



Office of
INSPECTOR GENERAL

U.S. Department of the Interior

INSPECTION REPORT



Museum Collections: Preservation and Protection Issues with Collections Maintained by the National Park Service



United States Department of the Interior

OFFICE OF INSPECTOR GENERAL

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To: Jonathan Jarvis
Director, National Park Service

From: Loralee Bennett *Loralee Bennett*
Deputy Regional Audit Manager

Subject: Inspection Report – Museum Collections: Preservation and Protection Issues with Collections Maintained by the National Park Service (C-IS-NPS-0008-2010)

The long-term preservation and future availability of artwork, artifacts, and other items maintained in museum collections operated by the National Park Service (NPS) requires NPS to minimize those factors that tend to shorten an object's life. As a result, we evaluated NPS museum collections to determine whether NPS was adequately preserving and protecting its artwork, artifacts, and other museum objects.

Background

Bureaus within the Department of the Interior manage museum collections that are estimated to include over 146 million pieces of artwork, artifacts, and other museum objects. Museum property is acquired to be preserved, studied, or interpreted for public benefit and can include objects representing archeology, art, history, botany, zoology, paleontology, or geology.

Because museum property is intended for long-term preservation, its management requirements are necessarily different from the requirements of property that can be easily replaced. Therefore, the Department's Museum Property Handbook defines seven preservation categories for use in protecting museum property: storage, environment, security, fire protection, housekeeping, planning, and staffing.

On December 16, 2009 we issued a report titled "Department of the Interior Museum Collections" (Report No. C-IN-MOA-0010-2008). The review found that the Department was a poor steward of these museum collections and could take additional steps to improve preservation and protection of museum collections. To assess the adequacy of the Department's preservation practices, we developed a 44 question checklist assessing the seven preservation areas identified in the Department's guidance. Using this checklist, we visited nine NPS sites and

completed the checklist based on both our observations and interviews with museum personnel. We also received self-reported checklists from an additional eight NPS sites. This report provides you with specific results for the NPS sites.

Results of Inspection

Overall, we found NPS could take steps to improve the preservation practices at NPS sites included in this review. *See Appendix.* While some sites had only a small number of deficiencies, others had numerous deficiencies in multiple categories. For example, two sites had deficiencies in less than 5 percent of the preservation controls we inspected. In contrast, two other sites had deficiencies in more than half of the preservation controls, with one having deficiencies in 80 percent of the controls inspected. Overall, all seventeen NPS sites (100 percent) had one or more deficiencies. Even one deficiency could jeopardize museum objects and result in irreparable harm, irreversible damage, or loss of the item. Specifically:

- **Storage space was not safe from flooding.** For example, at the Fort Union Trading Post National Historic Site in Williston, ND we observed water pipes running directly over the museum property storage cabinets that were not waterproof. In addition, there was evidence of past ceiling water damage in another storage area.

Site	Percentage of Checklist Items with Deficiencies
Arlington House	2%
Boston NHS	57%
Ft. Union NM	9%
Great Falls Park	20%
Hagerman Fossil Beds NM	16%
Minidoka Internment NM	16%
Northeast Museum	7%
Petroglyph NM	2%
Whiskeytown NRA	48%
Acadia National Park	7%
Alaska Regional Center	5%
Ft. Union Trading Post NHS	14%
Ft. Vancouver NHS	11%
Golden Gate NRA	80%
Lewis and Clark NHP	11%
South Florida CMC	11%
Western Archaeological	23%



- **Museum property was not safeguarded from overcrowding, breakage, or cross-contamination.** For example, at the Boston National Historic Park in Charlestown, MA we observed one dimly lit, cluttered, and disorganized storage room which contained various large historic items. Items continued to be added to the room despite open space available elsewhere. In another location, items such as antique furniture, carts, and bicycles were stacked on top of each other or were leaning against one another without protection.



- **Pest control devices not always used and/or contents analyzed.** For example, at the Whiskeytown National Recreational Area in Whiskeytown, CA we observed that the site did not have pest management control devices in an exhibit area that displayed historic furniture. Pest control devices are necessary to prevent pests from destroying the artifacts. Staff indicated the pest management controls were removed from the site due to the large volume of pests being trapped and they were unable to keep up with removing the pests being caught.

- **Light not appropriately controlled resulting in potential damage to museum property.** For example, at the Boston National Historic Park in Charlestown, MA the museum curator acknowledged that the visitor's center needs to be re-lighted because lights used in the visitor's center are inappropriate for the artifacts. For example, an old ship rope was displayed directly under track lighting, leading to the potential for premature deterioration.



