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AIR FORCE MUSEUMS AND THEIR CIVILIAN COUNTERPARTS: IMPROVING
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AIR FORCE MUSEUMS AND THEIR CIVILIAN COUNTERPARTS: IMPROVING
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COLLEGE OF PROFESSIONAL AND CONTINUING STUDIES

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Abstract

The U.S. Air Force is a continuing entity in the fight for freedom across the world. It does its job in the best way it knows how, and in the process claims to celebrate heritage. The celebration of heritage does occur in some instances, but not to the extent or necessity that it should. Air Force-run museums are lacking in the funding and organization that publicly-run museums utilize to thrive in society.

The surveys submitted to both the military-run and publicly-run museums were gathered with the goal of identifying best practices for improving how museums are run. Topics within the questionnaire included funding and artifact care, as well as questions about how museums function with what staff they have. These questions directly relate to AFI 84-103, the regulations for the U.S. Air Force museum system.

The surveys returned from the military-run museums indicated that the museums are in an extreme deficit with funding. The museums are understaffed and if the museums are staffed with the appropriate number of employees, the employees are not trained in museum sciences. This causes issues with the caring for artifacts, because a lack of training in the care of artifacts can lead to artifacts being mistreated, not purposely, but mistreated nonetheless. This thesis will discuss the necessary steps for the Air Force-run museums to take in order to better themselves by learning from publicly-run museums.

Chapter 1: Introduction

The South Dakota Air and Space Museum

(SDASM) may not seem appealing until a visitor drives through the front gate. Once through the gate, visitors are often

shocked at the sight



Figure 1. Front View of SDASM.

before them. Scattered around the front of the museum are 28 static displays. A B-29 with a solemn eagle painted on the side is on the left; a Titan I missile is perched on the visitors' right. In the middle of it all is the B-1 Lancer (see Figure 1), the bomber that is now at home at the base associated with the museum, Ellsworth Air Force Base (EAFB). The building itself is made up of four airplane hangars that were used in the 1950s as shelter for the 54th Fighter Interceptor Squadron, to help protect the U.S. from incoming Soviet threats.¹ The SDASM also extends onto Ellsworth Air Force Base with the Minuteman II Missile Trainer, where tours are taken through the summer to go nose to nose with a true Minuteman II missile.

The interior of the SDASM is split into topics: Technology, Cold War, South Dakota Air History, and Ellsworth AFB History. There are four more static air power displays inside, as well as an example of the interior of a missile launch complex and

¹ Observed by author on 05/30/2017.

two flight simulators. In the middle is the gift shop, and that is where the confusion sets in as to how the SDASM functions. The gift shop is not related to the Air Force or the museum within which it is housed. It is controlled by the South Dakota Air and Space Foundation, which is not directly affiliated with the museum or the Air Force. The South Dakota Air and Space Foundation attempts to offset the lack of funding the SDASM by buying items that it can afford to help set up certain exhibits and to pay certain bills.²

The U.S. Air Force, for all the good that it does for the American people, does not focus on its heritage as it should use its museum system. All museums, both military-run and publicly-run, should be utilized to teach and educate the population of the U.S. With the struggles that the U.S. Air Force-run museums face, there is a lack of opportunity to teach and educate the public, which will lead to a lack of understanding of the U.S. Air Force and its goals. These museums have the opportunity to express to the public not only the past of the U.S. Air Force, but the future as well.

The Air Force's inaction with its museums indicates a lack of interest in an integral part of its heritage. Often the thought process of those in charge of the museum system, including Wing Commanders at the different bases, is that if planes are staying airborne and airmen are surviving and thriving, then they are doing their required job, and everything else falls to the side. The U.S. Air Force's military-run museums lack the same organization, funding, and experience that publicly-run museums utilize to

² Dan Kuecker, Director of the South Dakota Air and Space Foundation (in discussion with the author), 10/23/2017.

continue to thrive. With the U.S. Air Force's focus on heritage right now, museums should rise to the top of its list of importance.

To bring the above-mentioned issues to light, it was necessary to get the point of views from both employees and volunteers of publicly-run and Air Force-run museums. Surveys were sent to types of museums with the goal of honest, anonymous conversation. They were designed specifically for both publicly-run and Air Force-run museums, since military-run museums are supposed to have more rigorous guidelines. These questionnaires cover aspects of how museums are run and managed, touching on topics such as funding, artifact care, and experience of employees. These surveys directly document the challenges that Air Force-run museums face, as well as the potential issues that publicly-run museums may face. However, more important will be the answers that the publicly-run museums submit within the surveys. The surveys that were collected from publicly-run museums reflect the common practices that most museums utilize – their storage facilities, the experience of their directors and staff, and their funding all point to common practices that can be found within museums across the country and around the world.

Utilizing the survey answers and collected research, this paper will tackle the issues that Air Force-run museums have run into in the past, and what they will continue to experience moving forward. The complexity of Air Force funding negatively affects its belief in heritage to the point that museums fall to the wayside. More funding would allow the Air Force to present the museums in the system in the best light to the public. Funding would allow for a better educational process for both the public and members of the U.S. Air Force, something that is extremely important with the on-going wars in

society. The government should fund the Air Force-run museums because if they want the support of the public, they need to express to the public their past and how the past will affect the future. Air Force museums can improve if they learn and employ best practices used by their civilian counterparts. The goal is to have these museums recognize their faults and learn how to better themselves so that they can better preserve the history of the U.S. Air Force and educate the public.

Chapter 2: Literature Review

2.1 Military Documents

The use of military documents within this paper will allow for a better understanding of Air Force protocol. However, to understand the goals and inner workings of the Air Force, it is important to understand what prompted the organization of the Air Force in the first place. “The Sacred Cow and the Creation of the U.S. Air Force,” by Jeffery S. Underwood,³ allows for the understanding of the formation of the U.S. Air Force while linking it to artifacts kept within the National Museum of the U.S. Air Force. Underwood also talks candidly about the NMUSAF and its influence over the Air Force in general because of its incredible collection.

The most important document within this paper is AFI 84-103.⁴ It is the outline of rules that each Air Force-run museum must follow. AFI 84-103 dictates exactly what each museum should have for storage, from exhibit cases to the types of boxes that each museum in the Air Force system should utilize for its artifacts. It also dictates the different professionals that should be in place in each museum; specifically, at least one professionally trained curator and one airman.⁵ Within this section, there are no exceptions listed – this will come strongly into play as this paper progresses. Funding and taking care of the museum are also discussed in detail. As a resource it is invaluable because the surveys gathered during research show that Air Force museums do not follow AFI 84-103 in the way they should, affecting the needs of all museums in the Air

³ Underwood, Jeffery, “The *Sacred Cow* and the Creation of the U.S. Air Force,” *Air Power History* 55, no. 2 (2008): 17.

⁴ U.S. Department of the Air Force, Secretary of the Air Force, *U.S.A.F. Heritage Program, Air Force Instruction 84-103*, (updated report), May 05, 2015, Air Force E-Publishing.

⁵ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 17.

Force. Curatorial needs in any museum are important, but the military rarely perform studies on that specific topic due to lack of interest or personnel. However, with the “Air Mobility Command, Archaeological Curation-Needs Assessment,”⁶ the U.S. Army Corps of Engineers studied Air Mobility Command’s archaeological collections and indicated what did and didn’t need to be done for the collections to continue to be utilized. The report indicates that the “curation of these materials has been largely substandard or ignored for over fifty years.” To have something so blatantly state such issues with Air Force-controlled artifacts indicates that there are some major issues in the museum and, in a larger scope, heritage system.

Another incredibly important aspect of understanding the Air Force way of thinking is the core competencies that every person interacting with the Air Force will run into at some point. Steven G. Seroka, in his paper “In Search of an Identity: Air Force Core Competencies”⁷ written for the School of Advanced Airpower Studies, discusses the general importance of core competencies as well as what they effect in the functioning of the Air Force, and whether the core competencies are being utilized in the best way possible. Seroka divides his thesis extremely well and makes thoughtful connections as he applies Air Force core competencies to different situations. He also looks towards the future, discussing where the core competencies might take the Air

⁶ U.S. Army Corps of Engineers. *An Archaeological Curation-Needs Assessment for the U.S. Air Force, Air Mobility Command*, by Natalie M. Drew. Ed. Christopher B. Pulliam and Michael K. Trimble, Technical Report No. 6, Final Report, Archaeological Curation-Needs Assessments, St. Louis, MO, 1995, vii.

⁷ Seroka, Steven G, “In Search of an Identity: Air Force Core Competencies,” Master’s Thesis, School of Advanced Airpower Studies, Air University, 1997.

Force as time moves forward.⁸ With this discussion in mind, the application of Air Force core competencies will be easily applicable to the research on Air Force museums.

Specifically, the National Museum of the United States Air Force (NMUSAF) is going to come into conversation often within this paper because it is the top Air Force-run museum in the country, and is the “world’s largest and oldest military aviation museum.”⁹ In “Measuring History,”¹⁰ authors Joseph Crance and Jerome Willoughby discuss how the NMUSAF underwent a work sampling project where they would measure the workload that the museum experiences. Similarly, “Keepers of their Stories”¹¹ by Tech. Sgt. Larry A. Simmons delves into detail the NMUSAF and how it affects its surrounding community. Since NMUSAF is the largest museum in the Air Force, it will be necessary to take an extremely close look at its functioning; not only is it the largest museum in the command, but it also acts as the “home base” to all other museums under Air Force regulations. If NMUSAF has faults the smaller museums in the Air Force system will have faults as well.

2.2 Museum Standards

To explore the extent to which a military-run museum differs from a publicly-run museum, one must understand general ideas and practices that are common in

⁸ Seroka, “Air Force Core Competencies,” 67.

⁹ Crance, Joseph and Jerome Willoughby, “Measuring History,” *Industrial Engineer* 39, no. 3 (2007): 33.

¹⁰ Crance and Willoughby, “Measuring History,” 33

¹¹ Simmons, Larry A, “Keepers of their Stories,” *Airman* (Spring 2007): 40-43

almost all museums and then apply that knowledge to specific actions that are documented.

Functionality of a museum is what allows the museum to flourish in society. If a museum isn't organized, there is a large chance of failure. *The Manual of Museum Management*, written by G.D. Lord and Barry Lord,¹² indicates this through organization tactics, analysis of the inner workings of museums, and management practices. This resource cites multiple real-world examples and charts for better description of each point. Having a resource such as this allows for a broad understanding of how museums should run. It focuses on both large and small museums, allowing for a better comparison to any size museum. Divided into three chapters, this book discusses the “why,” “who,” and “how” of museum management. Focusing on management of a museum allows for the expansion of ideas through leadership: “Too often, management bores on without the inspiration of leadership.” The U.S. Air Force, and perhaps all military branches, seem to need strong leadership to function. *The Manual of Museum Management's* discussion of leadership and management will allow for the research to be applied in a more specific way. Since museums need to have a leader – an Executive Director, a Board, or a single employee who answers the important and difficult questions – there is necessity in exploring what it means to be a leader and how those actions can influence a museum.

Delving deeper into the actions of a museum administrator proved to be extremely important within this research. *Museum Administration: an Introduction*, by

¹² Lord, G.D. and Barry, *The Manual of Museum Management* (Landham: AltaMira Press. 2009).

Hugh H. Genoways and Lynne M. Ireland,¹³ offers guidance in museum administration. As with *The Manual of Museum Management*, *Museum Administration: an Introduction* discusses management practices of museums in an in-depth, easy to understand way. Specifically, this book discusses the importance of having a strategic plan for a museum to follow and how to create and implement one. Often, the Air Force-run museums either have strategic plans that are extremely lacking or no strategic plan at all. This resource gives examples of Bryson and Alston's strategic planning process, which is drawn directly from workbooks presented by Bryson and Alston.

Leadership of any museum is a subject that will prove to be extremely important in the discussion of Air Force-run museums. Of course, the above-mentioned resources discuss the importance of having an executive director. But more specifically, it is important to discuss the specific necessities of an executive director. "Looking for a Superhero: a discussion of the qualities, training and experience needed to be a university museum director"¹⁴ outlines some of the most important qualities for leadership. While this article specifically covers leadership in university museums, it discusses much of the same characteristics of leadership as *Museum Administration: An Introduction*¹⁵ does; in fact, author Peter B. Tirrell specifically states that "...the characteristics and qualities are broadly appropriate for directors of university and non-university museums." He goes further to discuss the importance of museum directors

¹³ Genoways, H.H. and Lynn M. Ireland, *Museum Administration: An Introduction* (Landham: AltaMira Press, 2003).

¹⁴ Tirrell, "Looking for a Superhero: a Discussion of Qualities, Training and Experience Needed in a University Museum Director," *Museologia* 2003: 56.

¹⁵ Genoways and Ireland, *Museum Administration: An Introduction*.

having experience with museums in order to run a museum.¹⁶ This assertion is extremely important in the argument that Air Force-run museums need to adjust how its museums are run, as all of the museums that fall under Air Force purview have at least one airman in a high position of power¹⁷ and that one airman usually has no experience in museum studies. Tirrell also discusses the difference between leadership and management, stating that museums need to have both within a director for that museum to function at its highest level.¹⁸

Beyond just discussing the ins and outs of a leader, *The Manual of Museum Management* also discusses the daily running of museums – what should be done, and the common-sense actions that may not always be considered. All museums have some way of organizing the artifacts that they store; this refers to a collection policy. Each collection policy is different, but *The Manual of Museum Management* discusses some similarities that all public museum collection policies hold to make organization easier. Being able to compare these mass similarities to the odd collection policies from the U.S. Air Force allows for connections to be made for the best way to better USAF heritage programs. From stages in the exhibition process to outreach programs, this resource discusses the importance of running a museum to the best ability.

*Museum Administration: An Introduction*¹⁹ also discusses, in detail, the importance of budget and budgeting yearly costs. Using examples of different types of

¹⁶ Tirrell, “Looking for a Superhero,” 57.

¹⁷ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 18.

¹⁸ Tirrell, “Looking for a Superhero,” 60.

¹⁹ Genoways and Ireland, *Museum Administration: An Introduction*, 96-97.

budgeting, authors Genoways and Ireland show how to track certain costs and funding issues that may arise in the running of a museum. More importantly, *Museum Administration: an Introduction* discusses budget management. For museums to function, it is necessary that they have good budgets to work with and therefore the management of those budgets is extremely important, as reflected in the section titled “Budget Management Involves Everyone.”²⁰ It discusses in detail the roles of each aspect of the museum governing body as well as staff, including the executive director of any museum.

The effect of that budget, whatever budget is created within a museum plan, is exemplified through the article through “World of Museums.”²¹ This article gives specific examples of how museums function with different actions created by the governing board. Funding is recognized first, with the discussion of the Corporate Plan for the Natural History Museum, London from 1990-1995. This plan that was laid out affects a lot more than just the monetary income of the Natural History Museum, London; it affects the day-to-day functioning of the museum, from an updated mission statement to a change in employees.

