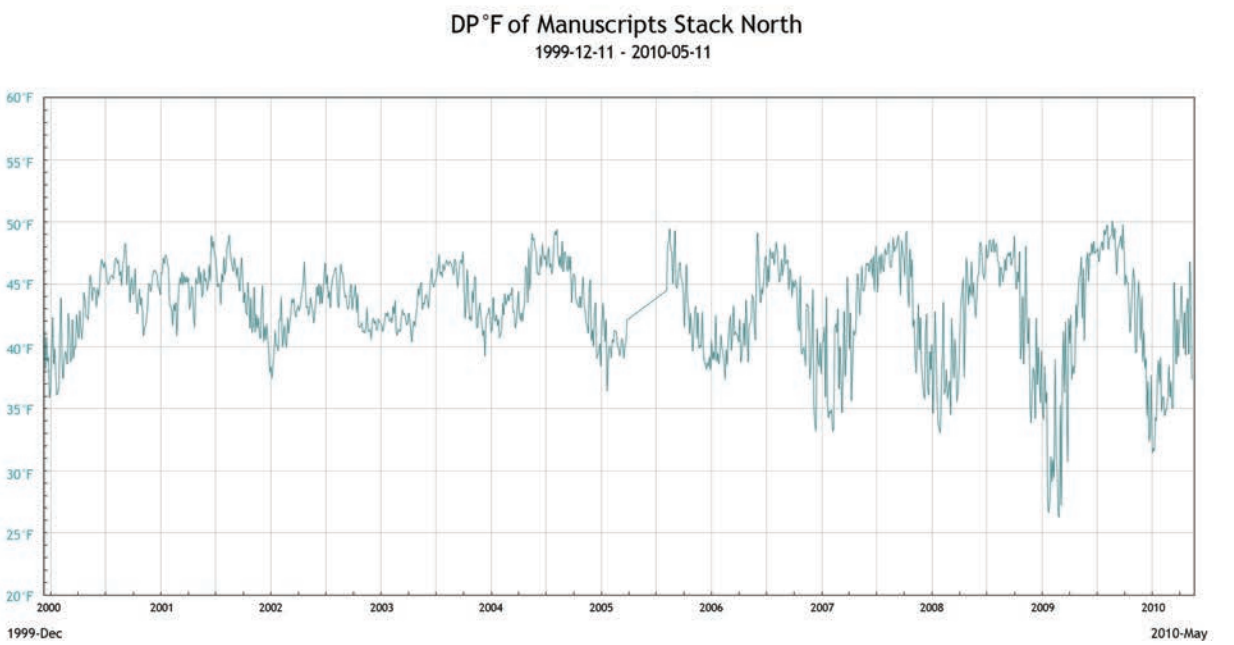
Relevant data and incident information should be brought to the Environmental Management Team meetings. These meetings should be scheduled at regular intervals, and have agendas and minutes. Activities can include data review and comparison, identification of underperforming spaces, determination of summer and winter settings, and review of adjustments, failures, etc.

Environmental management is a process—it isn't fixed, it's managed. The process must be routine and ongoing. The temptation to believe that everything is operating as well as it can and that there is no need to devote resources to examining operations with a critical eye is very common and almost always wrong.

In reality:

- Mechanical systems are prone to sub-optimal operation – settings change, equipment malfunctions, and unexpected incidents occur
- Sub-optimal operation can and does persist undetected and/or uncorrected

The graph below illustrates several years of collected data from one location. You can see that although the space maintained the dew point temperature above 40°F most of the time between 2000 and 2005, the system failed to do so starting in 2006 and got worse from then on. During an Environmental Management Team meeting this graph would be shared, discussed, and analyzed. The team would work to identify what caused the change (system malfunction, set point change, miscommunication, etc.). Solutions for alleviating the problem would be developed and a schedule for instituting a correction would be set. During a follow-up meeting the team would see what affect any actions taken would have on the environment and on the long-term preservation of collections.



The people who affect the storage climate are numerous, are not connected by any organized structure, and answer to different "masters". The most successful environmental management programs will be those where the process is institutionalized, with mandate and support from the administration. It is important to have a staff member or a position dedicated to the tasks and responsibilities of monitoring and analyzing the environments, and a committed facilities staff capable of enacting necessary changes.

Success relies on a strong working relationship between departments – the most committed preservation staff member will not be able to enact meaningful change in the system that produces the storage environment if facilities staff will not respond. Likewise, facilities staff will have a much easier time carrying out sustainability measures if they can work with collections staff to determine an optimal environment that saves energy without causing additional harm to collections. A mandate from the administration to work together to achieve this goal will expedite the process.

With this level of teamwork, the management of storage environments becomes much less reactionary and far more strategic. Collections staff benefits through better storage planning, facilities by helping to prioritize maintenance and capital expenditures, and the administration through efficient operation of the institution.

7B Define the Broad Responsibilities of the Environmental Management Team

Once you have an Environmental Management Team with the appropriate resources and skills committed to the task, regular meetings and ongoing communication is essential. The factors affecting storage climates (weather, HVAC equipment, control systems, occupant behavior, etc.) are variable and prone to malfunctions that typically go undetected. You can't take a "fix it and forget about it" attitude. You need a well-defined process for dealing with both short and long-term environmental issues. Based on work with the Library of Congress and other colleagues, IPI and Herzog/ Wheeler & Associates determined that managing the environment for preservation over the long-term must be based on the following key capabilities:

1. The ability to measure the actual storage climate over time in each area where significant collections are housed (this requires dataloggers and a data management system).
2. The creation and maintenance of documentation defining the optimal (best achievable) climate for all seasons of the year for each area (this is based on team review of appropriate data and negotiation based on factual information).
3. The ability to define an optimal environment for various storage locations and collection types.
4. The ability to regularly download reliable storage climate data, to compare the actual situation to the best achievable, and to detect and report when sub-optimal (harmful or wasteful) climates occur.
5. The ability to diagnose and correct the cause of sub-optimal climate conditions and to take actions that will reduce the likelihood of the malfunction's recurrence.

These key capabilities are discussed in more detail in Sections 8A and 8B of this guidebook.