- **Museum property was not safeguarded against fire.** For example, at the Hagerman Fossil Beds National Monument in Hagerman, ID we observed the lack of fire detection and suppression systems despite having radioactive material present.¹ Additionally, at the Arlington House in Arlington, VA we observed that neither the museum nor the site's annex had fire detection or suppression systems that housed paintings, furniture, books and textiles. Fire suppression had been slated to be installed in the museum building in FY 2006; however, this did not occur.



¹ While radioactive material is not flammable, it poses a serious risk to rescue personnel in the event of a fire.

Because the preservation of the collections at many NPS sites has been neglected, countless artwork, artifacts, and other museum objects are in jeopardy. Identified deficiencies could jeopardize museum objects and result in irreparable harm, irreversible damage, or loss of the item.

Recommendations

We recommend that the Director, National Park Service, ensure that a plan is developed and implemented to:

Recommendation 1. Correct and/or mitigate, to the greatest extent possible, all identified deficiencies at the seven sites identified in this report.

Recommendation 2. Inspect all remaining NPS sites that house museum collections and correct and/or mitigate, to the greatest extent possible, all identified deficiencies.

We would appreciate being kept apprised of the actions planned, or taken, on our recommendations as we will track the status of their implementation. We ask that you inform us of the planned course of action of the recommendations within 30 days.

If you have any comments or questions regarding this advisory, please call me at (303) 236-9243.

No Deficiencies Noted
 Deficiencies Noted
 % Percentage of Deficiencies Noted

	Observed								
	Arlington House	Boston National Historic Park	Ft. Union National Monument (NM)	Great Falls Park	Hagerman Fossil Beds NM	Minidoka Internment NM	Northeast Museum Services Center	Petroglyph NM	Whiskeytown NRA
STORAGE	0%	69%	15%	0%	15%	15%	0%	0%	38%
1. Safe from flooding.		X							X
2. Appropriately insulated.		X							X
3. Appropriate space.		X			X	X			
4. Sufficient space.					X	X			X
5. Adequate storage cabinets.		X	X						
6. Cabinets not over-stacked.		X							
7. Open shelving safe.									X
8. Stacked items protected.		X							
9. Earthquake safe.									X
10. No overcrowding.		X	X						
11. Secure exhibit cases.		X							
12. Appropriate exhibit cases.									
13. Properly framed artwork.		X							
ENVIRONMENT	0%	56%	0%	67%	33%	33%	11%	0%	67%
14. Temperature & humidity monitored.		X		X	X	X			
15. Observations recorded.		X		X	X	X	X		X
16. Observations permanently saved.				X					X
17. Observations analyzed.				X					X
18. Hygrothermographs maintained.		X							X
19. Outside light appropriately controlled.									
20. Artwork away from vents.									
21. Pest control devices used.		X		X					X
22. Type of pests analyzed.		X		X	X	X			X
SECURITY	0%	75%	0%	0%	0%	0%	13%	0%	50%
23. Appropriate staff have keys.		X							X
24. Keys are controlled.		X							
25. Visitors escorted.		X							X
26. Visitors sign in.		X					X		X
27. Closing procedures documented.									
28. Alarm systems maintained.		X							X
29. Sensitive items stored separately.									
30. Irreplaceable items guarded.		X							

	Self-Reported							
	Acadia National Park	Alaska Regional Curatorial Center	Fort Union Trading Post NHS	Fort Vancouver NHS	Golden Gate NRA	Lewis and Clark NHP	South Florida CMC	Western Archaeological & Conservatory Center
	<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 20%;"> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 5px;"></div> No Deficiencies Noted <div style="border: 1px solid black; width: 20px; height: 10px; margin-top: 5px; text-align: center; color: red;">X</div> Deficiencies Noted </div> <div style="width: 20%;"> % Percentage of Deficiencies Noted </div> </div>							
STORAGE	8%	15%	31%	15%	100%	23%	31%	46%
1. Safe from flooding.			X		X	X		
2. Appropriately insulated.					X			
3. Appropriate space.					X	X		X
4. Sufficient space.			X	X	X	X	X	X
5. Adequate storage cabinets.			X		X			X
6. Cabinets not over-stacked.					X			
7. Open shelving safe.					X			
8. Stacked items protected.					X			X
9. Earthquake safe.		X		X	X			X
10. No overcrowding.					X			X
11. Secure exhibit cases.					X		X	
12. Appropriate exhibit cases.	X	X	X		X		X	
13. Properly framed artwork.					X		X	
ENVIRONMENT	0%	0%	22%	11%	89%	11%	0%	11%
14. Temperature & humidity monitored.					X			X
15. Observations recorded.				X	X			
16. Observations permanently saved.					X			
17. Observations analyzed.					X			
18. Hygrothermographs maintained.					X			
19. Outside light appropriately controlled.					X	X		
20. Artwork away from vents.								
21. Pest control devices used.			X		X			
22. Type of pests analyzed.			X		X			
SECURITY	0%	0%	0%	13%	100%	0%	13%	13%
23. Appropriate staff have keys.					X			
24. Keys are controlled.					X			
25. Visitors escorted.				X	X			
26. Visitors sign in.					X			X
27. Closing procedures documented.					X		X	
28. Alarm systems maintained.					X			
29. Sensitive items stored separately.					X			
30. Irreplaceable items guarded.					X			