Funding is an extremely important aspect of Air Force-run museums because the museums do fall under government funding. Extra money, like the money discussed in the article “Aerospace and Defense Companies; Boeing Announces \$5M Donation to

²⁰ Ibid., 101.

²¹ Rolfe, Ian, “World of Museums,” *Museum Management and Curatorship* 9 (1990): 287.

Air Force Museum Foundation”²² is very rare and therefore Air Force-run museums often have to fend for themselves when it comes to taking care of items that need monetary support, including utilizing unrelated foundations to get funding for specific activities or fixes to a museum.

Artifact care and storage, as well as policies that are applied to artifacts, is the stepping stone for any museum to function on a higher level of professionalism. One of the most important aspects of artifact care is the accessioning and, more importantly, deaccessioning of artifacts. This refers to the act of taking in or out artifacts from a museum collection, respectively. In her thesis titled “Ethics and Deaccessioning: How Museums Enact Deaccession Policies,” Christina Marie Lucas provides a comparison of the current practices of deaccessioning as well as the ethics that go together with the act of deaccessioning. She questions why and how a museum or collection would destroy an artifact when it is deaccessioned, and whether original ownership had any effect on the actions of deaccessioning an artifact.²³ She investigated three different museums and their collection policies to gather the best amount of information on deaccessioning actions that she could find.²⁴

Along with accessioning and deaccessioning of artifacts is the preservation of artifacts for future education of the masses. William Murtagh, author of *Keeping Time:*

²² “Aerospace and Defense Companies; Boeing Announces \$5M Donation to Air Force Museum Foundation,” *Engineering Business Journal* (2011): 157-158, Accessed January 26th, 2017, <http://search.proquest.com/docview/854872226?accountid=12964>

²³ Lucas, Christina Marie, “Ethics and Deaccessioning: How Museums Enact Deaccession Policies,” PhD diss., Stephen F. Austin State University, 2016. No. 10294188, 2.

²⁴ Lucas, Christina Marie, “Ethics and Deaccessioning,” 22.

The History and Theory of Preservation in America,²⁵ discusses the importance of preserving places. He gives the history behind historic preservation while directly relating it to modern times, as well as justifying actions with examples throughout the book. Beyond the history, Murtagh expands on the different schools of thought involving preservation, to include the “let-it-alone” school of thought, indicating that restoration and preservation of an object or place gets rid of the “patina of time in the process.”²⁶ While this resource may not seem like a logical connection to Air Force-run museums, the discussion of preserving large objects and static displays directly relates to the planes that are a large component of them. Murtagh also makes a point to show the government’s relationship to the preservation movement through the decades.²⁷

Philip Tonner, author of “Museums, Ethics and Truth: Why Museums’ Collecting Policies Must Face up to the Problem of Testimony,”²⁸ goes one step further and states that the interpretation of an artifact stems directly from the collection of said artifact and from the information collected when the artifact comes into any museum. He uses the collections of the U.S. Holocaust Memorial Museum to point out the importance of knowing the background and every possible story that could go along with an individual artifact. He also makes the point of the importance of understanding the artifact itself, without the background knowledge collected upon receiving the

²⁵ Murtagh, William J. *Keeping Time: The History and Theory of Preservation in America*, 3rd ed. Hoboken: John Wiley & Sons, Inc., 2006, 3

²⁶ Murtagh, *Keeping Time*, 3

²⁷ *Ibid.*, 37.

²⁸ Tonner, Philip, “Museums, Ethics and Truth: Why Museums’ Collecting Policies Must Face up to the Problems of Testimony,” *Royal Institute of Philosophy Supplement* 79 (2016): 169.

artifact within a museum. “Even though the medium of the artefact’s testimony is the speaker, the agent, the artefact’s ‘truth’ is ultimately independent of the truth of the speaker’s testimony (we can, after all, read an artefact incorrectly).”²⁹ The ethics behind collecting an artifact becomes more and more complicated as the article continues, but Tonner continues to indicate that the artifact needs to be represented fairly, without bias, and that the background stories should still be told. Tonner shows that it is a delicate but important balance to achieve.

Interpretation of exhibits into which artifacts are placed may not seem as important to the day-to-day running of a museum, but without these considerations a museum would lose any standing it has both in museum communities and local communities. “Practical Military History” by David J. Blackmore³⁰ discusses the generalizations of military history and the importance of presentation of said history to the public. Blackmore stresses that the approach to presenting military history is not accurate because of the split into “new” and “old” histories, versus a continuous history. This will be useful in the comparisons with the surveys collected for this research. Another article, “The Interpretation Is A-Changin’: Memory, Museums, and Public History in Central Virginia,”³¹ discusses the importance of interpretation in museums at a deeper level. Interpretation refers to what guests within museums take away from their visits, both in education and emotion. This article discusses how to have interpretation

²⁹ Tonner, “Museums, Ethics and Truth,” 169.

³⁰ Blackmore, David J., “Practical Military History,” *International Committee for Museum of Arms and Military History Magazine* (Summer 2012): 9, 29.

³¹ Broomall, James J., “The Interpretation Is A-Changin’: Memory, Museums, and Public History in Central Virginia,” *The Journal of the Civil War Era* 3, no. 1 (2013): 114-124.

within a museum without politicizing it. This is extremely applicable to Air Force-run museums as there will always be visitors to those museums who do not agree with actions that the Air Force has taken throughout its history.

A thesis written by Rebecca Harmsen titled “Warts and All: The Representation and Interpretation of War in Museums”³² delves deeper into the interpretation of military museums, exactly like the Air Force-run museums focused upon within this paper. She connects how interpretation of exhibits is presented with the regulations with which different museums must work. She states that “Military museum professionals understand the necessity of displaying and interpreting challenging subject matter to the public; however, the degree to which exhibits display the horrors of war depends on the specific institution.”³³ She concludes her research by presenting the idea that, by interviewing visitors to the museums focused upon within her paper, the conclusion of interpretation based on museum beliefs can be accurately measured.³⁴ Megan McCoy, author of “Relics of Battle: War, Memory, and New Museum Theory in Military Museums”³⁵ indicates the same; she states that in order for museums to come into the more recent century and affect visitors, museums often have to “face difficult realities like outdated exhibitions, marginalized voices, and giving up authority in order to create dialogue with their communities.” The dialogue she refers to is interpretation, much like

³² Harmsen, Rebecca, “Warts and All: The Representation and Interpretation of War in Museums,” Masters’ Thesis, University of Washington, 2016, No. 10138574.

³³ Harmsen, “Warts and All,” 3.

³⁴ Ibid., 84.

³⁵ McCoy, Megan, “Relics of Battle: War, Memory, and New Museum Theory in Military Museums,” Masters’ Thesis, University of Denver, 2016, No. 10133582, 52.

what is discussed in “Warts and All: The Representation and Interpretation of War in Museums.”

The above-mentioned resources, “Practical Military History,” “Warts and All: The Representation and Interpretation of War in Museums,” “Relics of Battle: War, Memory, and New Museum Theory,” and “The Interpretation Is A-Changin’: Memory, Museums, and Public History in Central Virginia” show the importance of connecting the artifacts and histories that museums hold to the people who visit, whether they are local community members or tourists. Without that connection, museums are just buildings that hold old items.

Chapter 3: Research Methods

While the measuring the day-to-day running of any museum sounds straightforward, it is anything but. The necessity to investigate how a museum functions forces a look into both best-used museum standards and the individual procedures of each museum. Best-used museum practices are often shared beliefs throughout the museum community. However, due to lack of employees, lack of funds, or any other reason, the agreed-upon best-used museum practices may not always be utilized.

This research stems from personal experience of the author. With over 900 volunteer hours documented at the South Dakota Air and Space Museum, which does fall under the “Air Force-run” museum category, the author has experience in how that specific museum has been run and continues to run, thereby giving insight into the Air Force-run museum system.

3.1 Participants

To collect as many surveys as possible, questionnaires were sent directly to employees or volunteers of museums all over the country. There were no age specifications placed on them – in fact, difference in ages will allow for multiple points of view when it comes to dictating how a museum functions. Participants come from a variety of backgrounds, both military and civilian, and are from both genders. Surveys were directed to all types of museum employees, but responses that were most often received were from Executive Directors. All the participants have been kept anonymous with pseudonyms to protect their identities. Since many of the participants are military members or work for the military, it is imperative that the answers of the surveys remain anonymous. Gender, age, ethnicity, and religion do not play a part of this research; what really mattered was whether the people who took the surveys worked within museums, whether paid or unpaid.

Surveys were sent directly to museums. This was done because more transfers of information could cause confusion and misplaced information. Air Force-related museums were chosen from contact information given by Global Strike Command;³⁶ other military museums were chosen through research. Non-military museums were chosen for different reasons – all of them have a military tie somewhere within their foundations or collections. This relationship was necessary for comparisons.

³⁶ U.S. Air Force, *History and Museums Program Directory*.

3.2 Surveys

The survey sent to each Air Force run museum was specifically created for its programs. Titled “Masters’ Thesis Questionnaire for Military Museums,” (see Appendix 1) it was a survey requiring extensive written answers rather than “yes or no” answers. With AFI 84-103 giving specific actions to be done in museums regarding different aspects of day-to-day running of the museum, it was important for the surveys to question whether the museum functioned as well as AFI indicates that it should.

The Military-Run Museum Questionnaire asks whether the person taking the survey has a background in working in museums. That question is immediately followed with “Do you believe your job would be easier if you had a background in the museum field?” These two questions were created with the idea that airmen who are stationed at museums can introspectively evaluate whether they feel they are adept at doing their job. Similarly, it is hoped that veterans can evaluate whether they have the schooling to make their museum function at the highest level possible.

A question on the Military-run Museum Questionnaire that is also extremely important for employees to answer would be “How do you store your artifacts that are not on display?” To preserve history and heritage, which is one of the goals of the U.S. Air Force in general, artifacts must be taken care of to the highest regard. The survey questions delved into what artifacts were the most important for each museum, how they were taken care of, and how they were stored. This would allow for a better understanding of not only how the artifacts are cared for, but how the artifacts are thought of by the museum system.

Surveys that were sent to non-military museums have many of the same questions asked about their artifacts and the educational backgrounds of their employees. However, one difference is the question “What are your feelings on military-run museums in general, and specifically Air Force-run museums?” It was important to add this question to get a good understanding of what the public believes about military-run museums. Further questions include whether the participants’ museum has ever interacted with a military museum in any fashion.

Each employee or volunteer of a museum may recognize the best practices for what they do, but they may be unable to make those best practices a reality. To collect a presentation of museums within this research, the surveys that were sent ask questions that can be answered by “best practices” but, ideally, would be answered with a realistic point of view. Since the focus of this research is on U.S. Air Force-run museums, surveys were sent to base historians, museums that have purely static displays in the form of airplanes or air vehicles, and main museums.

Surveys were also sent to public museums situated across the nation to get a good comparison for running museums. These surveys have very similar questions to the ones that were sent to military-run museums to have consistency through the research. This survey is titled “Masters’ Thesis Questionnaire for Non-Military Museums” (see Appendix 2).

It is important to note that each of the surveys came with the option to not answer them, or to have the answers kept anonymous. This way there can be no backlash in any career now or in the future. Sadly, not all the museums requested to fill out surveys did so. Surveys were sent to twenty military-run organizations and only five

were returned. Some of the military-run museums returned blank surveys or refusals, and a few of the military-run museums requested to fill out surveys responded with ways to answer the survey questions via official means, including websites with military documents. Positively, there were some military-run museums who went above and beyond for filling out the surveys – not only did they send a full survey back, but they sent extra information that they deemed might be useful for further research. For non-military run museums, out of the 40 museums that were requested to fill out surveys, only ten did so. 30 museums refused to fill out the surveys or did not respond with information. There could be multiple reasons for the non-cooperative efforts of these museums – fear of being penalized for filling out the survey being the largest worry.

The surveys that were received from all the museums will be analyzed and documented by their answers and will be discussed both individually and with multiple comparisons, both in their own group and against the opposite group. Answers on the surveys will be analyzed to aid Air Force-run museums in bettering themselves by utilizing the best practices used by their civilian counterparts. All these surveys gathered do tend towards the idea that military-run museums need to have better funding and support for their survival, to match their civilian-run counterparts.

Chapter 4: Background

4.1 Non-military and Publicly-run Museums

When a museum is referred to as a non-military or publicly-run museum, those museums do not have any relationship with the Department of Defense - they are not supported monetarily by any military branch. These museums are most often the ones that are visited by the public daily in both large and small cities all over the country. The number of museums that fall into this category greatly outnumbers the military-run museums; these museums have an ability to survive in an ever-changing world that may strongly affect the military-run museums' survival.

4.1.1 Preserving the History

Often museums will outline their true goals in their mission and vision statements. These are statements upon which the museum should base all their organizational and business decisions. The mission statement of a museum is extremely telling for what their goals are for the future. Mission statements “may consist of a simple, one-line description, or it may be expanded to cover the institution’s goals, purpose, and scope of collections.”³⁷ A mission statement lays out what the museum believes in and what the museum wants to achieve. It should answer the question: “Why

³⁷ Genoways and Ireland, *Museum Administration: An Introduction*, 21.

should people care about this museum?”³⁸ It should prompt visitors to look carefully, no matter what the object or topic that is being discussed.³⁹ Mission statements dictate what the museum could accept as artifact donations, what types of educational activities they support, and what shows they put on for the surrounding community. Vision statements are very similar – oftentimes they can be interchangeable with mission statements. Vision statements investigate the future and set goals for where the museum wants to be after a certain amount of time. These statements dictate what the museum believes and how it portrays its goals of preserving history. Without museums preserving history, communities will lose extremely vital information on both a local and national scale.

The word “preserve” tends to suggest the idea of saving something, be it an object or an idea. Preservation is “the act or process of applying measures to sustain the existing form, integrity, and material” of an artifact or building.⁴⁰ Often, when discussing the preservation of an object or historic site, the idea of conservation and restoration are being discussed. Curators usually want to conserve and restore artifacts or buildings so that future generations can have access to them from which to learn lessons. While this could be the case for museums and historic sites, preserving history also includes the presentation of artifacts in a way that is emotionally hard-hitting, something that will make a difference to a visitor. This is known as interpretation, and it is something with which all museums struggle.

³⁸ Lord and Lord, *Manual of Museum Management*, 2-3.

³⁹ Genoways, *Museum Philosophy for the Twenty-first Century*, Landham: AltaMira Press, 2006, 48.

⁴⁰ Murtagh, *Keeping Time*, 5.

There are educational courses that people attend to become better at understanding and implementing interpretation techniques. The term “interpretation” is used to describe the way a museum communicates with its visitors about the artifacts and information that the artifacts hold.⁴¹ It is important for the museums to have open minds about their purpose and responsibility.⁴² Museums must be inclusive to all visitors, not just the visitors that the museum receives most. Interpretation should be able to reach young and old, people with English as a second language, and those handicapped in some way – all these people deserve to be educated in the museum. Interpretation and education go together. Education tends to be the number one goal for all museums.⁴³ Interpretation of artifacts can lead to education, both directly through the signage in the museum and indirectly with the link of educational programs to go along with exhibits within a museum.

