

**MUSEUM PREVENTIVE CONSERVATION II (Preventive Conservation Techniques)
Course Data and Syllabus, Spring 2017**

General Course Information

AH 6287.80 Preventive Conservation Techniques CRN 51746

ANTH 6204.80 Museum Preventive Conservation II CRN 51081

MSTD 6204.80 Preventive Conservation Techniques CRN 51672

Credit hours: 3.0

Dates and Times

Thursdays 6:10pm–8:00pm

Classes begin 19 Jan 2017 Spring Break 16 March 2017

Last class 27 April 2017

Venue

National Museum of Natural History, Smithsonian Institution, 10th and Constitution, Washington, DC. Students should assemble by 6:00pm in the Constitution Avenue lobby of the National Museum of Natural History. An escort will take you to the classroom as a single group. Please bring a photo ID in case the security guards request one. **If you are unable to be present by 6:00 PM, please let the instructors know by telephone and/or text and make arrangements with Alyx LeBlanc 304.710.9245 to meet you in the lobby.**

Course Directors and Primary Instructors

Catharine Hawks

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Office address: National Museum of Natural History, NHB Rm M85J

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*****PRE-REQUISITE COURSE:** Museum Preventive Conservation I ***

Required Texts

Available through GW Bookstore as noted, or through alternate sites given below

*Hatchfield, P. 2002. *Pollutants in the Museum Environment: Practical Strategies for Problem Solving in Design, Exhibition, and Storage*. Archetype Press, London.

<http://www.archetype.co.uk/publication-details.php?id=64>

*Hawks, C., M. McCann, K. Makos, L. Goldberg, D. Hinkamp, D. Ertel, and P. Silence (eds). 2011. *Health & Safety for Museum Professionals*. AIC Health & Safety Committee and Society for the Preservation of Natural History Collections, New York, NY.

<https://www.universityproducts.com/health-and-safety-for-museum-professionals.html>

*Landry, G. (ed.). 2000. *The Winterthur Guide to Caring for Your Collections*. Henry Francis DuPont Winterthur Museum, Inc., Winterthur, DE.

<http://www.winterthurstore.com/product/410696/The-Winterthur-Guide-to-Caring-for-Your-Collection.html?cid=111>

Purchase directly (not available through GW Bookstore)

ASHRAE Chapter A-23 2015. Applications Handbook, Chapter 23 Version 2015. *Museums, Galleries, Archives, and Libraries*. Purchase PDF (*****Make sure to buy version in Inch-Pounds**).

<http://www.techstreet.com/products/1897225>

Image Permanence Institute. 2012. *IPI's Guide to Sustainable Conservation Practices for Managing Storage Environments*. Image Permanence Institute, Rochester, NY.

<https://www.imagepermanenceinstitute.org/store/publications/sustainable-preservation-practices-guidebook>

Available at no charge as downloads

*Ashley-Smith, J., A. Burmester, and M.Eibl (eds.). 2013. *Climate for Collections: Standards and Uncertainties*. Postprints of the Munich Climate Conference, 7 to 9 November 2012. Doerner Institut, Munich.

http://www.doernerinstitut.de/downloads/Climate_for_Collections.pdf

Emergency Response and Salvage Mobile app

<http://www.conservation-us.org/emergencies/ers-app#.WF7YofkrLIU>

Faulk, W. and L. Sowd. 2001. *Collection Theft Response Procedures*. J. Paul Getty Trust and The Huntington Library.

http://www.getty.edu/conservation/publications_resources/pdf_publications/collections_theft_response.html

*Grzywacz, C. 2006. *Monitoring for Gaseous Pollutants in Museum Environments*. Getty Conservation Institute, Los Angeles.

http://www.getty.edu/conservation/publications_resources/pdf_publications/monitoring_gaseous.html

*Strang, T. J. 2013 *Studies in Pest Control for Cultural Property*. University of Gothenburg, Gothenburg.

<https://gupea.ub.gu.se/handle/2077/31500> (download 3 pdfs for complete text).

* Waller, R. W. 2006. *Cultural Property Risk Analysis Model*. University of Gothenburg, Gothenburg.

<http://protectheritage.com/blog/> (sign in to receive access to free pdf of complete text)

***Denotes text required for pre-requisite course, Museum Preventive Conservation I.**

Additional readings (required and supplemental) are available on course Blackboard site.

Consult Websites as assigned and review all for discussion in class

Canadian Conservation Institute: <http://canada.pch.gc.ca/eng/1454704828075>

Getty Conservation Institute: <http://www.getty.edu/conservation/>

National Archives and Records Administration (Preservation): <http://www.archives.gov/preservation/>

Image Permanence Institute: <https://www.imagepermanenceinstitute.org/>

Library of Congress Preservation Directorate: <http://www.loc.gov/preservation/>

Museum Pests Network: <http://museumpests.net/>

NPS-Technical Preservation Services: <http://www.nps.gov/tps/index.htm>

Storage Techniques for Art, Science, and History: <http://stashc.com/>

University of Illinois Library Preservation Self-Assessment Program <https://psap.library.illinois.edu/> (there is no need to log in to access most relevant content)

General Information

Code of Academic Integrity

All students are expected to comply with the George Washington University Code of Academic Integrity in completing assignments and examinations. The Code is available at: <https://studentconduct.gwu.edu/>

Accommodation for Religiously Observant Students

In keeping with University policy, student are to notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. These students will be permitted to be absent without penalty on such occasions, including permission to make-up examinations. The full policy is available at: <http://registrar.gwu.edu/university-policies>.

Disability Accommodation

If you require disability accommodations, please register with Disability Support Services (DDS) at <http://disabilitysupport.gwu.edu/registration>. If you have questions about disability accommodations, contact DDS at 202.994.8250 or dss@gwu.edu or visit them in person in Rome Hall, Suite 102.