No Deficiencies Noted
 Deficiencies Noted
 % Percentage of Deficiencies Noted

	Observed								
	Arlington House	Boston National Historic Park	Ft. Union National Monument (NIM)	Great Falls Park	Hagerman Fossil Beds NM	Minidoka Internment NM	Northeast Museum Services Center	Petroglyph NM	Whiskeytown NRA
FIRE PROTECTION	20%	40%	0%	0%	20%	20%	20%	0%	40%
31. Fire detection and suppression.	X	X			X	X			X
32. Fire extinguishers.									X
33. Staff trained on fire extinguishers.							X		
34. Fire suppression systems clear.									
35. No flammable liquids.		X							
HOUSEKEEPING	0%	50%	0%	0%	0%	0%	0%	0%	50%
36. Housekeeping performed.		X							X
37. Written rules on housekeeping.		X							X
38. Housekeepers trained.									
39. Smoking & eating prohibited.									
PLANNING	0%	33%	67%	100%	33%	33%	0%	33%	67%
40. Written plan.				X				X	
41. Assessment of property.		X	X	X	X	X			X
42. Plan to evacuate property.			X	X					X
STAFFING	0%	0%	0%	0%	0%	0%	0%	0%	0%
43. Staff assigned responsibilities.									
44. Staff have been trained.									
ADDITIONAL DOCUMENTS									
1. Checklist Report									
2. Basic Security Protection Report				X	X	X		X	X
3. Fire Protection Plan			X	X	X	X		X	X
4. Integrated Pest Management Plan		X		X	X	X	X	X	X
5. Environmental Control Plan			X	X	X	X			X
6. Annual Emergency Management Plan		X		X			X		X
7. Current Collection Storage Plan		X	X	X	X	X		X	
8. Written Handling Procedures		X						X	

No Deficiencies Noted
 Deficiencies Noted
 % Percentage of Deficiencies Noted

	Self-Reported							
	Acadia National Park	Alaska Regional Curatorial Center	Fort Union Trading Post NHS	Fort Vancouver NHS	Golden Gate NRA	Lewis and Clark NHP	South Florida CMC	Western Archaeological & Conservatory Center
FIRE PROTECTION	20%	0%	0%	0%	40%	0%	0%	0%
31. Fire detection and suppression.					X			
32. Fire extinguishers.								
33. Staff trained on fire extinguishers.								
34. Fire suppression systems clear.								
35. No flammable liquids.	X				X			
HOUSEKEEPING	0%	0%	0%	0%	75%	0%	0%	0%
36. Housekeeping performed.					X			
37. Written rules on housekeeping.					X			
38. Housekeepers trained.								
39. Smoking & eating prohibited.					X			
PLANNING	33%	0%	0%	33%	33%	33%	0%	67%
40. Written plan.								
41. Assessment of property.				X	X	X		X
42. Plan to evacuate property.	X							X
STAFFING	0%	0%	0%	0%	0%	0%	0%	0%
43. Staff assigned responsibilities.								
44. Staff have been trained.								
ADDITIONAL DOCUMENTS								
1. Checklist Report								
2. Basic Security Protection Report	X				X			X
3. Fire Protection Plan	X				X			
4. Integrated Pest Management Plan					X	X		X
5. Environmental Control Plan	X	X		X	X			X
6. Annual Emergency Management Plan	X				X	X		
7. Current Collection Storage Plan		X		X	X			
8. Written Handling Procedures					X			

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