Broomall stated “[Learning] is largely voluntary and self-directed but also shaped by what content an institution conveys through interpretation and exhibition. The potential impact of these narratives should not be underestimated.”⁴⁴ Interpretation not only is an educational piece, but one of extreme conflict as well. Depending on how an artifact is presented, interpretation could be extremely political. Interpretation should be an “expression of what museums ‘do’: a museum is a space of (the generation of and

⁴¹ Lord and Lord, *Manual of Museum Management*, 130.

⁴² Genoways, *Museum Philosophy for the Twenty-first Century*, 140-141.

⁴³ Genoways and Ireland, *Museum Administration*, 274.

⁴⁴ Broomall, “The Interpretation Is A-Changin’,” 115.

mutual influence and conflict of) plural views and self-reflection.”⁴⁵ Self-reflection might result in challenging the museums’ point of view or presentation of facts.

Often museums utilize hands-on exhibits, classroom activities, lectures, films, and special events to educate the community better than what it would if it was just a building filled with exhibits to be read. Educational programming needs to reach all ages and cultures to fully meet the museum’s goals. Educationally, there needs to be opportunities for children of all ages to be able to utilize the tools that the museums give. The Journey Museum and Learning Center in Rapid City, South Dakota gives multiple types of educational opportunities weekly. Spanning from Toddler Tuesdays, aimed towards one to five-year-old’s, to Learning Forums and “Turtle Soups” that are aimed towards all ages, the educational opportunities allow for an expansion of what the Journey Museum presents within its exhibits.⁴⁶

The other important piece for museums to educate the surrounding communities is to interact with the local schools.⁴⁷ Whether it is working with school groups to give tours around the museum, or having college students as volunteers, extending the opportunity for schools to take advantage of the museum that is in their neighborhood is extremely important for continuing to educate the masses about the museum. It also allows for a different type of learning; instead of sitting in a classroom, children can learn through hands-on interaction, which seems to cement the lessons more vividly in their minds.

⁴⁵ Tonner, “Museums, Ethics and Truth,” 172.

⁴⁶ Observed by author 10/24/2016.

⁴⁷ Lord and Lord, *Manual of Museum Management*, 138.

4.1.2 Caring for Artifacts

Museums often are in the public eye with the discussion of their importance to society. One such discussion of importance focuses on the artifacts that the museums house, and what they represent for their surrounding communities. Publicly-run museums are not lucky enough to have an all-encompassing packet of “best practices” on which to base their functioning and their caring of artifacts. These museums often use the best practices that are regulated by large organizations, i.e. the American Association of Museums (AAM). AAM employs large amounts of museum professionals who work together to continually update information and keep publicly-run museums aware of what new and upcoming practices will be most important to implement at their museum.

Museums must be able to manage their artifact collections effectively while preserving the collection and yet being true to its mission statement and acknowledging the worries of the public.⁴⁸ Most publicly-run museums have storage spaces that are adequate for their artifacts. Adequate would mean that they have lighting appropriate for the artifacts in the storage space, as well as appropriate humidity levels; their storage would need to be able to hold what artifacts they are supposed to house, and their ability to preserve the artifacts within their museums is extremely high. Most often, museums have what is called “preventative conservation” which “is concerned with the condition of the overall collection rather than the condition of individual objects.”⁴⁹ It regulates

⁴⁸ Genoways and Ireland, *Museum Administration*, 175.

⁴⁹ Genoways and Ireland, *Museum Administration*, 187.

the temperature and humidity at a fixed level, one that would be considered safe for most if not all the artifacts within that storage space.

The stability of humidity and temperature are integral – in fact, museum storage should have a temperature between 66 to 72 degrees Fahrenheit with regulated humidity based on the temperature.⁵⁰ The humidity will fluctuate depending on the seasons; museums require a higher humidity during the winter and a lower point during the summer.⁵¹ Further, storage areas within museums should be constructed of nonreactive material (material that does not off-gas or have chemical signatures) that do not allow for vibrations, light, dust, pests or pollution to access the artifacts.⁵² These usually are boxes that are made out of a non-reactive material – one that does not release any damaging chemicals over long periods of time - along with tissue paper to protect the specific artifacts from others or themselves. Depending on the level of acidity that artifact has, the tissue paper can either be buffered or unbuffered. Storage boxes will immediately protect from light damage, because the artifact will be completely covered by the box and it will be an opaque barrier. Similarly, dust and pollution will be protected against. In storage, the largest concern behind humidity and temperature would be pests. Both insects and rats pose a huge problem for artifacts because the pests look for food and homes when they are found in the storage areas. All museums should

⁵⁰ Genoways and Ireland, *Museum Administration*, 188. and Lord and Lord, *Manual of Museum Management*, 196.

⁵¹ Ibid.

⁵² Genoways and Ireland, *Museum Administration*, 188.

have a way to rid themselves of the pest that is both safe for the artifacts and humane for the pests themselves.⁵³

Beyond the above issues that museums can face, the safety of artifacts while in storage is also a part of caring for the artifacts that not many museums utilize. Storage for artifacts should be locked tightly, under some sort of security with regulated access – and it is dependent on the type of artifact being protected. The Department of Interior, Indian Arts and Crafts Board Sioux Indian Museum, in Rapid City, South Dakota, has storage spaces protected with key pads.⁵⁴ The only person allowed in these storage spaces is the curator of the museum, who must be vetted by the DOI to be considered for the job. This is because the storage spaces house ceremonial and funerary Native American artifacts;⁵⁵ it could be disrespectful or even sacrilegious to look at certain items without the correct ceremonies being performed. Often small items of high value are the most protected with alarmed vaults,⁵⁶ followed by works of art and other items of high value.⁵⁷ All storage should have regulated access, whether curators just sign in when they enter and leave or if some curators have copies of keys to access storage areas.

Deaccessioning artifacts is another aspect of making sure the artifacts are cared for properly. In civilian-run museums the deaccessioning of artifacts becomes quite the

⁵³ Lord and Lord, *Manual of Museum Management*, 105.

⁵⁴ Observed by author on 07/28/2016.

⁵⁵ Conversations held between Conor McMahon, curator of the Sioux Indian Museum, and the author on 07/28/2016.

⁵⁶ Lord and Lord, *Manual of Museum Management*, 206.

⁵⁷ Ibid.

conversation to have, especially if the artifacts are ceremonial or funerary and belong to a culture different than that of the surrounding area. Repatriation, the act of returning artifacts to a community, has put the act of deaccessioning in the limelight of the museum world.⁵⁸ If repatriation is not involved in the deaccessioning of an artifact, then the process tends to go extremely smoothly. Deaccessioning only occurs rarely, and usually occurs for a couple of reasons, to include “objects that do not fit the museum’s mandate; objects acquired illegally or unethically; duplicates that are inferior to more recently acquired examples; and objects in a condition that is not cost effective to restore.”⁵⁹

When artifacts are on display publicly-run museums make sure to recognize and eliminate all possible dangers to the artifacts. These dangers are like the ones that are faced while artifacts are in storage, and much of the preventative measures are the same. However, while the artifacts in storage have the protection against light, dust, and pests thanks to the containers in which they are stored, this is not as often the case for the artifacts that are on display. Cases that are on display have multiple aspects that need to be adjusted, depending on what artifacts are stored within them. The cases of course should have some sort of alarm system or cameras focused on them for safety of the artifacts.⁶⁰ Cases cannot normally be under lock and key, so security is taken in a different direction. They should also be tight in the corners and joints,⁶¹ not only for

⁵⁸ Lucas, Christina Marie, “Ethics and Deaccessioning: How Museums Enact Deaccession Policies,” PhD diss., Stephen F. Austin State University, 1.

⁵⁹ Lord and Lord, *Manual of Museum Management*, 88.

⁶⁰ Ibid., 210.

⁶¹ Ibid.

security but for the protection against pests and possible pollutants as well. It is recommended that museums “create micro-environments in which the objects can spend time in the so-called limelight without suffering any adverse effects.”⁶² This way the artifacts can continue to educate the public without risking the loss of the artifact in the process. If the environments are supervised, artifacts will continue to thrive while on display.

Caring for artifacts also means protecting against weather. Flooding or fires can cause immense issues for any museum, so to stave off the worst museums have emergency plans that dictate the best way to take care of the artifacts in any situation. Of course, this plan will vary from museum to museum based on the area of the country that the museum resides in, as well as what types of artifacts that the museum houses.

In both storage and display, one of the largest concerns is the interactions that humans have with artifacts. If curators are ever going to be interacting with artifacts for any reason, they should be wearing gloves, unless otherwise advised.⁶³ This prevents the oils on the hands of the curators from being transferred over to the artifact and possibly doing irreversible damage. It also protects the curators – what would happen if there was a dangerous chemical on the artifact and it aggravated the skin of curators trying to do their jobs? There is a never-ending list of dangers for artifacts in museums, as well as curatorial staff, and if museums disregard these dangers then they could lose the artifacts that they have within their collections.

⁶² Genoways and Ireland, *Museum Administration*, 280.

⁶³ Lord and Lord, *Manual of Museum Management*, 105.

4.1.3 Communities and Museums

Museums are continually attempting to include their surrounding communities to enhance their own images. Some museums do this through interactions with the community schools – allowing high school “band or theater groups in a museum program will bring a new audience – parents and school leaders – to the museum and generate goodwill within the community.”⁶⁴ On a national level, in the year 2000 the AAM sponsored an initiative called the “Museums and Community Initiative” which “created opportunities for dialogue between museums and community leaders as well as outside experts on community life....”⁶⁵ Having a relationship between museums and community leaders is extremely important; not only could the museum provide meeting places and other helpful necessities to the community leaders, but the community leaders in turn could show their support for the museum. This could mean the difference between a museum continuing to exist and a museum falling to the wayside.

Communities do not just have to be the physical surrounding area of a museum. It is a good idea for museums to recognize and praise their donors and volunteers on a yearly basis, if not more often. Museums only function on a high level if they have the volunteers and donors to match the actions of the museum. Donors, of course, fund activities that the museum wants to host. They could also donate items that are necessary for those activities to take place, i.e. craft supplies for children’s educational activities, etc.

⁶⁴ Genoways and Ireland, *Museum Administration*, 268.

⁶⁵ Ibid.

Volunteers do everything and anything that a museum could possibly need. From leading tours to helping “the goodwill of those who already volunteer and donate to the museum will increase their feelings of satisfaction with the museum and may encourage them to volunteer and donate more.”⁶⁶ It is a circular motion – the more a museum thanks and acknowledges their donors and volunteers, the more the donors and volunteers will help the museum.

4.1.4 Funding Opportunities

Non-military-run museums or publicly-run museums have more opportunities for funding than their military counterparts. Primarily, “governments at all levels contribute to the financial support of museums for a wide variety of reasons.”⁶⁷ These can vary from governments wanting to preserve the history of the area to tourism and social growth.⁶⁸ Whatever the reasons for government support, the funding is always needed, as most museums do not turn a profit annually.

Having government funding for museums, while an awesome asset, does give potential issues as well. One of the potential issues is how the government feels about funding the local museum. It will not always be a friendly relationship between the government and the museum. This could lead to museums having to possibly depend on themselves to have funding. If museums must partially depend on themselves to have the funding they need, then it is important to recognize programming for what it is and

⁶⁶ Genoways and Ireland, *Museum Administration*, 269.

⁶⁷ Lord and Lord, *Manual of Museum Management*, 240.

⁶⁸ Ibid.

what it could be. There are programs that could be both costly to museums, and a revenue stream for museums. One such aspect would be educational programming.⁶⁹ Depending on what the programming is for – concerts, for example – money could be gained and utilized for further educational opportunities within the museum.⁷⁰ However, if educational tours are mandated to be given freely to schools that visit, it could be costly to the museum.⁷¹ It is important to budget appropriately in regards to these minute details, otherwise the museum could very much so lose its abilities to fund activities.

4.2 Air Force-run Museums

The difference between military-run museums and publicly or privately-run museums is that military-run museums are funded by the Department of Defense and overseen by their specific military branches. The museums, or historic places, are often found on military bases or academy grounds, and this restricts accessibility to the public. Generally, military history has been approached with a renewed attack, causing the categories of military museums to become “old military history” and “new military history.”⁷² The Air Force is going one step further and combining these two categories to extend their historic reach.

⁶⁹ Lord and Lord, *Manual of Museum Management*, 238.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Blackmore, David J., “Practical Military History,” *Icomam Magazine*, 9: Summer 2012, 28.

The U.S. Air Force oversees 13 museums, nine heritage centers, and two air parks within its total reach.⁷³ Each of these historic places falls under different commands: Air Education and Training Command (AETC), Air Force Global Strike Command (AFGSC), Air Force Material Command (AFMC), Air Force Space Command (AFSPC) and Air Mobility Command (AMC).⁷⁴ The museums are scattered across the U.S. , but each one has a regulated outline of procedures and actions, AFI 84-103, that museums are expected to follow closely in order for them to function on a comparable level to museums that are publicly-run. Last updated in 2015, AFI 84-103 is the leading source for the U.S. Air Force Heritage Program (USAFHP).

AFGSC is the most important command on this list, as it is home to the National Museum of the U.S. Air Force (NMUSAF), as well as some of the most visited military-run museums in the country. The NMUSAF is the largest of all the museums and is the “home base” for all other USAF-run museums and from where they can get most of their artifacts. Located in Dayton, Ohio on Wright-Patterson Air Force Base, the NMUSAF is considered the “home base” because of its ability to employ large numbers of people and its focus on conservation, preservation, and presentation of artifacts. This museum is situated on 17 acres of land, houses 500 aerospace vehicles and 78,000 artifacts.⁷⁵ According to the AFI 84-103,

The NMUSAF is...assigned as a direct reporting unit (DRU) of
Headquarters (HQ) Air Force Material Command (AFMC) for logistics

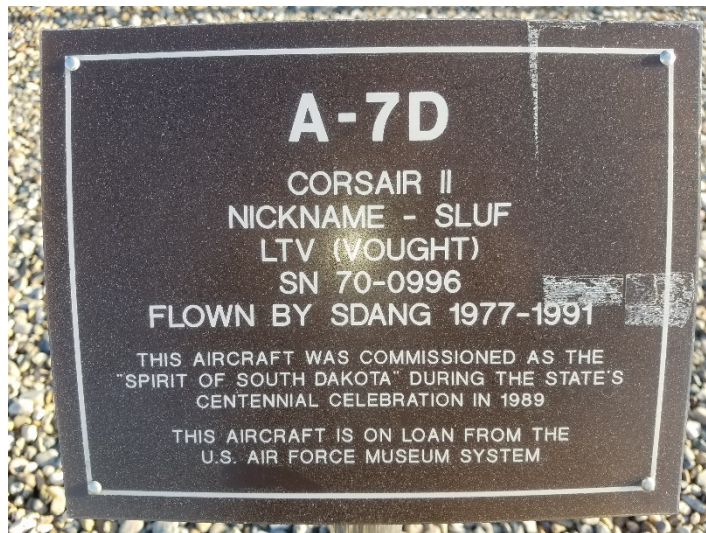
⁷³ U.S. Air Force, *History and Museums Program Directory*, 2.