University Counseling Center

(UCC) 202.994.5300 <http://counselingcenter.gwu.edu/>

The UCC offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include:

- crisis and emergency mental health consultations
- confidential assessment, counseling services (individual and small group), and referrals

Security

In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location. Instructions on evacuation procedures and fire safety will be given at each class venue.

Course Description

Practical applications of preventive conservation for: preservation planning; procedures to facilitate collections care; preparation of grant proposals for collections care initiatives; environmental monitoring; design and maintenance of facilities, exhibits, and collection storage; collections maintenance; emergency management; integrated pest management; security; fire and life safety; and use of facilities and collections.

Course Instruction Hours

This course provides a minimum of 112.5 hours based on fourteen class sessions of face to face instruction of two hours weekly plus readings, lab preparation, group project participation, and individual assignments of at least six hours of independent learning each week.

Learning Outcomes

Upon completion of the course, participants will be able to:

- Integrate preventive conservation into museum policies and practices for:
 - Risk assessment
 - Institutional libraries and archives (often not viewed as part of museum collections, but frequently incorporating collection documentation essential to conservation concerns)
 - Facilities, exhibition, and storage design
 - Emergency preparedness, salvage, and response
 - Fire protection (including and understanding of protection systems and equipment maintenance)
 - Physical security of collections
 - Safety of visitors, staff, interns and volunteers
 - Integrated pest management
 - Routine maintenance of grounds and facilities
 - Maintenance of cultural property
 - Use of collections
 - Special events and facilities rentals
 - Packing and moving collections
- Calibrate environmental monitoring equipment
- Navigate preventive conservation and related Web sites
- Describe cleaning methods used to maintain cultural property and know which methods can be used by museum staff with various levels of training
- Identify funding sources available for collection care projects
- Create a grant proposal for a collections care project
- Apply peer review processes for collections care proposals
- Advance collection care concerns with architects and engineers for construction/renovation of facilities
- Identify classes of adhesives used in care of cultural property and evaluate use of adhesives with heritage collections

Grading

Numerical scores for assignments are posted on the Blackboard site for the course; final grades are based on the BB calculations and given as letter grades. GW classes do not give A+; highest possible mark is an A.

A	94-100
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	77-79
C	74-76
C-	70-73
F	Below 70

Method of Evaluation

Class participation (class discussions; effort)	10%
Quizzes (2 @ 10%)	20%
Website critique	10%
Grant proposal (team grade)	35%
Peer reviews, written	15%
Grant peer review panel, oral	10%

Assignments

- **Working in assigned teams**, students will prepare the **face sheets, narrative, and budgets (including a budget justification), brief staffing bios, data on supplies and equipment, and any other elements presented in class** for a grant proposal for an IMLS Museums for America Conservation Project Support grant to re-house a collection in a small or mid-sized museum. Specific portions of each proposal that must be submitted will be discussed in class.
- **Working as individuals, each student will**
 - Prepare a **one page** (single spaced) critique of a conservation Website to be assigned at first class and be prepared to discuss the review in class.
 - Prepare **written reviews for 2 grants** prepared by other teams, using a peer review form provided by the instructors.
 - **Take part in a peer review panel** to determine whether proposals merit funding. Students should be prepared to describe the projects they reviewed and orally defend their written reviews at the panel session as well as take part in the discussions about other grants.

CONSULT THE COURSE SCHEDULE FOR INFORMATION ON DUE DATES FOR ASSIGNMENTS AND QUIZZES. ADDITIONAL INFORMATION ABOUT ASSIGNMENTS AND GRADING RUBRICS IS AVAILABLE ON THE COURSE BLACKBOARD SITE

Class Sessions and Reading Assignments

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Session 1.1 Course overview and Introduction; team assignments for grant proposal project and website assignments – Sturman

Session 1.2 Conservation planning and quantitative risk assessment – Hawks

Required texts

Waller, R. 2003. Pp. 55-104

Scanned Required Readings

Risk assessment & planning

- Brokerhof, A. 2007. Applying the outcome of climate research in collection risk management—or a challenge to our research efforts. Pp.115-121 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.
- Brokerhof, A. 2006. Collection risk management—the next frontier. Presentation at *CMA Cultural Property Protection Conference, Ottawa, 16 January 2006*. 5 pp.
- Brokerhof, A., T. Luger, B. Ankersmit, F. Bergevoet, R. Schillemans, P. Schoutens, T. Miller, J. Kiers, G. Meuthing, and R. Waller. 2005. Risk assessment of Museum Amstelkring: application to an historic building and its collections and the consequences for preservation management. Pp. 590-596 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague 12-16 September 2005*. International Council of Museums and James & James Publishers, London.
- Henderson, J. and R. Waller. 2016. Effective preservation decision strategies. *Studies in Conservation* 61(6):308-323.
- Waller, R. 2008. Cultural property risk assessment: matching approach with purpose. Pp. 815-819 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Waller, R. 2008. Comprehensive risk assessment. Pp. 179-190 in *Real-Time and Deliberative Decision Making* (I. Linkov et al., eds.) NATO Science for Peace and Security Series-C. Springer Science + Business Media.
- Waller, R. and S. Michalski. 2004. Effective preservation. *GGI Newsletter* 19(1): 6 pp.

Review these Websites (required – review to understand content)

Risk assessment & planning (qualitative assessments)

American Institute for Conservation, *Collections Assessment for Preservation (CAP)*

<http://www.conservation-us.org/grants/cap>

Collections Trust Benchmarking <http://collectionstrust.org.uk/resource/benchmarks-in-collections-care-2-0/>

Scanned Supplemental Reading

Risk assessment & planning

Ashley-Smith, J. 1999. Value, pp. 81-98 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.

Session 2.1 IMLS Museums for America, Collections Stewardship, and other programs – Mark Feitl Program Officer, IMLS

Session 2.2 Funding sources for collections care – Hawks

Session 2.3 Moving collections - Hawks

Consult these Websites (required)

Funding

IMLS Museums for America grant guidelines (read all carefully, concentrate on those for Collections Stewardship, Provision of Optimum Environment, and Review Criteria); download budget and narrative forms, and any other forms necessary for preparation of proposals:

<https://www.imls.gov/nofo/museums-america-fy17-notice-funding-opportunity>

Scanned Supplemental Readings

Moving collections

Anderek, K. 2014. *Packed with Pride the Garber Move Team Way*. Smithsonian National Air and Space Museum, Washington, DC.

Lavédrine, B. 2003. Lending and shipping. Pp. 126-128 in *A Guide to the Preventive Conservation of Photographs*. Getty Conservation Institute, Los Angeles.

Marcon, P. 1991. Shock, vibration, and protective package design. Pp. 107-120 in *Art in Transit*. National Gallery of Art, Washington, DC.

Marcon, P. 1991. Shock, vibration, and the shipping environment. Pp. 121-132 in *Art in Transit*. National Gallery of Art, Washington, DC.

PACCIN 2003. *Materials and Descriptions-Soft Packing Workshop*. Compiled by Michelle Barger of SFMOMA and Scott Atthowe of Atthowe Fine Art for the PACIN Web site.

Consult these Websites (suggested)

Moving collections

National Museum of the American Indian collections move project

<http://nmai.si.edu/explore/collections/moving/>

PACCIN

<http://www.paccin.org/content.php?62-Materials>

Session 3.1 Video on facilities design; Facilities design & renovation – Hawks

Session 3.2 Facilities use – Hawks

Session 3.3 Storage design - Sturman

Required Texts

Facilities design & renovation

ASHRAE Chapter 23

Hawks et al. – Chapters 2,11

Facilities use

Hawks et al. – Chapters 7 8,9,10

Storage design

ASHRAE Chapter 23

Hawks et al. – Chapters 12,15

Landry – Chapter 1

Scanned Required Readings

Facilities design & renovation

Ashley Smith, J. 2007. Current thinking on environmental standards. Pp. 10-14 in *Conservation Matters in Wales - Challenging Buildings: the Search for Solutions*. Federation of Museums and Galleries in Wales, Cardiff.

Hefferan, S. 2008. Working with daylight in the museum environment. *WAAC Newsletter* 30(1): 22-24.

Henry, M. 2007. *The Heritage Building Envelope as a Passive and Active Climate Moderator: Opportunities and Issues in Reducing Dependency on Air-Conditioning*. Contribution to the Experts' Roundtable on Sustainable Climate Management Strategies, April 2007, Tenerife, Spain. Getty Conservation Institute, Los Angeles, CA.

Smythe, A. , P. Brewick, R. Greenbaum, M. Chatzis, A. Serotta, and I. Stunkel. 2016. Vibration mitigation and monitoring: a case study of construction in a museum. *Journal of the American Institute for Conservation* 55(1):32-55.

Wei, W., L. Sauvage, and J. Wölk. 2014. Baseline limits for allowable vibrations for objects. Article 1516 in, *ICOM-CC Triennial Conference Preprints: Melbourne, 15-19 September 2014*. Ed. J. Bridgland. ICOM, Paris, 7pp.

Use of facilities

Ashley-Smith, J. 1999. The things people do. Pp. 246-262 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.

Horstman, N. 1993. Two million feet: wear and tear in an historic house. Pp. 2-29 – 2-32 in *The Interiors Handbook for Historic Buildings*. Vol. 3 (M. Auer, C. Fisher, T. Jester, and M. Kaplan, eds.). Historic Preservation Foundation, Washington, DC.

Storage design

- Lambert, S. 2111. RE-ORG: *A Methodology for Reorganizing Museum Storage Developed by ICCROM and UNESCO*. CeROArt. From <http://ceroart.revues.org/2112>
- Lambert, S. 2014. Museum storage estimation in theory and practice. Article 1503 in, *ICOM-CC Triennial Conference Preprints: Melbourne, 15-19 September 2014*. Ed. J. Bridgland. ICOM, Paris, 7pp.
- Pretzel, B. 2003. Materials and their interaction with museum objects. *V&A Conservation Journal* Summer (44): 1-4 & chart of pollutants vs materials.
- Consult these Websites to understand content (required)
- Facilities design & renovation*
- Grattan, D. and S. Michalski. 2015. *Environmental Guidelines for Museums – Temperature and Relative Humidity (RH)*. Canadian Conservation Institute, Ottawa.
<http://canada.pch.gc.ca/eng/1444920450420>
- Storage design*
- Storage Techniques for Art, Science, and History. <http://stashc.com/>
Library of Congress, *Preservation Supplies*
<http://www.loc.gov/preservation/resources/specifications/index.html>
- Scanned Supplemental Readings
- Facilities design & renovation*
- Artigas, D. 2007. *A Comparison of the Efficacy and Costs of Different Approaches to Climate Management in Historic Buildings and Museums*. Thesis for Graduate Program in Historic Preservation, University of Pennsylvania. Web published.
- Conrad, E. 2007. *Climate Control Systems Design and Climate Change*. Contribution to the Experts' Roundtable on Sustainable Climate Management Strategies, April 2007, Tenerife, Spain. Getty Conservation Institute, Los Angeles, CA.
- Getty Conservation Institute. 2009. *Alternative Climate Controls for Historic Buildings*. Contributions to the Experts' Roundtable on Sustainable Climate Management Strategies, Tenerife, April 2007. Getty Conservation Institute, Los Angeles.
http://www.getty.edu/conservation/science/climate/climate_experts_roundtable.html#proceedings
- Hatchfield, P. 2011. Crack, warp, shrink, flake: a new look at conservation standards. *Museum* (Jan-Feb):40-43, 51-53.
- Padfield, T. 2007. How to design a museum building that protects the collection without destroying itself. Pp. 4-7 in *Conservation Matters in Wales - Challenging Buildings: the Search for Solutions*. Federation of Museums and Galleries in Wales, Cardiff.
- Saunders, D. and J. Kirby. 2008. A comparison of light-induced damage under common museum illuminants. Pp. 766-774 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Watts, S., J. Berry, A. de Joia, and F. Philpott. 2002. In control or simply monitoring? The protection of museum collections from dust and vibration during building works. Pp.108-115 in *Preprints of the 13th Triennial ICOM-CC Meeting, Rio de Janeiro, 22-27 September 2002* (R. Vontobel, ed.). James and James, London.
- Use of facilities*
- English Heritage. 2004. *Practical Conservation Guidelines for Successful Hospitality Events in Historic Houses*. English Heritage, London.
- Lithgow, K., H. Lloyd, P. Brimblecomb, Y. Yoon, and D. Thickett. 2005. Managing dust in historic houses - a visitor/conservator interface. Pp. 662-669 in *Preprints of the COM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