⁷⁴ U.S. Air Force, *History and Museums Program Directory*.

⁷⁵ Information released by U.S. Air Force Air Material Command, 2010.

and administration. It is delegated by the Secretary of the Air Force (SECAF) to be the service-level authority on the stewardship and accountability of USAFHP property and to provide the broadest interpretation and presentation of USAF history and heritage. NMUSAF is obligated to ensure that heritage activities are meeting stewardship and accountability requirements for the historical property in their custody. As such, it may periodically be required to evaluate heritage activities and advise supporting commanders and Major Command History Offices (MAJCOM/HOs) on the acceptable levels of professional museum standards and practices. NMUSAF provides USAFHP leadership opportunities to identify and intervene to correct potential problem areas before they negatively impact an artifact.⁷⁶

NMUSAF also
its artifacts to
museums within the
Force Heritage
Program, as well as
civilian museums
pass an inspection
follow AFI 84-103
guidelines (see
example in Figure 2).



loans
Air
that
and

Figure 2. Example of USAF Loan.

⁷⁶ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 7.

That leaves the 23 other Heritage Programs that fall within the Air Force system. These include Air Force Field Museums (AFFMs), Air Force Heritage Centers (AFHCs), Air Force Historical Holdings (AFHHs), and airparks. AFFMs showcase specific Air Force functions.⁷⁷ One museum that falls into this category would be the South Dakota Air and Space Museum, located just outside of Ellsworth Air Force Base (EAFB) in Western South Dakota.

Air Force Heritage Centers display the history and actions of a wing, command, or base.⁷⁸ AFHHs “are collections of historical property under Air Force control displayed in a trophy room, visitors’ center, hall of fame, hallway exhibit, or other type of display not recognized by the Air Force as a field museum or a heritage center.”⁷⁹ Air parks are exactly what they sound like, they have aircrafts or missiles on display in an area that allows visitors to walk around and inspect.⁸⁰

4.2.1 Preserving the History

The U.S. Air Force was originally called the U.S. Army Air Corps, as a segment of the US Army. Only after WWII, once the threat of the invasion of communism rose, did the Army Air Corps become the U.S. Air Force. This military branch is the youngest branch in the U.S., having been organized in 1947. Even though the Air Force

⁷⁷ Ibid.

⁷⁸ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 7.

⁷⁹ Ibid.

⁸⁰ Ibid., 8.

is a young military branch, its history regarding flight and war is one that all should learn and be able to share.

While it would seem like an obvious goal, the action of preserving history within a museum or heritage center is not always the most focused upon goal. The U.S. Air Force has increasingly concentrated on the heritage of their past. All of the heritage activities within the USAF museum system need to have approved mission statements.⁸¹ “The missions of all USAF heritage activities collectively express the Air Force’s heritage and preserve its material culture.”⁸² These statements must be specific and concise in the description of the goals of any heritage program.⁸³ A good example of a well-followed mission statement is the mission statement for the SDASM:

“Improve US Air Force combat capability by reinforcing and preserving the identity, history, and traditions of the USAF, Ellsworth AFB and SD aviation through aerospace history exhibits, education and activities for military personnel and the general public.”⁸⁴ By stressing the desire to promote combat capability and having interactive activities for military personnel, the SDASM reiterates what the USAF is overall trying to achieve by focusing on heritage.

⁸¹ Ibid., 83.

⁸² Ibid.

⁸³ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 83.

⁸⁴ Taken from Survey received from SDASM, which discusses the MOU between the Commander, 28th Bomb Wing, Ellsworth AFB and the Ellsworth Heritage Foundation, 26 September 2017.



Figure 3. Installation of Signage at Minuteman Missile Trainer on Ellsworth Air Force Base.

There is no focus on interpretation, but education and interpretation continue to be part of a larger goal for the heritage programs of the Air Force-run museum system (see example of interpretation practices in Figure 3). To continue to promote the heritage of the U.S. Air Force, the heritage programs must form interpretive and educational labels and signs that explain the stories of the artifacts and presents them in an emotionally-reaching light.

4.2.2 Caring for Artifacts

Artifacts within the Air Force-run museum system are as important as the artifacts in a civilian-run museum. According to AFI 84-103, which regulates all of the museum actions within the USAF Heritage Program, “A heritage activity’s artifact

collection is its most important component and that which identifies and defines it.”⁸⁵

Every Air Force-run museum in the heritage system cares for its artifacts in the best way they know how and follows the rules for the care of their artifacts accordingly.

Every heritage program has a Condition and Conservation Survey that needs to be filled out for each artifact within each specific collection as an additional protection for the artifacts and the museum. This survey documents the general condition of the artifacts, the materials, and anything wrong with the artifacts physically, chemically, or biologically (see Appendix 3).

In Air
Force-run
museums, care and
storage of artifacts
prescribed to be
same as in any
civilian-run
museum.



are
the

Figure 4. Interior of Gallery 1 at the SDASM.

Temperature and

humidity need to remain constant at 67 degrees and 47 percent, respectively; pests and pollution need to be avoided at all costs.⁸⁶ The amount of damage a beetle can do to a leather flight jacket, for example, can be easily avoided with storage boxes that can be kept on shelves around the area. Storage spaces should be locked and only accessible to

⁸⁵ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 46.

⁸⁶ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 46.

essential staff and volunteers. Like their civilian counterparts, Air Force-run museums secure the most important pieces in their own cases, with key pads or locks protecting them inside of the larger storage area. To protect from flooding, storage area shelves need to be raised at least four inches off the floor, and each museum needs to have an emergency plan in place for their artifacts in case the worst occurs.⁸⁷

Air Force-run museums do have to care for aerospace vehicles more often than civilian-run museums – if they are made of wood or cloth the vehicles need to be kept inside, unlike their metal counterparts.⁸⁸ The Air Force has a specific set of rules and regulations for their outside static displays, including of the importance of bird-proofing⁸⁹ and painting the interior of the windows on any aerospace vehicle with reflective paint so that the sunlight doesn't fade and/or do extensive damage to the interior of the vehicle.⁹⁰

In Air Force-run heritage programs, the act of deaccessioning items is important. Often, if an artifact is no longer able to be displayed, these artifacts will be turned into Educational Support Items (ESI). If this is the case, the NMUSAF will have to verify this action and then the status of the object will change within the database.⁹¹ If the object in question is missing, or extremely damaged or destroyed, then the “NMUSAF

⁸⁷ Ibid., 47.

⁸⁸ Ibid., 46.

⁸⁹ Birds really like living in the wheel wells and engine intake spaces. In order to protect the planes from the immense amounts of pigeons and other birds, spiked metal is attached to the planes. The pieces used are like the ones that are on the signs outside of malls or large chain stores.

⁹⁰ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 50.

⁹¹ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 29.

will initiate deaccession action where applicable.”⁹² This falls in line with the actions of civilian-run museums and deaccessioning items.

When on display the artifacts that the U.S. Air Force museum system owns fall under specific rules and regulations. Most of the rules could be considered “common sense” to those who read them, such as “Do not put screws, nails, pins, single- or double-sided tape, or other adhesives in direct contact with any artifact...”⁹³ The adhesive part of the tape could cause extensive damage to the artifacts, not to mention the holes that a screw or nail would leave behind in an artifact. This damage is irreversible in most cases, and therefore should be avoided at all costs. The cases need to be able to protect against pests and pollution as well and should not off-gas or cause any chemical reactions with the artifacts themselves.⁹⁴ Similar to civilian-run museums, it is important to note that the Air Force wants to keep its personnel safe as well. There are regulations in place for wearing gloves for the safety of the volunteers and employees.⁹⁵ AFI 84-103 also regulates the interaction staff and volunteers would have with radiation and the objects within which it can be found.⁹⁶

⁹² Ibid., 40.

⁹³ Ibid., 47.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid., 55-60.

4.2.3 Communities and Museums

Most of the Air Force-run museums are on-base, which means the museum is within the base gate and their visitors are regulated by Security Forces. The only Air Force-run museum outside of the security gates is the South Dakota Air and Space Museum next to Ellsworth Air Force Base in South Dakota – and a satellite location of the museum is located on the base. For the most part, entering and leaving museums on the bases is not an issue, but when there are drills or other regulated practices, the museum's needs get ignored for the base to achieve what it needs.⁹⁷

Programming and publications are extremely important aspects of Air Force heritage programs because they are ways to reach a broader audience than those just utilizing the museums. “Heritage activities are encouraged to further their mission through educational programs and activities such as lectures, guest speakers, multimedia presentations and programs targeted toward both military and civilian audiences. Particular attention should be given to sponsoring special recognition programs related to important or historic Air Force people, events and dates.”⁹⁸ Publications can be a cooperation between the museum or historical presence and the base itself, especially Public Affairs, to bring more attention to the heritage program.⁹⁹

The USAF-run museum system does have an opportunity to partner with publicly-run museum systems, as long as the publicly-run museums meet all protocol

⁹⁷ Collected from Author's observations and experiences while volunteering at Air Force-run museums 2016-2018.

⁹⁸ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 76.

⁹⁹ Ibid.

for their artifacts to be safely housed.¹⁰⁰ There is a process to go through to get that recognition, which includes a pre-loan certification.¹⁰¹ Once approved these loan programs have three goals: “They seek to bring Air Force history and heritage to a wider, civilian audience. They also serve to assist organizations qualified under 10 USC §2572 in fostering a deeper appreciation and interest in aerospace history, education and technology. Lastly, these loan programs seek to memorialize the accomplishments of American Airmen.”¹⁰² 10 USC §2572 is a code by the U.S. Government that regulates the loan, gift, or exchange of a historical artifact or material.¹⁰³

There is a large tourism impact for the military-run museums. The South Dakota Air and Space Museum gets, on average, 115,000 visitors a year through their doors.¹⁰⁴ This huge number can be accredited to the location and the fact that it is a free museum. Situated near Mt. Rushmore, the South Dakota Air and Space Museum brings in large numbers of people on their way to see the giant memorials honoring past presidents. Many of these guests do tend to be veterans as well. 115,000 visitors a year is a huge tourism impact for western South Dakota – and those numbers are only from one museum.

¹⁰⁰ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 73.

¹⁰¹ Research collected by author. Documents involved in the process include requests for measurements in temperature and humidity, as well as documentation on the mission and vision statements and by-laws of the interested museum.

¹⁰² U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 73.

¹⁰³ "10 U.S. Code § 2572," LII / Legal Information Institute, Accessed April 28, 2018, <https://www.law.cornell.edu/uscode/text/10/2572>.

¹⁰⁴ Dan Kuecker, Director of the South Dakota Air and Space Foundation (in discussion with the author) 05/27/2017.

The other side of the community aspect of the USAF-regulated museums is the number of volunteers. All the USAF-run museums thrive on volunteerism. Even the NMUSAF utilizes volunteers, especially when they restore the planes that they wish to display. Many of the NMUSAF volunteers are veterans who had experience with working on planes during their years of service. Likewise, volunteers at the SDASM use their strengths to help around the museum. Without volunteers, many of the necessary projects at both museums would not be completed.

4.2.4 Funding Opportunities

Monetary issues are not unheard of within the Air Force-run museum system, and not all the funding for the system comes from the U.S. Government. A great amount of funding for SDASM, similarly with all museums in the Air Force system, comes from Ellsworth Air Force Base and funnels to SDASM, as is the norm with active squadrons on any base. Base commanders who support the running of the museums are responsible “for all costs associated with acquiring, preparing for display, maintaining and, when appropriate, disposing of USAFHP artifacts to include aerospace vehicles at heritage activities for which they support.”¹⁰⁵ According to AFI 84-103, “Appropriate funding is needed to ensure heritage activities are presented in a professional manner and reflect accurately and favorably on the Air Force.”¹⁰⁶ Utilizing the word “required,” the AFI lists in detail what the heritage programs of the U.S. Air Force should support and fund yearly, if not more often. AFI 84-103 requires that field

¹⁰⁵ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 21.

¹⁰⁶ Ibid.

museums have professionally trained staff and specifies that “AFFM directors are civilian employees occupying a professional museum position at a grade level appropriate to the heritage activity. The director performs the traditional duties of a curator in smaller AFFMs.”¹⁰⁷ A “grade level” refers a “GS,” or Government Service position for a civilian. These positions usually correlate with the military ranking system, to give parallel perspective.

	PROFESSIONALLY TRAINED STAFF	DEDICATED FACILITY	STRATEGIC PLAN
NMUSAF	●	●	●
Field Museums	●	●	●
Heritage Centers	◐	◐	●
Historical Holdings	○	○	●
Airparks	○	○	●
● = required ◐ = recommended ○ = not required			

Table 1. Comparison of Heritage Activities.¹⁰⁸

However, some funding does also come from other donors and foundations as well. In 2011, it was reported that The Boeing Company would donate \$5 million to the Air Force Museum Foundation “in three installments over the next three years...for the benefit of the National Museum of the U.S. Air Force at Wright-Patterson Air Force Base near Dayton, Ohio.”¹⁰⁹ The foundation mentioned began in 1960 to aid in the

¹⁰⁷ Ibid., 9.

¹⁰⁸ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 8.

¹⁰⁹ “Aerospace and Defense Companies; Boeing Announces \$5M Donation to Air Force Museum Foundation,” *Engineering Business Journal* (2011): 157-158, Accessed January 26th, 2017, <http://search.proquest.com/docview/854872226?accountid=12964>

funding of the NMUSAF when federal funds were unavailable.¹¹⁰ The South Dakota Air and Space Museum has a similar foundation that aids their funding when federal funds are not available for use, called the South Dakota Air and Space Heritage Foundation.¹¹¹

Air Force heritage programs are also supposed to preserve historical artifacts “through measures such as adequate climate controls and museum-unique supplies to maintain display standards, address effects of improper display or storage, and/or to ensure long-term integrity of the artifact.”¹¹² These programs also fund displays, museum furniture, special lights, computer software, signage, storage cabinets, and other museum-related equipment.¹¹³

Chapter 5: Survey Response Summary

5.1 Military-Run Museum Surveys

The South Dakota Air and Space Museum, home to up to 15 employees during the summer season, had two surveys returned. According to the survey, the SDASM has three authorized military positions – two active duties, and one government civilian.

¹¹⁰ Ibid.

¹¹¹ Observed by the author on 09/23/2017.

¹¹² U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 21.

¹¹³ Ibid.