- Lloyd, H. and T. Mullany. 1994. The impact of overvisiting: methods of assessing the sustainable capacity of historic houses. Pp. 132-138 in *Preventive Conservation Practice, Theory and Research* (A. Roy and P. Smith, eds). International Institute for Conservation, London.
- Sample policies/procedures for facilities rentals and other facilities use
Cornell University. 2005. *Guidelines for the Rental of the Herbert F. Johnson Museum of Art*. Cornell University, Ithaca.
- Sam Noble Oklahoma Museum of Natural History. n.d. *Room Rental Policies and Procedures*. Sam Noble Oklahoma Museum of Natural History, Norman.

Storage design

Wagner S. (comp). 2000. *Published Environmental Standards*.

Consult these Websites (suggested)

Storage design

CAMEO materials database. <http://cameo.mfa.org/>

Preserv'Art information on materials used with collections.

<http://preservart.ccq.gouv.qc.ca/bonchoix.aspx> (or type PreservArt in your browser)

Session 4.1 Practicum on reading blueprints and other construction documents-Jeffrey Hirsch, AIA, LEED AP, Principal, Director of Cultural Practice, EwingCole

Session 4.2 How HVAC systems work – William Jarema, PE, Principal/Engineer, EwingCole

Required Texts

HVAC systems

ASHRAE Chapter 23

Grzywacz –scan to understand content

IPI Guide–Chapters 2,4,5,9

Scanned Required Readings

HVAC systems

Henry, M. 2007. *The Heritage Building Envelope as a Passive and Active Climate Moderator: Opportunities and Issues in Reducing Dependency on Air-Conditioning*. Contribution to the Experts' Roundtable on Sustainable Climate Management Strategies, April 2007, Tenerife, Spain. Getty Conservation Institute, Los Angeles, CA.

Lechner, N. 1991. Pp. 1-9 and 11- 22 in *Heating, Cooling, Lighting Design Methods for Architects*. John Wiley & Sons, New York.

Session 5.1 Historic preservation and facilities maintenance plans for historic structures–Niklas Vigener, Senior Principal and Head of Building Technology, Simpson Gumpertz & Heger

Session 5.2 Housekeeping in museums–Sturman

Required Texts

Facilities maintenance

Hawks et al. – Chapters 6, 13

Scanned Required Readings

Facilities maintenance

American Association of Museums. 2007. *AAM Standards Regarding Facilities and Risk Management*. American Association of Museums, Washington, DC.

Daniel, V., S. King, C. Pearson, I. Cole. 2005. Stories from historic buildings. Pp. 625-631 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

MLA and ARUP. 2010. *Museums & Art Galleries Survival Strategies: A Guide for Reducing Operating Costs and Improving Sustainability*. ARUP, London.

Stevens, R. 2010. Preventive conservation and the historic house structure. Pp. 125-148 in *Preventive Conservation for Historic House Museums* (J. Merritt and J. Reilly, eds). Altimira Press, Lanham, MD.

Weeks, K. 1986. *New Exterior Additions to Historic Buildings: Preservation Concerns*. Preservation Briefs 14. National Park Service, Washington, DC.

Housekeeping

Lloyd, H., P. Brimblecombe, and K. Lithgow. 2007. Economics of dust. *Studies in Conservation* 52: 135-146.

Rossol, M. 2004. *D-Limonene: Citrus & Terpene Solvents*. Datasheet from ACTS FACTS. Arts, Crafts and Theatre Safety, New York. 7 pp.

Consult these Websites (required – review to understand content)

Facilities maintenance

International Association of Museum Facilities Administrators. <http://newiamfa.org/>

National Park Service. *Secretary of the Interior's Standards for the Treatment of Historic Properties* <https://www.nps.gov/tps/standards/four-treatments/treatment-guidelines.pdf>

Scanned Supplemental Readings

Facilities maintenance

Doehne, E. and C. Price. 2010. *Stone Conservation: An Overview of Current Research*. 2nd ed. Research in Conservation. Getty Conservation Institute, Los Angeles.

Feilden, B. 1994. Pp. 217-231 in *Conservation in Historic Buildings*. Butterworth-Heinemann, Oxford,

Smith, B. 2003. Background controls on urban stone decay. Pp. 31-60 in *The Effects of Air Pollution on the Built Environment* (P. Brimblecombe, ed.). Air Pollution Reviews v. 2. Imperial College Press, London.

Wheeler, G. 2006. Considerations in cleaning historic stonework. *AIC News* 31(2): 1, 9-10.

Housekeeping

Nazaroff, W., M. Ligoocki, L. Salmon, G. Cass, T. Fall, M. Jones, H. Liu, T. Ma. 1993. *Airborne Particles in Museums*. Research in Conservation. Getty Conservation Institute, Los Angeles.

Rossol, M. 1997. Labels: *Reading between the Lies*. Datasheet. Arts, Crafts and Theater Safety, New York. 6 pp.

Trakumas, S, K. Willeke, S. Grinshpun, T. Reponen, G. Mainelis, and W. Friedman. 2001. Particle emission characteristics of filter-equipped vacuum cleaners. *AIHAJ* 62: 482-493

Consult these Websites (suggested)

Facilities maintenance

General Services Administration. www.gsa.gov/historicpreservation

National Park Service *Preservation Briefs* 44. <http://www.nps.gov/tps/index.htm>

Session 6.1 Integrated pest management – Caitlin Amborski, George Washington's Mt. Vernon

Session 6.2 Preservation of museum archives – Sturman

OPTIONAL SESSION: Practicum on Integrated pest management at Mt. Vernon

Required text

IPM

Strang, pp. 263-284

Institutional archives

Landrey – Chapters 2, 7, 9

Scanned required readings

IPM

Child, R. 2007. Insect damage as a function of climate. Pp. 57-60 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.

- Hawks, C., E. Cooney, and D. Lunde. 2014. Integrated pest management for natural history collections: The importance of visual inspection. *In* ICOM-CC 17th Triennial Conference Preprints, Melbourne, 15–19 September 2014, ed. J. Bridgland, art. 1202, 7 pp. Paris: International Council of Museums
- Klein, D. 2008. *Identifying Museum Insect Pest Damage*. NPS Conserve O Gram 3(11). 7 pp.
- Pinninger, D. 2011. Ten years on – from vodka beetles to risk zones. Pp. 1-9 in *Integrated Pest Management for Collections. Proceedings of 2011: A Pest Odyssey, 10 Years Later* (P. Winsor, D. Pinniger, L. Bacon, B. Child, K. Harris, DL Lauder, J. Phippard and A. Xavier-Rowe, eds.). English Heritage, London.
- Strang, T. 2008. *Controlling Insect Pests with Low Temperature*. CCI Notes 3. Canadian Conservation Institute, Ottawa.
- Strang, T. 1998. Another brick in the wall. Pp. 10-29 in *Proceedings of the 3rd Nordic Symposium on Insect Pest Control in Museums, Stockholm, 24-25 September 1998*. PRE-MAL and ICOM, Stockholm.

Preservation of institutional archives

- Image Permanence Institute. 2011. *Preserving Film-Based Photographic Collections*. Image Permanence Institute, Rochester.
- Iraci, J. 2011. *Longevity of Recordable CDs and DVDs*. CCI Notes 19/1. Canadian Conservation Institute, Ottawa.
- Library of Congress. 2013. *Care, Handling and Storage of Motion Picture Film*. Library of Congress, Washington, DC.
- National Information Standards Organization. 2000. *Guidelines for Information about Preservation Products*. ANSI/NISO Z39.77-200. National Information Standards Organization, Baltimore, MD.

Consult these Websites (required)

IPM

- Strang, T. and R. Kigawa. 2009. Combatting pests of cultural property. Part of the CCI *Ten Agents of Deterioration* series. <http://canada.pch.gc.ca/eng/1444922929038>
- Integrated Pest Management (for museums) www.museumpests.net

Preservation of institutional archives

- University of Illinois Library Preservation Self-Assessment Program <https://psap.library.illinois.edu/>
(there is no need to log in to access most relevant content)

Scanned Supplemental readings

IPM

- Baskin, B. 2001. Solar bagging: putting sunlight to work to eliminate insect infestations in mere hours. *WAAC Newsletter* 23(2):20-21.
- Selwitz, C. and S. Maekawa. 1998. Pp. 41-78 in *Inert Gases in the Control of Museum Insect Pests*. Getty Conservation Institute. Los Angeles.
- Williams, S. and S. McLaren. 1990. Modification of storage design to mitigate insect problems. *Collection Forum* 6(1):27-32.

Preservation of institutional archives

- Casey, M. and B. Gordon. 2007. *Sound Directions: Best Practices for Audio Preservation*. Indiana University, Bloomington. Web published.
- Library of Congress (LOC). 2002. *Cylinder, Disc and Tape Care in a Nutshell*. Library of Congress, Washington, DC.
- McCormick-Goodhart, M. and H. Wilhelm. 2004. The design and operation of a passive humidity-controlled cold storage vault using conventional freezer technology and moisture-sealed cabinets. Pp. 176-181 in *Final Program and Proceedings: IS&T Archiving Conference, San Antonio, 20-23 April 2004*. Society for Imaging Science and Technology, Springfield, VA.

- McIlwaine, J. 2005. *First, Do No Harm: A Register of Standards, Codes of Practice, Guidelines, Recommendations, and Similar Works Relating to Preservation and Conservation in Libraries and Archives*. Preservation and Conservation Section, International Federation of Libraries and Archives.
- Norris, D. 1995. Historic and contemporary photographic prints. Pp. 355-363 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.
- Van der Reyden, D. 1995. Paper documents. Pp. 327-354 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.
- Vest, M., U. Kejser, and C. Brunn. 2008. New long-term storage facilities at the Royal Library, Denmark: storage requirements for mixed collections. Pp. 808-814 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Wagner, S. 2008. Cold storage costs: comparison pricing for photographic collections. *AIC News* 33(1): 1, 8-9.

Consult these Websites (suggested)

Preservation of institutional archives

Image Permanence - free publications on preservation of photographic materials.

<https://www.imagepermanenceinstitute.org/resources/publications>

International Federation of Libraries and Archives. www.ifla.org

Library of Congress, *Preservation Supplies*

<http://www.loc.gov/preservation/resources/specifications/index.html>

National Archives and Records Administration. www.archives.gov/preservation/

Wilhelm Imaging Research (permanence and printers/papers/printing inks).