Most of the employees are those who work in the gift shop, which is run by a foundation that is unrelated to the museum itself. The survey taker goes on to say that “Actual military manning is a single active duty military member...filling role of Museum Director, Curator, & Technician. Military manpower positions have been chronically unfilled.” The museum also has between eight and ten regular volunteers that donate time as docents, groundskeepers, and collection management. For all of the employees, the SDASM gets over 115,000 visitors annually,¹¹⁴ drawing in the second-biggest crowd for the whole of the museum system after the National Museum in Ohio.

A survey from the Barksdale Global Power Museum indicates even smaller numbers – they have one civilian and one military employee, and four regular volunteers who do restoration and conservation on planes and other artifacts.¹¹⁵ With this staff they support roughly 30,000 visitors per year. The Dyess Museum and Air Park brings in 6,000 visitors a year with one civilian director.¹¹⁶ Warren ICBM & Heritage Museum has a single civilian director as well, along with anywhere between four and 20 volunteers, depending on the day.¹¹⁷ This museum brings in between 15,000 and 24,000 visitors annually, but because of their computer presence they also register around 450,000 “virtual” visitors.¹¹⁸

¹¹⁴ Above data collected on 12/06/2017 from South Dakota Air and Space Museum Survey by author.

¹¹⁵ Data collected from survey from Barksdale Museum by author on 12/06/2017.

¹¹⁶ Data collected from survey from Dyess by author on 12/06/2017.

¹¹⁷ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

¹¹⁸ Ibid.

Funding for the SDASM comes from a variety of sources, but mostly from the 28th Bomb Wing, Ellsworth Air Force Base.¹¹⁹ Funding for the museum has steadily been increasing, though nowhere near what is needed to keep the museum functioning. However, special to the SDASM is the foundation that can be considered a major funding partner. “In addition to direct museum operations support (supplies, materials, etc.) the foundation provides advertising, exhibit development, event, infrastructure, and other support. The foundation operates the gift shop and bus tours specifically to generate revenue for museum support. The foundation also pursues and executes grant money on behalf of the museum as well as soliciting and receiving donations that directly support the museum.”¹²⁰

The Barksdale Air Force Museum returned a more in-depth answer. It mentions the budget from the wing that it is attached to, but state that as an operating budget it is too small for a full year, and they “make ends meet and get creative with what we do.”¹²¹ According to the survey answers, it costs \$60,000 to paint one static plane display, which is twice the operating budget given from the Air Force for the year.¹²² For other resources, the Barksdale Museum mentions “End of Year Funds.” The survey describes these funds as “money that normally drops down from big Air Force towards the end of the fiscal year to fund projects we have set on our unfunded list.”¹²³ The

¹¹⁹ Data collected from survey from SDASM by author on 12/06/2017.

¹²⁰ Ibid.

¹²¹ Data collected from survey from Barksdale Museum by author on 12/06/2017.

¹²² Ibid.

¹²³ Ibid.

Barksdale survey goes on to indicate that they do have an association that is “in place to raise money for me to help with things the military can’t pay for,” but the association is not an active one, like the South Dakota Air and Space Museum’s foundation.

The Dyess Museum in the Air Force system indicates that funding “comes from operational funds from the wing commander budget. Some funds for the aircraft come from off-base benefactors.”¹²⁴ The survey states that the annual budget is less than \$100,000, with “an infusion of additional funds to conduct a complete reconditioning/painting of each respective aircraft...”¹²⁵ It does not go into detail on how the funding affects salaries or other aspects of the museum.

This differs greatly from Warren ICBM & Heritage Museum who states that there should be three full-time employees, but there is only a single civilian.¹²⁶ Funding at this museum seems to be rather low, in fact the survey takers states that at one point the museum was begging for “toilet paper and light bulbs.”¹²⁷ They go on to add that “typically, we are all not budgeted properly. Just recently [the museum] received [their] very first substantial budget of \$40K, normally it is \$4,500 annually. This does not include staff pay, electricity, water or waste.”¹²⁸

Artifact care falls directly under the purview of the USAF Museum Director, and neither of the survey-takers from the SDASM have any experience in that

¹²⁴ Data collected from survey from Dyess by author on 12/06/2017.

¹²⁵ Ibid.

¹²⁶ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

¹²⁷ Ibid.

¹²⁸ Ibid.

department. However, the answers indicate a lot of responsibility falls onto one party.¹²⁹ The SDASM surveys do indicate that they take photo inventory every five years and store artifacts in museum-appropriate storage boxes.¹³⁰ For artifacts, the Barksdale Air Force Museum indicates that again, they rely on their volunteers to do much of the taking care of the artifacts. Three of their four volunteers work on the static displays and the airplanes they have on display because of their pasts as mechanics for the military. The Barksdale Air Force Museum puts their needs for their planes on an “unfunded” list, in the hopes that big Air Force will give them the funds at the end of the year to paint one plane. The other volunteer helps take care of the smaller artifacts, like flight jackets. The survey indicates that although they are not allowed to apply a monetary value to the artifacts, the Barksdale Air Force Museum does have a “save first” list which compiles information regarding artifacts that are considered priceless to the museum itself.

Artifacts in the Barksdale Museum that are on display are inspected quarterly, but the staff at the museum does do a walk-through every day looking for damage and deterioration. The staff also does a full photographic inventory of the collection every five years. To keep track of the artifacts, the Barksdale Museum utilizes AFMATS, which is the Air Force system that is given to every museum. However, the Barksdale Museum is looking to utilize another system called PastPerfect, because the Air Force

¹²⁹ Data collected from survey from SDASM by author on 12/06/2017.

¹³⁰ Ibid.

Museum Artifact Tracking System (AFMATS) is not “set up for us to use. It is not a user-friendly system.”¹³¹

Dyess states that all their artifacts are priceless, which means that all artifacts receive identical care, security and upkeep.¹³² Dyess also indicates that they store their artifacts in a secured facility that is not climate controlled but has a fire-suppression system. The museum utilizes the same software that the other Air Force museums use to keep track of the artifacts.

The Warren ICBM & Heritage Museum indicates that they rely on AFI 84-103, like all other museums in the Air Force system, to dictate how the museum cares for the artifacts. Storage of artifacts includes “acid free storage boxes with acid free tissue paper on powder coated shelving.”¹³³ They also use AFMATS to keep track of their artifacts, many of which are continuously on display as part of a larger exhibit.¹³⁴ The survey taker states that lights are turned on and off daily, allowing for the general inspection of the artifacts as that person walks through the museum. They also state that storage areas are cleaned once a month or sooner if needed, and boxes are re-tissued every five years or earlier if the artifacts need it.¹³⁵

One Base Historian responded to the survey sent out, and while the answers are not as specific as some of the other answers, this survey does give some insight into

¹³¹ Above data collected from the survey from Barksdale Museum by author on 12/06/2017.

¹³² Data collected from survey from Dyess by author on 12/06/2017.

¹³³ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

¹³⁴ Ibid.

¹³⁵ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

military-run museums. This base historian indicated that the museum is run by a military member who is not educated in any sort of museum information.¹³⁶ Since the base historian do not have as much interactions with museums, but rather work directly on the base itself in connection with the museum, they do not have as much experience with the funding of the museum. However, they do state that funding comes from the base or wing itself, and most of the funding goes into the care and upkeep of the planes that the museum has on display.¹³⁷

5.2 Publicly-Run Museum Surveys

Most publicly-run museums that the surveys were collected from indicate varying amounts of employees or volunteers. According to an employee at the Museum of Science and Industry (MSI) in Chicago, IL, it has between 300 and 500 employees depending on the season that do “everything from food service to fundraising, security to education.”¹³⁸ The employee also estimates that this museum gets over 1.3 million visitors annually. Being in Chicago, this number makes sense with the number of tourists the City receives. Another survey collected from the Minnulusa Pioneer Museum documents 1.25 employees – one full time, and one that works ten hours a week – and 35 volunteers that do everything from data entry to giving tours.¹³⁹

¹³⁶ Data collected from survey from Base Historian by author on 12/05/2017.

¹³⁷ Ibid.

¹³⁸ Data collected from survey from Museum of Science and Industry, Chicago, IL, by author on 12/05/2017.

¹³⁹ Data collected from survey from Minnulusa Historical Association and Pioneer Museum, Rapid City, SD, by author on 12/03/2017.

Comparatively, the National WWII Museum indicates that there are close to 300 employees that do everything from janitorial work to senior level staff. This museum also has over 1,000 volunteers to help visitor services – and some highly trained volunteers work directly with collections.¹⁴⁰

The National Museum of the Pacific War indicates that they have over 200 volunteers and does not specify the number of employees within the survey.¹⁴¹ With over 200 volunteers and the annual visitor numbers between 120,000 and 140,000, it can be assumed that there is a significant number of employees used to keep the museum functioning. An even larger museum, the Yankee Air Museum, indicates that it has over 700 volunteers who help with the museum and the annual air show.¹⁴² The Yankee Air Museum has nine full-time and two part-time employees covering multiple positions within a museum management system and serving anywhere between 50,000 to 120,000 visitors per year.¹⁴³

As can be seen, numbers vary from museum to museum. The Pima Air and Space Museum in Tucson, AZ states that they have 50 employees and over 200 volunteers to help the museum run and welcome 200,000 visitors yearly.¹⁴⁴ One survey taken reached a museum that has no employees, but only runs on volunteer hours, the

¹⁴⁰ Data collected from survey from National WWII Museum by author on 12/04/2017.

¹⁴¹ Data collected from survey from National Museum of the Pacific War by author on 12/04/2017.

¹⁴² Data collected from survey from the Yankee Air Museum by author on 12/06/2017.

¹⁴³ Ibid.

¹⁴⁴ Data collected from survey from Pima Air and Space Museum by author on 12/10/2017.

National Vietnam War Museum. The National Vietnam War Museum brings in about 25,000 visitors a year, and still functions extremely well with volunteers alone.¹⁴⁵

The Journey Museum has ten museum employees that do everything from visitor service management to curating, and another five to ten volunteers that do tours and fundraising.¹⁴⁶ The Dakota Sunset Museum in Gettysburg, SD indicated in their survey that there are four employees and no volunteers to do all the work in and around the museum.¹⁴⁷

Funding discussions differ from one public museum to the next. The MSI in Chicago states that the funding they receive comes from city, state, and federal governments, along with ticket sales and individual and corporate donations.¹⁴⁸ It needs to be noted that at the MSI in Chicago conservation is paid for with restricted funds “as per AAM guidelines” which removes the need for conservation to be in the annual budget.¹⁴⁹ The National Museum of the Pacific War states that they receive funding from private sources and earned revenue, and that there are no issues receiving the funding the museum needs to function.¹⁵⁰

Many of the museums surveyed get money from private sources, the National WWII Museum included. This museum receives funding from private donors, as well as

¹⁴⁵ Data collected from survey from National Vietnam War Museum by author on 12/09/2017.

¹⁴⁶ Data collected from survey from the Journey Museum and Learning Center, Rapid City, SD, by author on 12/03/2017.

¹⁴⁷ Data collected from survey from Dakota Sunset Museum, Gettysburg, SD, by author on 12/04/2017.

¹⁴⁸ Data collected from survey from Museum of Science and Industry, Chicago, IL, by author on 12/05/2017.

¹⁴⁹ Ibid.

¹⁵⁰ Data collected from survey from National Museum of the Pacific War by author on 12/04/2017.

grant money and a one-time appropriation of funding from the state of Louisiana.¹⁵¹

Yankee Air Museum gets their funding from private donors and grant funds, again allowing for the museum to get what it needs when it needs it.¹⁵² The National Vietnam War Museum gets all of its funding from private donations, with the only obstacle in getting the funding being the action of going out and raising the funds with “Friends” and community.¹⁵³

The Dakota Sunset Museum gets its funding from “a trust quarterly as well as any other donations provided throughout the year. We also received rent money as we rent out part of the building to the library and extension office.”¹⁵⁴ Interestingly, the funding for the Dakota Sunset Museum is perfect for the size of museum that it is.¹⁵⁵ The Minnilusa Pioneer Museum’s funding comes from memberships, donations, grants, special programs, and endowments.¹⁵⁶ They do not have as large of an issue in receiving funding as the Journey Museum and Learning Center does. The Journey Museum gets much of its funding from the city of Rapid City, which is now trying to cut the funding by \$30,000.¹⁵⁷ A cut in funding would cause the museum to have to get

¹⁵¹ Data collected from survey from National WWII Museum by author on 12/04/2017.

¹⁵² Data collected from survey from the Yankee Air Museum by author on 12/06/2017.

¹⁵³ Data collected from survey from National Vietnam War Museum by author on 12/09/2017.

¹⁵⁴ Data collected from survey from Dakota Sunset Museum, Gettysburg, SD, by author on 12/04/2017.

¹⁵⁵ Ibid.

¹⁵⁶ Data collected from survey from Minnilusa Historical Association and Pioneer Museum, Rapid City, SD, by author from 12/03/2017.

¹⁵⁷ As observed by author on 8/15/2017.

more creative in keeping its doors open, though it already is struggling to make ends meet.¹⁵⁸

The Pima Air and Space Museum is unique in its funding. According to the survey-taker, “the museum is entirely self-supporting with virtually all operational funds coming from visitor admissions and gift shop revenue. Large infrastructure projects such as the construction of new display buildings is funded by donations and fund-raising campaigns.”¹⁵⁹ It is not a regular occurrence in museums to be completely self-sustaining.

Regarding artifacts, many museums have differing policies. The MSI in Chicago did not specifically name the artifact that was most valuable in their museum as it was against museum policy to say.¹⁶⁰ MSI doesn’t have a regular artifact inspection schedule – due to the proximity that the storage is to the curatorial desks the MSI’s employees often work in the storage areas.¹⁶¹ Similarly, the National Museum of the Pacific War states that the artifacts within the museum are not inspected on a schedule, rather the artifacts are inspected as they are moved or inventoried.¹⁶² The artifacts in the National Museum of the Pacific War’s collection are stored in certified repositories,

¹⁵⁸ Ibid.

¹⁵⁹ Data collected from survey from Pima Air and Space Museum by author on 12/10/2017.

¹⁶⁰ Data collected from survey from Museum of Science and Industry, Chicago, IL, by author on 12/05/2017.

¹⁶¹ Ibid.

¹⁶² Data collected from survey from National Museum of the Pacific War by author on 12/04/2017.

archives and libraries with “acid free environment, climate controlled, controlled access, fire suppression and secured.”¹⁶³

Since the Yankee Air Museum is deeply involved in an air show that is held annually, its artifact care and maintenance is a little different. According to the survey, the museum has “a flying B-17, B-25, C-47 and WACO bi-plane.”¹⁶⁴ In order to keep these planes flying for public experience, the museum must put hundreds of hours and thousands of dollars into each plane. For other artifacts, there is an inspection scheduled every six months, or when needed.¹⁶⁵

The National Vietnam War Museum does not have as strong care for its artifacts as the other museums that were surveyed, but this can be attributed to its lack of employees. This museum has “some small climate control storage, and a conex container for non-climate control and a large maintenance building not climate controlled.”¹⁶⁶ It indicates that there is no formal inspection schedule for the artifacts, rather if someone notices something wrong with one of the artifacts then they report it immediately.¹⁶⁷ This museum does not even utilize a program to help them document its artifacts.¹⁶⁸

¹⁶³ Ibid.

¹⁶⁴ Data collected from survey from the Yankee Air Museum by author on 12/06/2017.

¹⁶⁵ Ibid.

¹⁶⁶ Data collected from survey from National Vietnam War Museum by author on 12/09/2017.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

The National WWII Museum, because of how large it is, has three temperature and humidity-controlled rooms.¹⁶⁹ One of the rooms is specific to books and paper, and the other two for three-dimensional items.¹⁷⁰ This separation of artifacts allows for the temperature and humidity to be regulated to a point that each room's pieces react to the least. The museum goes on to state that they have "a large warehouse for macro items (jeeps, artillery, etc.) and this space is not temperature controlled."¹⁷¹ This museum has large artifacts that are extremely unique, including a B-17 bomber called "My Gal Sal."¹⁷² In order to take care of all of their artifacts, the National WWII Museum inspects them every day. "Essentially we have collections staff routinely in collections areas and they are always looking for new damage or an artifact that might be deteriorating at a quicker rate than others. Security routinely helps to notify us when they see something on display that has changed or is suffering from a conservation issue (leather "blooming" or metal corroding)".¹⁷³ The fact that the National WWII Museum has security that is able to walk through the museum and look at artifacts indicates that taking care of the artifacts is a hugely important aspect of running the museum.

Like the National WWII Museum, the Pima Air and Space Museum stores its smaller artifacts in "one of several climate and access controlled storage rooms." Their planes and other larger artifacts are stored "in a non-climate controlled storage building

¹⁶⁹ Data collected from survey from National WWII Museum by author on 12/04/2017.

¹⁷⁰ Ibid.

¹⁷¹ Data collected from survey from National WWII Museum by author on 12/04/2017.

¹⁷² Ibid.

¹⁷³ Ibid.

or outdoors.” This museum does go into the specifics on what their most valuable artifacts are, indicating that the most valuable “micro” artifact is on display “in a locked, armored, and alarmed display case in our Space Gallery building.” This indicates a high level of responsibility and an extremely careful staff. Artifacts at this museum are “inspected weekly as a part of regular Collections Department staff walkarounds.”¹⁷⁴

The Minnilusa Pioneer Museum states that it is not sure which artifact is most valuable, only that it can either be found in display or storage.¹⁷⁵ They do store their artifacts with the common tools that museums have, but they do not specifically inspect the artifacts. The museum relies on staffing to walk through and just do a general inspection.¹⁷⁶ The Journey Museum and Learning Center indicates the same thing – there isn’t time to inspect the artifacts individually.¹⁷⁷ The Dakota Sunset Museum follows the advice of AAM and other museums around the area on how to store their artifacts. This museum stores each artifact with specific care to what type of artifact it is – i.e., “photographs are placed in protective sleeves and stored in files.”¹⁷⁸ Their artifacts are inspected periodically, and displays are inspected daily while doing walk-throughs of the museum.¹⁷⁹

¹⁷⁴ Above data collected from survey from Pima Air and Space Museum by author on 12/10/2017.

¹⁷⁵ Data collected from survey from Minnilusa Historical Association and Pioneer Museum, Rapid City, SD, by author on 12/03/2017.

¹⁷⁶ Ibid.

¹⁷⁷ Data collected from survey from anonymous museum by author on 12/06/2017.

¹⁷⁸ Data collected from survey from Dakota Sunset Museum, Gettysburg, SD, by author on 12/04/2017.

¹⁷⁹ Ibid.

The Yankee Air Museum is an official loanee for the NMUSAF, which means they “get aircraft on loan from them.” According to the survey taker, there has never been any issues encountered when “working with Air Force or military-run museums in general.” This person goes on to indicate that because all of the museums are working to preserve similar artifacts, there is a sense of “family,” allowing for a greater relationship in helping one another rather than competing. However, this survey taker does state that “most museums often struggle with funding, and military-run museums are no different (except for the major ones such as the NMUSAF).”¹⁸⁰

The Pima Air and Space Museum also had strong opinions on the USAF museum system, stating that the museums are “generally competently and professionally operated.” As a large loan partner with the National Museum of the U.S. Air Force, interactions with the Air Force museum system is done regularly to keep track of the over 100 aircraft on loan. According to the survey-taker, the Air Force’s “collections staff is easy to work with and very knowledgeable.”¹⁸¹ Again, this is relating to the top Air Force museum in the country that has adequate abilities to do what is necessary for the museum to thrive.

The employee from the MSI in Chicago, when asked about whether or not directors should have some sort of museum background, states that directors should have a background in museums, but it would have to be dependent on the director’s daily responsibilities.¹⁸² “The smaller the institution, naturally the more hands-on the

¹⁸⁰ Above data collected from survey from the Yankee Air Museum by author on 12/06/2017.

¹⁸¹ Above data collected from survey from Pima Air and Space Museum by author on 12/10/2017.

¹⁸² Data collected from survey from Museum of Science and Industry, Chicago, IL, by author on 12/05/2017.

museum head becomes and their ability to make informed decisions about the artifacts' accession, care and deaccession becomes imperative.”¹⁸³ The employee does go on to state that directors would need less of a museum background if their focus was on fundraising and fielding questions from the board, or meeting with donors.¹⁸⁴

“Regardless, the ultimate responsibility for making high-end accessions and deaccessions must get the museum head's approval and therefore an understanding of not only the care requirements (because of the funds required if nothing else) is imperative, but so is how the artifacts will be used to educate guests.”¹⁸⁵ The National Museum of the Pacific War very succinctly stated that yes, directors of museums should have some sort of museum background in order to “understand the business we are in.”¹⁸⁶

The survey-taker for the Yankee Air Museum states that “[they] think it is very helpful, yes” regarding whether an Executive Director of a museum should have a museum background. They go on to say that they “believe it leads to better and more informed decision making with keeping the artifacts and purpose of the museum in focus, all the while making sure the museum is a financial success so the doors can stay open to the public.”¹⁸⁷ A similar museum, the Pima Air and Space Museum, indicates

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ Ibid.

¹⁸⁶ Data collected from survey from National Museum of the Pacific War by author on 12/04/2017.

¹⁸⁷ Data collected from survey from the Yankee Air Museum by author on 12/06/2017.

that “directors of museums should have a background in museums or at least non-profits.”¹⁸⁸

The National WWII Museum gives a resounding “yes” to the question of education necessity in museums. The survey-taker states that “the legal and ethical issues of museum work, especially those related to collections, collecting, and taxes are different than anything else out there. When you get higher ups that do not understand the museum processes, the time and care it takes to manage a collection or the ethical issues with why and how to collect you can set yourselves up for total disaster.”¹⁸⁹

Minnilusa Pioneer Association feels that “it is important, but not always necessary for a museum director to have experience and education in museums.”¹⁹⁰ It goes on to say that because museums are always changing it is important to keep up with what is happening.¹⁹¹ The Journey Museum and Learning Center survey taker agrees, stating that “It would be helpful but could be overcome by the right dynamic individual who has a passion to learn and innovate with new ideas.”¹⁹² Similarly, the Dakota Sunset Museum survey taker states that “it would be beneficial, however not always plausible.”¹⁹³ This person goes on to state that the position is part-time, and that

¹⁸⁸ Data collected from survey from Pima Air and Space Museum by author on 12/10/2017.

¹⁸⁹ Data collected from survey from National WWII Museum by author on 12/04/2017.

¹⁹⁰ Data collected from survey from Minnilusa Historical Association and Pioneer Museum, Rapid City, SD, by author on 12/03/2017.

¹⁹¹ Ibid.

¹⁹² Data collected from survey from the Journey Museum and Learning Center, Rapid City, SD, by author on 12/03/2017.

¹⁹³ Data collected from survey from Dakota Sunset Museum, Gettysburg, SD, by author on 12/04/2017.

it would be fairly difficult to locate “an appropriately qualified individual.”¹⁹⁴ There is the belief that “anything can be learned if there is enough passion and interest”¹⁹⁵ which allows for the Dakota Sunset Museum to continue its work.

The volunteer-run National Vietnam War Museum indicates that directors of museums “should have some education and/or experience in a related field.”¹⁹⁶

However, the survey-taker does go on to warn that even the most well-educated people might not be right for a director position as “there is no way to gain experience before your first job, and education is not exactly like real life.”¹⁹⁷

¹⁹⁴ Data collected from survey from Dakota Sunset Museum, Gettysburg, SD, by author on 12/04/2017.

¹⁹⁵ Ibid.

¹⁹⁶ Data collected from survey from National Vietnam War Museum by author on 12/09/2017.

¹⁹⁷ Ibid.

Chapter 6: Data Analysis

6.1 Military-Run Museum Surveys

Air Force-run museums are extremely useful resources to have, if they function at a high level. The collected surveys from military-run museums indicate that, while these museums do function at a level beyond most normal museums, they do not function to their highest ability. It needs to be noted that the National Museum of the U.S. Air Force should not be included in any of the recommendations that are made below, unless specifically mentioned, because the NMUSAF, for some reason, is the only Air Force-run museum about which the U.S. Air Force seems to care.

6.1.1 Funding for Military-Run Museums

Funding is the most important issue that Air Force-run museums face. All the museums in the hierarchy below the NMUSAF need to be given funds that will allow them to be able to work to their highest purpose, instead of just barely getting along with the funding that they have now. The SDASM, for example, should not have to rely on a non-military associated foundation for funding. According to the survey received from SDASM, the South Dakota Air and Space Heritage Foundation aids in the funding of the museum, even though it has no ties to the museum itself.¹⁹⁸ Not only does the foundation make small purchases (i.e., lightbulbs and toilet paper) but they also fund large changes to the museum as well.¹⁹⁹ In September of 2017 the SDASM placed a

¹⁹⁸ Data collected from survey received from SDASM by author on 12/06/2017.

¹⁹⁹ Data collected from survey received from SDASM authors research and conversations with members of the Foundation.

Titan I Missile on display, with the South Dakota Air and Space Foundation paying thousands of dollars for the cradle in which it was placed (see Figure 5).²⁰⁰ The museum should be getting enough funding from the Bomb Wing to support the necessary actions that the museum would need to take care of annually. Simply put, in 2016 the SDASM had a budget of \$700.²⁰¹ This isn't enough funding to



Figure 5. Titan I Installation.

purchase minimal amounts of museum-quality supplies for the over 2,000 artifacts that are in storage, let alone to run the museum for a full year.

The Barksdale Air Force Museum is in the same situation as the SDASM. Having to “make ends meet and get creative with what [they] do”²⁰² is not the way a museum should function in any format, let alone for military-run museums. According to the survey received from the Barksdale Air Force Museum, for one year, they receive about \$30,000.²⁰³ Barksdale Air Force Base is the home to the Global Strike Command, so for the survey to indicate this low of a funding is extremely telling, as it indicates that even the higher level of Air Force Command does not care about the museum system. Since it would take at least double that to paint and care for one static display airplane,

²⁰⁰ Authors research and conversations with members of the Foundation.

²⁰¹ Research collected by author from MSgt. Mark Wight, Director of the SDASM

²⁰² Data collected from survey from the Barksdale Air Force Museum by the author on 12/06/2017.

²⁰³ Ibid.

this is an obviously inadequate budget. Similarly, the Warren ICBM & Heritage Museum states that its funding was so low at one point that it must beg for “toilet paper and light bulbs.”²⁰⁴ Its normal budget was \$4,500²⁰⁵ – again, an inadequate amount to even purchase museum quality resources, let alone enough money to take care of the facility for a full year.

The Dyess Museum does get a solid budget. The survey collected from it indicates that it gets less than \$100,000,²⁰⁶ which is not specific, but it can be assumed that its budget is more than that of all three of the other museums mentioned combined. The Dyess Museum gets more funding from its Air Force base, than all their museum partners across the nation. This is ridiculous when investigating the annual number of visitors, it gets. As mentioned in the survey, the Dyess Museum and Air Park brings in 6,000 visitors annually.²⁰⁷ The SDASM brings in 115,000 visitors a year,²⁰⁸ which is 19 times more, and in 2016 only received \$700 to function. This does not make sense, when comparing the survey from SDASM and the Dyess Museum and Air Park. These museums bring in two totally different sized amounts of visitors, vastly different numbers, and yet the funding does not reflect that whatsoever. It should be asked whether the Air Force base associated with the Dyess Museum and Air Park cares more about its museum than any other base, and why that is.

²⁰⁴ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

²⁰⁵ Ibid.

²⁰⁶ Data collected from survey from Dyess Museum by author on 12/06/2017.

²⁰⁷ Ibid.

²⁰⁸ Data collected from survey from the SDASM by author on 12/06/2017.

Most of the funding that any of the museums received, after funding the personnel positions, went towards caring for artifacts. This is extremely important. Many of the museums surveyed rely on volunteers, most of whom are untrained in

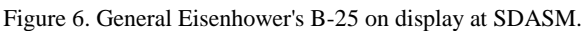


the curatorial sciences. These volunteers care for the artifacts, both the large static displays and the artifacts that are in the small exhibits. The Barksdale Air Museum survey specifies that it has volunteers working as docents and for other aspects of the museum to keep up with the number of visitors that it receives.²⁰⁹ Dyess and the Warren ICBM Museum indicate in the surveys similar experiences with volunteers and what the museums utilize the volunteers for. In all the Air Force museums, large static displays frequently are not taken care of unless the volunteers are educated in the maintenance of large military vehicles, like airplanes, because of the cost it takes to care for just one of them. To paint and care for a plane costs at least \$60,000 a year.²¹⁰ For the SDASM, which has 30 static displays outside the museum building, funding does not cover one plane, let alone 30. Some of these planes in each of these museums are extremely historic, beyond just being an example of the type of airplane. For example, the B-25

²⁰⁹ Data collected from survey from the Barksdale Air Force Museum by author on 12/06/2017.

²¹⁰ Data collected from survey from Barksdale Air Force Museum by author on 12/06/2017.

bomber on display at the SDASM is more than just a B-25 (see Figure 6). It is the plane in which General Eisenhower was transported in during WWII when he was in Europe. It was his personal transport plane; it still has the leather chairs, phones, and even wallpaper on the inside of it.²¹¹ But this plane isn't being taken care of to the extent it should be, because of the lack of funding. The SDASM itself has been working extremely hard to take care of all its static displays to the best of its ability – but it would be better if more funding was available.

Caring for the small artifacts runs into funding issues too. Museum-regulated storage supplies, as  well as the displays themselves, cost money. These supplies need to be specifically intended and safe for the artifacts that they are intended, so as not to damage the heritage and history within each piece. Museums will lose artifacts if the supplies are not correct, which means that funding for correct supplies needs to be awarded accordingly. As mentioned earlier, with a budget of \$700, the SDASM would not be able to purchase much in the way of protection for the artifacts. The museum has done what it could with the amount of funding and space that it has, but it should be better. With the indicated budgets that each of the museums within the Air Force system, the utilization of funding becomes a question of what needs to be taken care of more. This is left up to the individual directors, of course, but that should not even be a question that is posed, there should be enough funding for the museums to take care of both the static displays and the artifacts on the inside.