<http://www.wilhelm-research.com/index.html>

Session 7.1 Practicum, Lighting in Museums - Virginia Croskey, Lighting Specialist, NMNH

Session 7.2 Environmental monitoring and calibration lab – Hawks & Sturman

Required Texts

Environmental monitoring

Gryzwacz—Appendices 1 & 2

Hatchfield – Pp. 55-133, Appendix 2; Appendix 3

Scanned Required Readings

Lighting and environmental monitoring

Bullock, L. and D. Saunders. 1999. Measurement of cumulative exposure using blue wool standards. Pp. 21-26 in *Preprints of the ICOM-CC 12th Triennial Meeting, Lyon, 29 August-3 September 1999*. James and James, London.

Kilby, V. 1993. Using a Psychrometer to Measure Relative Humidity. Conserve O Gram 3/1 National Park Service, Washington, DC.

Padfield, T. 2007. Why keep climate records – and how to keep them. Pp.157-163 in *Museum Microclimates: Contributions to the Conference in Copenhagen, November 2007* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.

Springer, S. 2008. UV and visible light filtering window films. *WAAC Newsletter* 30(2): 16-23.

Weintraub, S. 2000. The color of white: is there a ‘preferred’ color temperature for the exhibition of works of art? *WAAC Newsletter* 21(3): 3 pp.

Consult these Websites (required – review to understand content)

Lighting

Canadian Conservation Institute Light Damage Calculator

<http://canada.pch.gc.ca/eng/1450464034106>

Canadian Conservation Institute – Michalski on Light, UV, and IR as agents of deterioration
<http://canada.pch.gc.ca/eng/1444330943476>

Scanned Supplemental Readings

Lighting and environmental monitoring

- Hawks, C. 2005. *Desiccating Microclimates*. 2 pp. Adapted from an article by Steven Weintraub, Art Preservation Services, New York, NY.
- Lavédrine, B. 2003. 149-158 and 164-169 in *A Guide to the Preventive Conservation of Photographs*. Getty Conservation Institute, Los Angeles.
- Merritt, J. and J. Reilly. 2010. Preventive conservation and light. Pp. 61-78 in *Preventive Conservation for Historic House Museums* (J. Merritt & J. Reilly, eds). Altamira Press, Lanham, MD.
- Pretzel, B. 2008. Now you see it, now you don't: lighting decisions for the Ardabil carpet based on the probability of visual perception and rates of fading. Pp. 759-763 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Saunders, D. and J. Kirby. 2008. A comparison of light-induced damage under common museum illuminants. Pp. 766-774 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Weintraub, S. 2003 *Demystifying Silica Gel*. Art Preservation Services, New York.

Session 8.1-2 Fire protection – Bryan Stemen, Fire Protection Specialist, CSP, CFPS, F&G Standards and Assurances Lead, BP Exploration (Alaska) Inc.

Required Texts *Fire protection*

Hawks et al. – Chapter 3

Scanned Required Readings

Fire protection

- Baril, P. 1998. *Fire Protection Issues for Historic Buildings*. CCI Notes 2/6. Canadian Conservation Institute, Ottawa.
- Tétreault, J. 2008. Fire risk assessment for collections in museums. *Journal of the Canadian Association for Conservation* 33: 3-21.

Scanned Supplemental Readings

Fire protection

- Fire Protection Association. 1994. Focus on sprinklers. *Fire Prevention* 267(March): 1-4.
- General Services Administration, Advisory Council on Historic Preservation. 1989. *Fire Safety Retrofitting in Historic Buildings*. General Services Administration, Washington, DC.
- Wilson, R. 1985. *Fire Detection Systems*.
- Wilson, R. 2004. *Fire safety strategies*. Text from a museum fire risk assessment.

Consult these Websites (suggested)

Fire protection

- Automatic Fire Alarm Association www.afa.org
- Consumer Product Safety Commission (lists product recalls) www.cpsc.gov
- Fire Protection Association, United Kingdom www.thefpa.co.uk
- International Water Mist Association <http://iwma.net/>
- National Fire Protection Association (NFPA) www.nfpa.org
- National Fire Sprinkler Association www.nfsa.org
- NIST Building and Fire Research Laboratory www.bfrl.nist.gov
- Underwriter's Laboratory Inc. www.ul.com
- US Fire Administration www.usfa.fema.gov

SPRING BREAK  HAVE A GREAT HOLIDAY!

Session 9.1 Filming in museums – Anthony Wallace, NASM

Session 9.2 Website critiques discussion and brief presentations

Scanned Required Readings

Filming in museums

Stavroudis, C. 2009. Never Yell “Cut” (A Brief Guide to Filming in Museums). *WAAC Newsletter* 31(2): 10-23.

Scanned Supplemental Readings

Filming in museums

British Museum. 2013. *Terms and Conditions for Filming*.

Victoria and Albert Museum. 2013. *Agreement for Filming at the Victoria & Albert Museum*.

Consult this Website (suggested)

US National Holocaust Museum, Guidelines for Filming and Photography

<https://www.ushmm.org/information/press/guidelines-for-filming-and-photography>

Session 10.1 Cleaning collections – Sturman

Session 10.2 Practicum: Cleaning objects – Hawks & Sturman

Required Text

Cleaning collections

Hawks et al. – Chapters 8, 9, 10, 12

Scanned Required Readings

Cleaning collections

Fell, V. 1996. Washing away the evidence. Pp. 48-51 in *Archaeological Conservation and Its Consequences* (A. Roy and P. Smith, eds.). Preprints of the Contributions to the Copenhagen Congress, 26-30 August 1996. International Institute for Conservation, London.

Hedley, G. 1994. Cleaning and meaning: *The Ravished Image* reviewed. Pp. 21-29 in *Care of Collections* (S. Knell, ed.). Routledge, London.

Science for Conservators, Book 2 (Cleaning). 1992 ed. Pp.10-40, 41-72. Conservation Science Teaching Series. The Conservation Unit, Museums & Galleries Commission, London.

Rajer, A. 2008. Who cares about public art: commissioning and conservation concerns. *Collections: A Journal for Archive and Museum Professionals* 4(3): 201-210.

Rhyne, C. 2006. Clean art? *Journal of the American Institute for Conservation* (JAIC) 45:165-170.

Scanned Supplemental Readings

Cleaning collections

Southall, A. 1990. Pp. 29-34 in *Dirt and Pictures Separated* (S. Hackney, J. Townsend, and N. Eastaugh, eds.). United Kingdom Institute for Conservation, London.

Session 11.1 Health & safety issues in collection care – Dennis Ertel, CIH, CSP, REM, Sandler Occupational Medicine

Session 11.2 Physical security - Hawks

Required Texts

Health & safety

Hawks et al. – Chapters 4, 5, 6

Scanned Required Readings

Health & safety

Ertel, D. 2009. Risk assessment. *AIC News* 34(5):1, 8-10.

Hawks, C. and T. Radtke, 2000. *An Introduction to Respirator Use in Collections Management*. NPS Conserve-O-Gram 2/13. National Park Service, Washington, DC.

Occupational Safety and Health Administration (OSHA). 2002 (revised). Pp. 1-14 in *Job Hazard Analysis*. OSHA Publication 3071. U.S. Occupational Safety and Health Administration, Washington, DC.

Schrager, K. and W. Jarema. 2016. Taking time to vent: Understanding extraction and exhaust. *AIC News* 41(5):1,3-10.

Physical security

Faulk, W. and L. Sowd. 2001. *Collections Theft Response Procedures*. J. Paul Getty Trust, and Huntington Library, Art Collection, and Botanical Gardens, Los Angeles.

Consult this Website (required)

Physical security

International Foundation for Cultural Property Protection. <http://www.ifcpp.org/>

Scanned Supplemental Readings

Health & safety

Hawks, C. 2001. Historical survey of the sources of contamination of ethnographic materials in museum collections. *Collection Forum* 16(1&2): 2-11.

Hawks, C. and K. Makos. 2000. Inherent and acquired hazards in museum objects – implications for care and use of collections. *CRM* (5):31-37.

Pool, M., N. Odegaard, and M. Huber. 2005. Identifying the pesticides: pesticide names, classification, and history of use, pp. 5-31 in *Old Poisons, New Problems* (N. Odegaard and A. Sadongei, eds.) Altamira Press, Walnut Creek, CA.

Physical security

Keller, S. and D. Willson. 1995. Security systems. Pp. 51-56 in *Storage of Natural History Collections: A Preventive Conservation Approach* (C. Rose, C. Hawks, and H. Genoways, eds.). Society for the Preservation of Natural History Collections, Iowa City.

Macek, J. 2010. Stop! Thief! The theft of community treasures. *Collections: A Journal for Archives and Museum Professionals*. 6(1-2):55-62.

Consult these Websites (suggested)

Health & safety

AIC Health & Safety Guides. [http://www.conservation-wiki.com/wiki/Health %26 Safety](http://www.conservation-wiki.com/wiki/Health_%26_Safety)
NIOSH Respirators <http://www.cdc.gov/niosh/topics/respirators/> and Respirator Selection
<http://www.cdc.gov/niosh/docs/2005-100/default.html>

Physical security

Vocabulary of Museum Security Terms. <http://museum.zib.de/voc/>

Museum Security Network. <http://www.museum-security.org/indexdefinitief.html> (find information on reporting thefts)

Session 12.1 Emergency management–Hawks

Session 12.2 Conservation in exhibitions–Sturman

Required Texts

Emergency management

Hawks et al. – Chapters 1,14

Emergency Response and Salvage Mobile app

<http://www.conservation-us.org/emergencies/ers-app#.WF7YofkrLIU>

Exhibits conservation

Hawks et al. – Chapter 18

Scanned Required Readings

Emergency management

Carmicheal, D. 2010. Chapters 1 and 3. Pp 7-12, 17-21 in *Implementing the Incident Command System at the Institutional Level: A Handbook for Libraries, Archives, Museums, and other Cultural Institutions*. Heritage Preservation and RescuingRecords.com.

- Ertel, D. 2007. Dress for disasters. *AIC News* 32(5): 1, 8-9.
- Ferraro, J. and J. Henderson. 2011. Identifying features of effective emergency response plans. *JAIC* 50:35-48.
- ICCROM. 2016. *Endangered Heritage: Emergency Evacuation of Heritage Collections*. ICCROM, Rome.
- Rossol, M. 2001. After disaster: a museum employee's guide to re-entry. Pp. 81-84 in *HELP! A Survivor's Guide to Emergency Preparedness* (C. Ball and A. Yardley-Jones, eds.) Museums Alberta, Edmonton.

Exhibits conservation

- Ashley-Smith, J. 1999. Travelling shows, pp. 263-284 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.
- Lambert, S. and J. Henderson. 2011. The carbon footprint of museum loans: a pilot study at Amgueddfa Cymru–National Museum Wales. *Journal of Museum Management and Curatorship* 26(3):1-27.
- Reuss, M., G. Scott, and F. MacKinnon. 2005. Conservation of exhibitions: making a maintenance programme work. Pp. 693-699 in *Preprints of the ICOM-CC 14th Triennial Meeting, The Hague, 12-16 September 2005*. International Council of Museums and James & James Publishers, London.
- Thickett, D., P. Fletcher, A. Calver, and S. Lambarth. 2007. The effect of air tightness on RH buffering and control. Pp. 245-251 in *Museum Microclimates* (T. Padfield and K. Borchersen, eds.). National Museum of Denmark, Copenhagen.
- Thickett, D., B. Stanley, and K. Booth. 2008. Retrofitting old display cases. Pp. 775-782 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.
- Tsang, M-J, and M. Blyzinsky. 2008. A practical collaborative approach for long-term displays. Pp. 791-797 in *Preprints of the ICOM-CC 15th Triennial Meeting, New Delhi, 22-26 September 2008*. Getty Conservation Institute and Allied Publishers, New Delhi.