²¹¹ Authors experience, having inspected the inside of the B-25 to collect photos for the artifact list. It should be noted that the wallpaper on the inside of the plane has cattle brands on it; the running joke is that Eisenhower was a wannabe cowboy.

Each Air Force-run museum needs more funding from its associated Air Force Base. These Air Force bases do answer to the higher command system, but not to a sufficient extent regarding museum funding. There needs to be an increase in funding to each museum, and the higher commands need to make sure that the funding is given. It is ridiculous that a museum which brings in 6,000 visitors annually gets two to three times the amount of that of a museum that brings in 115,000 visitors a year. Besides the higher commands needing to pay attention to the amount of funding a museum receives, the air bases themselves need to care more about their on-base museums. A lack of funding indicates that the air bases do not care about the museum, rather they fund the museum to a small extent because they realize they must do so to some extent. The base relating to any museum does not really want to fund its museum; it does not care about the museum, which goes directly against the overall Air Force goal of celebrating the heritage of the Air Force.

6.1.2 Museum Directors at Military-run Museums

The number of directors at the museums in the Air Force system needs to be discussed separately from funding because of the explicit rules that Air Force museums must follow when manning positions within the museum. According to AFI 84-103, field museums (which encompasses the museums from which the surveys were collected) need to have professionally trained staff.²¹² This professionally trained staff person is a civilian and is put into the director position instead of a member of the Air Force. AFI 84-103 even goes on to specify that “the director performs the traditional

²¹² U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 9.

duties of a curator in smaller AFFMs.”²¹³ This rulebook focuses on having a trained civilian director in any of the field museums, and yet none of the Air Force bases in charge of the museums have filled the positions to their full extent because they do not see the need to fill them. The SDASM, for example, has two active duty positions and one government civilian position open; only one of the active duty positions is filled at any one time.²¹⁴ The active duty person fills the role of Museum Director, Curator, and Technician.²¹⁵ According to the survey collected from the SDASM, there has not been a civilian curator position funded in a decade.²¹⁶ For whatever reason, the base associated with the SDASM had the position taken away and never reinstated it. Right now, the person in charge of the SDASM comes from a maintenance position where he took care of planes and kept them flying²¹⁷ – while helpful in taking care of static display airplanes at the museum, this experience in maintenance has nothing to do with curatorial sciences. The Barksdale Air Force Museum indicates a similar situation on the survey that it submitted – the lack of a full staff slows down the workings of the museum. On the other side of this issue is the Warren ICBM & Heritage Museum, which is run by one civilian and no active duty military, though there should be at least one. While perhaps untrained in the way of curatorial sciences, having an active duty airman within the museum helps with the facility functioning and the relationships

²¹³ Ibid.

²¹⁴ Data collected from survey from the SDASM by author on 12/06/2017.

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ Observed by author on 04/28/2016.

between the civilian director, who might not have any experience dealing with the military, and the base from where the funding comes. It is necessary to have both a trained civilian director and an active duty person within the museums.

To have a professionally trained curator in the museum means that the artifacts are cared for to a higher standard. No longer would artifacts be hung with regular screws or double-sided tape.²¹⁸ It needs to be stated that when this happens within a museum, it was done with best intentions in mind. To pass along a history of the Air Force, the directors of the museums did their best to display what they had to tell their visitors about what happened in the past. A professionally-trained curator is not to be hired to be better than the active-duty personnel; that is not the goal of getting another person hired. Doing so betters the museum and allows for a shared education of curatorial sciences. Working together, the trained professional and the active-duty airman would be able to better the museum to an extreme.

The bases associated with the museums surveyed need to hire enough personnel for the museums to function. This should not need to be stated. The museums will not and do not function as well as they should be because of their lack of personnel. One person can only do so much when faced with dealing with facilities, rentals, artifacts, and all other issues that a museum could face. One person should not need to deal with all these things, since AFI 84-103 requires the hiring of at least one civilian director as well as an airman. If all museums hire even just one person – which would not be all the people that the museums have room to hire – the museums could increase their

²¹⁸ Author observations and experience – the damage done by double sided tape is irreversible.

functioning and take better care of the heritage that the Air Force claims to want to support.

6.1.3 Artifact Care

Besides the above-stated necessities for artifacts, the Air Force-run Museum system also needs to update its artifact tracking system. The Air Force Museum Artifact Tracking System, known as AFMATS, is not a user-friendly system, according to the survey received from Barksdale Air Force Museum.²¹⁹ Being that it is only accessible by the director of the museum, it causes an extreme backup of abilities by the volunteers. The Dyess Museum and Air Park survey, as well as the Warren

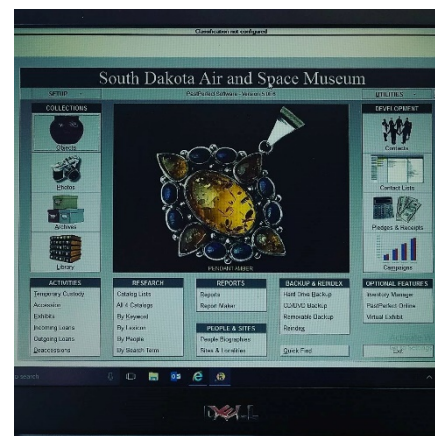


Figure 7. PastPerfect Software.

ICBM Museum survey, do not indicate any major issues in using AFMATS, but because the system is used as a network, it can be assumed that all the museums within the Air Force system have, at some point, had an issue with it. All Air Force-run museum systems need to transfer over to another program, like SDASM has done with PastPerfect software (see Figure 7). It is an investment, but PastPerfect allows for all artifacts, not just the physical objects, to be tracked through the system. It also allows for books, photos, and archival documents to be tracked. The system is also able to have regulated access for each person who would need it, depending upon what the curator would like the volunteers to do. Using this program increases the ability of the museum

²¹⁹ Data collected from survey from Barksdale Air Force Museum by author on 12/06/2017.

director to get more done as just one person, but with more full-time employees even more could get done to archive the museum.

6.2 Publicly-run Museums

The surveys collected from the publicly-run museums indicate that, while each museum seems to have minor issues, they are all functioning extremely well. Each of the museums, of course, would like to better themselves in one way or another, but they do not specify within the surveys collected.

It is recommended that publicly-run museums begin to explore the idea of having a professional relationship with the U.S. Air Force. To have that would allow Air Force-run museums to utilize some outside recommendations to better themselves, and the publicly-run museums might be able to benefit from some of the Air Force regulations within their own museum.

6.3 Recommendations

Museum	Funding	Curator	New Software
SDASM	Needs more funding for artifacts and personnel – numbers are extremely low, and not increasing at a steady rate.	SDASM is supposed to have a civilian curator – this hasn't been filled in over a decade.	SDASM is testing a new software system called "PastPerfect" which works much better than AFMATS
Barksdale Air Force Museum	Needs more funding for artifacts, personnel, and common museum items	There are two staff here, and they don't mention needing another. However, the list of jobs that each director does indicates there should be another person hired.	Barksdale does not like the AFMATS system, stating that it is not useful.

Warren ICBM & Heritage Museum	On average, the funding that this museum receives is \$4500. Of course, this is not enough for any purchases.	Supposed to be three people working at this museum – there is only one civilian	They don't specify anything beyond having to work with AFMATS
Dyess Museum and Air Park	They did not request more funding, although having funding is always going to be helpful	There is only one civilian working in this museum – this can cause issues with the AFB associated with it.	They don't specify anything beyond having to work with AFMATS

Table 2. Survey Responses.

The bases associated with the Air Force-run museum system need to give more funding to the museums if the Air Force wants the museums within their purview to continue to promote heritage to the highest ability. As seen in Table 2, 75% of the museums that were surveyed indicate that they have inadequate funding for the jobs that are necessary to perform, including care for artifacts. Artifacts are being placed in jeopardy with the lack of funding, including the static display airplanes that draw thousands of visitors every year.

Along with artifacts, the Air Force is undermining itself by not following its own rules when it comes to museum functions, specifically the idea of having a professional curator as part of the staff. 75% of the survey responses indicate missing staff from the museums because of a lack of funding (i.e. there's only one person when there should be at least two staff, etc.). The other 25% does not necessarily indicate that they need another person, but it does reflect the amount of duties that one person within

the museum must take on. This list is extensive and would be better taken care of if there was one more person on staff. This can clearly be seen in Table 2.

Beyond funding, the Air Force needs to update the artifact tracking system to be more accessible to volunteers and staff. This is especially true with the Barksdale Air Force Museum's reaction to what was asked within the survey. By stating that it is not a user-friendly system, the museum acknowledges the fact that there needs to be a better system put in place. In fact, 50% of the museums surveyed indicate that the AFMATS is a problematic system to use. PastPerfect software is being tested by the SDASM and it is working much better for the volunteers than AFMATS ever could. The fact that SDASM has moved forward in testing a new software, before the NMUSAF even has, also indicates that there is a problem to be fixed with AFMATS. If the volunteers of these museums do not have access to the tracking system, the functioning of the museum will get slowed to a crawl.

Finally, civilian museums need to explore relationships with the Air Force museum system. This could benefit both sides of the partnership, with the amount of information that could be shared.

Chapter 7: Summary and Conclusion

7.1 Preserving the History

The goal of all the Air Force system museums, heritage centers, and air parks is to preserve the history of the U.S. Air Force through education and history. With the ongoing fighting that is going on in the world, it is extremely important for Air Force history to be preserved through stories, uniforms, and planes.

The Warren ICBM & Heritage Museum states that the higher entity's interactions for museums fall "sporadically, at best. Some MajCOM's are better than others."²²⁰ "MajCOM" is the shortened version of "Major Command," which includes the commands that the museums fall under, such as Global Strike Command. This would also loop in the wings in charge on the bases that the museums reside on or near. This does not even include funding opportunities – the staff of the bases do not interact with the museums on any level unless forced in some way.

The National Museum of the U.S. Air Force is not in need of any adjustments. It is the field museums, air parks and heritage centers that need help with funding and employment. Each museum below the NMUSAF is, in some way, lacking and not following the AFI.

7.2 Caring for Artifacts

The NMUSAF, in ideal circumstances, provides "USAFHP leadership opportunities to identify and intervene to correct potential problem areas before they negatively impact an artifact."²²¹ This does not always happen. According to AFI 84-103, directors and staff of the heritage properties are supposed to "Address questions on standard conservation methods and mounting artifacts for display to the NMUSAF Conservator."²²² While having access to a museum like this is helpful, the Barksdale

²²⁰ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

²²¹ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 7.

²²² U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 47.

Museum indicates that they are mostly hands-off.²²³ The SDASM has had issues where the staff needs questions about certain artifacts answered, and the NMUSAF does not respond.²²⁴ This includes dealing with dangerous chemicals, like mercury, in one-of-a-kind artifacts.²²⁵

Each of the Air Force-run museums needs better storage and care. Artifacts are stored in the safest way possible at each museum, utilizing acid-free paper and boxes as well as protective covers for photos and newspapers, but these storage materials only do so much in protecting them. The Air Force-run field museums should have temperature, climate, and humidity control for both their on-display artifacts and those stored behind the scenes. The surveys allowed for a lot of information to be shared about the museums, and one indication that not everything was well with storage of artifacts is the lack of information discussing the artifacts.²²⁶ This ties directly into funding.

The museums in the Air Force utilize a program called the Air Force Museum Artifact Tracking System, or AFMATS, that allows them to keep track of the artifacts that they have in their collections. This program, while in theory is very helpful, is anything but. The AFMATS program only allows access to the employees that are cleared by the government. The Barksdale Museum states that it is “not a user-friendly system.”²²⁷ Understandably, this is to keep the artifacts safe from unsavory people who

²²³ Data collected from survey from Barksdale Museum by author on 12/06/2017.

²²⁴ Observed by author during research on 01/30/2018.

²²⁵ Ibid.

²²⁶ Data collected from survey from Barksdale Museum, survey from Dyess Museum by author on 12/06/2017.

²²⁷ Data collected from survey from Barksdale Museum by author on 12/06/2017.

would want to use the artifacts for their own gain, but it also slows down the working of the museum in general. Both the SDASM and the Barksdale Museum utilize their volunteers to help with artifact care²²⁸ and if the volunteers do not have access to the AFMATS system, dealing with artifacts becomes a much slower process.²²⁹ If there was a waiting period for each volunteer to have access to AFMATS, based on what the director of the museum is doing at the time the volunteer's duties would slow down exponentially.

While the argument of not allowing volunteers to work with the artifacts may come up, the truth is that this is not a feasible option. For the South Dakota Air and Space Museum one employee cannot handle the artifacts, facility management, and fundraising and community involvement alone. Other museums are the same way, documenting that the AFMATS system is not useful in the least. All museums in the Air Force system should utilize PastPerfect like the South Dakota Air and Space Museum is doing now. The security of the artifacts is still safe as the users of the program can be restricted to what parts of the program they can access.²³⁰

7.3 Communities and Museums

Beyond the obvious issue of base access that museums must face, the interaction with the public is an ever-changing challenge that Air Force museums deal with daily.

²²⁸ Data collected from survey from SDASM by author on 12/06/2017, Barksdale Air Force Museum by author on 12/06/2017.

²²⁹ Observed by author during research on 02/04/2018.

²³⁰ Ibid.

The NMUSAF alone receives over one million visitors a year, allowing for a lot of interaction to take place. The number of volunteers that each museum is what keep the museums



Figure 8. Volunteers Installing Satellite Display at SDASM.

afloat. If there were less volunteers at any one of these museums, there is a chance that barely anything would get done in a timely manner. An increase in volunteerism would always be a boon to any one of the museums in the Air Force system. Volunteers should be acknowledged for their work and thanked regularly to keep their spirits up and their interest in the museum intact. Allowing volunteers to work with what they know goes a long way in keeping them around to continue to help. Some of the museums in the Air Force system already do this by utilizing the volunteers' strengths as retired mechanics or people trained in museum studies.²³¹

Educationally, each of the Air Force Museums show promise. Tours and programs for civilians and military personnel alike are held within each museum or

²³¹ Data collected from survey from Barksdale Museum by author on 12/06/2017.

heritage center. School groups often tour the museums to learn more about the history of their country. Airmen volunteer time as part of their welcoming to the base or leadership school.²³² Of course, education outreach can always be increased in different ways.

7.4 Funding

The funding of all the museums in the Air Force system is what affects the ability of the museums to function appropriately and in line with their regulations. The NMUSAF is the odd museum out when it comes to how they take care of their artifacts. NMUSAF has the funding, volunteers, and time to devote to taking care of the artifacts that they house in their massive museum. In fact, they even have the capabilities to restore artifacts – most recently the “Memphis Belle,” a B-17 “Flying Fortress” that was used during World War II. Not every military-run museum has the same capabilities. In fact, all the museums that fall below the NMUSAF in the hierarchy do not have the same capabilities. Another standing issue with multiple Air Force-run museums is the lack of funding to help the staffing of the museums. As mentioned before, and as seen in Table 1, all field museums in the Air Force museum system should have a professionally educated museum person on staff.

While in theory this would be a great set-up for the Air Force-run museum system, reality is much different. Take, for example, the SDASM. This museum is run by an enlisted airman, usually close to retirement. Airmen in charge are untrained in any museum profession – however, the USAF does pay for them to go to a training seminar

²³² As observed by author on 07/08/2017.

once a year. The airmen in charge of the SDASM refer to themselves as the Executive Directors, which is an all-encompassing title; their training should match the title, but it does not. According to AFI 84-103, “Supporting commanders may assign military personnel to field museum duties, but not in positions requiring professional curatorial experience.”²³³ If military personnel assigned to museums stand in the Executive Director position, they are blatantly breaking the rules that are laid out in AFI 84-103 unless the airman has curatorial training – which is not common. According to one survey collected, “Military manpower positions [at SDASM] have been chronically unfilled.”²³⁴ The survey-taker actually goes on to specify that military positions that are filled come with no museum background, and that the civilian position has not been filled for a decade.²³⁵ The Barksdale museum is similarly staffed, though it does have the ability to have a civilian and an airman.²³⁶

In 2015, the SDASM’s annual budget was \$700. This was given with the idea that it would cover painting static displays, taking care of artifacts, and cleaning/upkeep that is normal for any museum. Plane painting alone for the 27 planes and missiles outside of the museum building costs hundreds of thousands of dollars. In 2016 and 2017, the funding for the SDASM has increased but not to the extent that is necessary for the museum to take care of its artifacts. The SDASM often must rely on the South Dakota Air and Space Heritage Foundation to make purchases for the museum, even

²³³ U.S. Dept. of Air Force, *Heritage Program Instruction 84-103*, 18.

²³⁴ Data collected from survey from SDASM by author on 12/06/2017.

²³⁵ Ibid.

²³⁶ Data collected from survey from Barksdale Museum by author on 12/06/2017.

though those purchases do not fall under the foundation's purview. In fact, the foundation aids in providing advertising, infrastructure, and other support to a museum that it truly does not need to put any money into, if not for the kindness and understanding that the foundation portrays.²³⁷

Other museums seem to have even larger funding issues. The Barksdale Air Force Museum has an operating budget that is "too small for a full year" and state that they "make ends meet and get creative with what they do."²³⁸ The Warren ICBM & Heritage Museum claims that at one point they had to beg for toilet paper and light bulbs, just regular everyday items to keep the museum going.²³⁹ This museum ideally should staff three employees, whereas now it only staffs one civilian. Its average annual budget is \$4,500, not including staff pay, electricity, water, or waste.²⁴⁰ It does mention that it just received its first substantial budget of "\$40K,"²⁴¹ but as seen earlier that does not stretch very far when it comes to taking care of rare and unique artifacts.

The Barksdale Air Force Museum and other museums in the Air Force system rely on "End of Year" funds that trickle down to the museums at the end of a fiscal year.²⁴² These funds can be used for anything from taking care of the static displays to purchasing necessities for museum functions. When the cost of painting one plane is

²³⁷ Data collected from survey from SDASM by author on 12/06/2017.

²³⁸ Data collected from survey from Barksdale Air Force Museum by author on 12/06/2017.

²³⁹ Data collected from survey from Warren ICBM & Heritage Museum by author on 12/05/2017.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Data collected from survey from Barksdale Air Force Museum by author on 12/06/2017.

double the amount of funding that the Barksdale Air Force Museum receives, it is imperative to use the funding in the best way possible.

Thankfully, even without the support of the U.S. Air Force Heritage Program, Air Force Museums thrive. The National Museum of the U.S. Air Force, while having a large amount of funding, does need some support as well. Even with the needed help, NMUSAF is moving forward in taking care of and displaying artifacts. The South Dakota Air and Space Museum (SDASM) has taken leaps and bounds in the past two years to make up for lacking funding and caring from those who are supposed to fund, and care for, the museum. The Executive Director of the SDASM has implemented an “Adopt-A-Plane” movement to get the static displays taken care of to the extent necessary and get the base involved more directly with the museum.²⁴³ Annual bird-proofing and paint touch-ups needs to be done for the static displays to be worthy of display, but also so that they are safe for both visitors and wildlife. Base squadrons oversee cleaning and bird-proofing the planes, which equals free labor for the museum and an extension of knowledge to the squadrons helping. The other museums in the Air

²⁴³ Author helped write the Adopt-A-Plane Program, including the details of what the adoptees would do with their plane, while volunteering for the SDASM. The goal was to both continue promoting heritage throughout the Air Force system, as well as care for the static displays that make up a large chunk of the museum’s draw to the public. Information comes from conversations with the SDASM Director and author.

Force system are moving forward as well. The directors of these museums spread themselves thin for the museums to function at a level of pride for the U.S. Air Force.

With the adoration that General Rand had so recently displayed towards SDASM, it seems like common sense to allow that museum to grow and thrive in the necessary ways to keep the positive reactions. When Global Strike Command sent a representative to

SDASM in 2016 to inspect and document the museum, they ended up making observations of what the museum was lacking and what they were doing wrong, to include presentation of artifacts and storage



Figure 9. General Rand's Challenge Coin, given to Author in thanks for work in SDASM.



spaces within the museum. Cited as the “crown jewel” of the U.S. Air Force Global Strike Command’s museum system, the South Dakota Air and Space Museum (SDASM) seems to be in a limbo when it comes to being taken care of appropriately. Global Strike Command’s museum team wants the SDASM to continue moving forward as it gets over 115,000 visitors a year, changing and upkeeping exhibits, deaccessioning artifacts, and continuing upkeep on 30 static displays. The museum does move forward annually due to the hard work of all the employees and volunteers. In

2017 the SDASM was awarded the Air Force Global Strike Command Heritage Award for their work to get new signage for the static displays around the air park (see Appendix 3).²⁴⁴

While realizing there is a “chain of command” that all bases need to follow, and all airmen need to stay within, there is also a point where the chain of command becomes inadequate for what needs to happen. Each of these museums deserve the funding to add staff, as well as have funding for care of the artifacts within each museum. The National Museum of the USAF does not have a funding issue because of how large it is; it tends to be funded the best. But what of the other museums within the system? These museums get large amounts of visitors annually as well, but lack of funding can lead visitors to think that the Air Force does not care about them as much as they care for the National Museum. Truly this might be the case, however there is a problem with that line of thinking. Not recognizing the importance that each museum within the Air Force system holds will lead to a lack of understanding of heritage.

Similarly, there is the fight against Air Force core competencies that the heritage programs come up against. The usefulness of the museums gets measured against the core competencies, and if they do not measure up they may not get funded.²⁴⁵ Air Force heritage programs should not be measured against core competencies, but rather the mission of the Air Force as a whole. To educate the airmen, heritage programs need to be continued and funded no matter what. AFI 84-103 is an incredible resource if the museums have the funding to follow it. However, if there is no funding to supply

²⁴⁴ As observed by author on 04/10/2018.

²⁴⁵ Seroka, Steven, “Air Force Core Competencies,” 6.

museums with what they need, the museums will make do with what they have and that may not necessarily comply with AFI 84-103. Sadly, those who oversee the museums do not recognize the challenges that the museums are facing.

7.5 Conclusion

The U.S. Air Force has a fabulous museum system, even with all its faults. If the museums with to continue to provide the history and heritage that the Air Force is focusing on now, they need to be funded. 75% of the museums surveyed indicate a lack of funding, reflecting a very large issue that the museums are facing. Bases associated with the museums needs to stop ignoring them and begin to open funding for them. These museums house over a hundred years of history of the Air Force – from before the Air Force was even titled such – and the museums will lose that history if they are not funded. Funding allows for artifact care and professional knowledge to be shared within the museum system.

These museums bring in thousands of visitors annually, and the U.S. is lucky to have these museums at its disposal. But without proper care, the museums will eventually fail to care for the artifacts they house, and that history will be lost like so much other history.

Appendices

Appendix 1: Master's Thesis Questionnaire for Military-run Museums

1. Please state the museum you are currently involved with.
2. Do you have any background in museums? If so, what?
3. Do you believe your job would be easier if you had a background in the museum field?
4. What is your official job description?

5. What is the mission statement of your museum, and does your museum continue to meet that statement every year?
6. How many employees (military and civilian) does your museum have? What types of jobs do they do in your museum?
7. How many volunteers does your museum have? What do they do?
8. Does your museum have an executive director, or someone in a similar position? Do they have previous museum experience? Were they an internal or external hire?
9. Is your museum overseen by a higher entity (e.g. the Smithsonian Institute, etc.)? If so, how often do they interact with your museum directly?
10. Has that higher entity continuously interacted with the museum?
11. Where does the funding for your museum come from? Are there issues in receiving that funding?
12. How many visitors does your museum get annually?
13. How do you store your artifacts that are not on display?
14. What is the most valuable object in your museum? How much money goes into the conservation of that object annually? How is it stored?
15. How often do you inspect artifacts for damage?
16. How are your artifacts documented? Do you use PastPerfect Software, or something similar?

Appendix 2: Master's Thesis Questionnaire for Publicly-run Museums

1. Please state the museum you are currently involved with. If you are a volunteer, please specify what you do at your museum.
2. What is the mission statement of your museum, and does your museum continue to meet that statement every year?
3. What is your job description?
4. What is your education background?
5. How many employees does your museum have? What types of jobs do they do in your museum?
6. How many volunteers does your museum have? What do they do?
7. Does your museum have an executive director, or someone in a similar position? Do they have previous museum experience? Were they an internal or external hire?
8. Is your museum overseen by a higher entity (e.g. the Smithsonian Institute, etc.)? If so, how often do they interact with your museum directly?
9. Where does the funding for your museum come from? Are there issues in receiving that funding?
10. How many visitors does your museum get annually?
11. How do you store your artifacts that are not on display?
12. What is the most valuable object in your museum? How much money goes into the conservation of that object annually? How is it stored?
13. How often do you inspect artifacts for damage?
14. How are your artifacts documented? Do you use PastPerfect Software, or something similar?
15. What are your feelings on military-run museums in general, and specifically Air Force-run museums?

16. Has your museum ever interacted with an Air Force-run museum? If so, how did that proceed?
17. Should directors of museums have some sort of museum background, either education or work experience? Why or why not?

Appendix 3: USAF Heritage Program Artifact Condition and Conservation Survey

USAF HERITAGE PROGRAM ARTIFACT CONDITION AND CONSERVATION SURVEY			
I. ARTIFACT CONDITION			
NOMENCLATURE		ACCESSION NUMBER	
MATERIALS			
GENERAL CONDITION			
<input type="checkbox"/> EXCELLENT ORIGINAL / RESTORED	<input type="checkbox"/> GOOD	<input type="checkbox"/> FAIR	<input type="checkbox"/> POOR
SPECIFIC CONDITIONS			
ITEM	REMARKS	ITEM	REMARKS
EVIDENCE OF		PHYSICAL	
<input type="checkbox"/> Ethnographic Deposits		<input type="checkbox"/> Adhesive - Display or Tag	
<input type="checkbox"/> Previous Repairs		<input type="checkbox"/> Bloom	
<input type="checkbox"/> Previous "Native" Repairs		<input type="checkbox"/> Brittle	
<input type="checkbox"/> Extensive Restoration		<input type="checkbox"/> Broken	
<input type="checkbox"/> Previous Conservation		<input type="checkbox"/> Cracked	
<input type="checkbox"/> Other: <input style="width: 100px;" type="text"/>		<input type="checkbox"/> Crazed	
BIOLOGICAL		<input type="checkbox"/> Dirty	
<input type="checkbox"/> Dry Rot		<input type="checkbox"/> Distorted - Warped / Bent / Crushed	
<input type="checkbox"/> Insect Damage		<input type="checkbox"/> Dusty	
<input type="checkbox"/> Mold		<input type="checkbox"/> Dry (Abnormally)	
<input type="checkbox"/> Other: <input style="width: 100px;" type="text"/>		<input type="checkbox"/> Foreign Deposits	
CHEMICAL		<input type="checkbox"/> Frayed	
<input type="checkbox"/> Corrosion Products		<input type="checkbox"/> Greasy	
<input type="checkbox"/> Crystalline Deposits		<input type="checkbox"/> Paint Flaking	
<input type="checkbox"/> Faded		<input type="checkbox"/> Parts Missing	
<input type="checkbox"/> Oxidized/Tarnished		<input type="checkbox"/> Scratched	
<input type="checkbox"/> Red Rot		<input type="checkbox"/> Shipping / Smoke Damage	
<input type="checkbox"/> Stained		<input type="checkbox"/> Torn	
<input type="checkbox"/> Over-Application of Previous Treatments		<input type="checkbox"/> Water Damage / Wet	
<input type="checkbox"/> Other: <input style="width: 100px;" type="text"/>		<input type="checkbox"/> Other: <input style="width: 100px;" type="text"/>	
IMMEDIATE STOP GAP TREATMENT PERFORMED			
<input type="checkbox"/> YES	DATE	SUGGESTED TREATMENT	
<input type="checkbox"/> NO			
STORAGE LOCATION			
SIGNATURE Corey Christianson		Digitally signed by Corey Christianson Date: 2018.04.30 06:19:29 -06'00'	
		DATE	

AF FORM 3573, 20150507

Appendix 4: Photo of Letter awarded by Air Force Global Strike Command



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE GLOBAL STRIKE COMMAND

23 March 2018

MEMORANDUM FOR 28 BW/CC

FROM: AFGSC/HO

SUBJECT: 2017 AFGSC Heritage Award for the South Dakota Air & Space Museum Signage Project Team

1. It is my pleasure to announce the South Dakota Air & Space Museum Signage Project team as the Air Force Global Strike Command Heritage Award winner for 2017. The team, including MSgt Mark Wight, Mr. Daniel Phoenix (HQ AFGSC), and the Ellsworth Heritage Foundation, served as a benchmark within AFGSC for exhibit contracting, planning, development, and design.
2. The team "broke ground" as the first tangible example of our command's shift from standard statistics-driven signage to a more mission-focused look using the basic principles of interpretive design. From idea/concept to completion, this team's efforts resulted in high quality, visually stimulating signage that will not only inform and educate, but will speak to the hearts of our Airmen, their families, and the general public. Truly a benchmark for the AFGSC museum program, we are now moving forward with implementation of similar interpretive methods throughout our heritage program.
3. We salute the collective efforts of your team, and look forward to future development and growth!

DONALD L. KOSER, GS-13, DAF
Acting Director, History & Museums Program

DETER...ASSURE...STRIKE!

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