Consult this Website (required – review to understand content)

AIC Exhibition Standards and Guidelines

http://www.conservation-wiki.com/wiki/Exhibition_Standards_%26_Guidelines

Scanned Supplemental Readings

Emergency management

- Dorge, V., W. Faulk, and J. Martinez. 2002. Emergency planning for cultural institutions: the process and some of its challenges. Pp. 27-33 in *Preprints of the 13th Triennial Meeting, ICOM-Conservation Committee, Rio de Janeiro, 22-27 September 2002*. ICOM and James & James, London.
- Federal Emergency Management Agency (FEMA). 2005. FEMA 386-6 How-to #6. *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning: State and Local Mitigation Planning How-to-Guide*.
- Hawks, C. 2001. Health and safety during emergency response for cultural property. Pp. 87-94 in *Help! A Survivor's Guide to Emergency Preparedness* (C. Ball and A. Yardley-Jones, eds.). Museums Alberta, Alberta.
- Heritage Preservation Emergency National Task Force. 2005. *Before and After Disasters: Federal Funding for Cultural Institutions*. Heritage Preservation and US Federal Emergency Management Agency, Washington, DC.
- Lowry, M, B. Farrar, D. Amendariz, and J. Podany. 2007. Protecting collections in the J. Paul Getty Museum from earthquake damage. *WAAC News* 29(3): 16-23.
- Verberne-Khurshid, F., R. Boitelle, D. Ormond, and R. van Gulik. 2008. Disaster is just a step away: working at being a step ahead. Pp. 898-807 in *Preprints of the ICOM-CC 15th Triennial*

Meeting, New Delhi, 22-26 September 2008. Getty Conservation Institute and Allied Publishers, New Delhi

Exhibits conservation

- Barclay, R., A. Bergeron, C. Dignard, and C. Schlichting. 1998. Pp.3-5 in *Mountmaking for Museum Objects*. Canadian Conservation Institute, Ottawa.
- Fisher, A. 1997. Invisible boundaries: searching for common ground between curators, conservators, and interpreters. Pp. 33-37 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa.
- Leminski, S. 2002. Choosing a garment for display. Pp. 7-8 in *Museum Mannequins* (M. Bunn and J. White, eds.). Alberta Regional Group of Conservators, Edmonton.
- Prytulak, G. 2010. *Outdoor Storage and Display: Basic Principles*. CCI Notes 15/8. Canadian Conservation Institute, Ottawa.
- Prytulak, G. 2010. *Outdoor Storage and Display: Remedial Measures*. CCI Notes 15/9. Canadian Conservation Institute, Ottawa.

Consult these Websites (suggested)

Emergency management

- dPlan Emergency management assessments at cultural institutions. <http://www.dplan.org>
- FEMA Web site. www.fema.gov

Session 13.1 Adhesives and consolidants – Hawks

Session 13.2 Use of Collections–Sturman

Required Texts

Use of Collections

Hawks et al. Chapters 15, 19

Scanned Required Readings

Adhesives

- Feller, R. 2008. Thoughts about “crosslinking.” *WAAC Newsletter* 30(3):16-20.
- Horie, C. 1987. Chapters 4 and 5, pp. 71-82 in *Materials for Conservation: Organic Consolidants, Adhesives, and Coatings*. Butterworths, London.
- Science for Conservators Book 3: Adhesives and Coatings*. 1992 ed. Pp 10-21, 108-119. The Conservation Unit, Museums & Galleries Commission, London.

Use of collections

- Barclay, R. 2004. A decision-making protocol for the use of historic musical instruments. *Journal of the Canadian Association for Conservation* 29: 3-7.
- Hallam, D. 1991. The conservation of functional objects – an ethical dilemma. *AICCM Bulletin* 16(2):19-26.
- Milwaukee Public Museum. n.d. *Destructive Sampling Agreement and Policy*. Milwaukee Public Museum, Milwaukee, WI.
- National Park Service (NPS). 1998. Evaluating and documenting museum collection use pp. 1.1-1.58 in *Museum Handbook Part III*. National Park Service, Washington, DC.

Scanned Supplemental Readings

Use of collections

- Ashley-Smith, J. 1999. The things people do, pp. 246-262 in *Risk Assessment for Object Conservation*. Butterworth-Heinemann, Oxford, UK.
- Braun, T. 2007. An alternative technique for applying accession numbers to museum artifacts. *Journal of the American Institute for Conservation (JAIC)* 46: 91-104.
- Mann, P. 1994. Working exhibits and the destruction of evidence in the science museum. Pp. 35-46 in *Care of Collections* (S. Knell, ed.). Routledge, London.

- National Museum of Natural History (NMNH), Department of Anthropology. 2005 *Anthropology Sampling Committee Policies, Procedures and Guidelines*. National Museum of Natural History, Smithsonian Institution, Washington, DC.
- Turpin, D. 1997. Exhibiting textiles in historic house furnished rooms: balancing conservation and interpretation. Pp. 45-52 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa
- Varnell, C. 1997. 'Let me edu-tain you,' historic artifacts and the world of themed entertainment. Pp. 163-165 in *Fabric of an Exhibition: An Interdisciplinary Approach*. Preprints of Textile Symposium 97. Canadian Conservation Institute, Ottawa.

Session 14.1-2 Peer review panel discussion of grant proposals

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