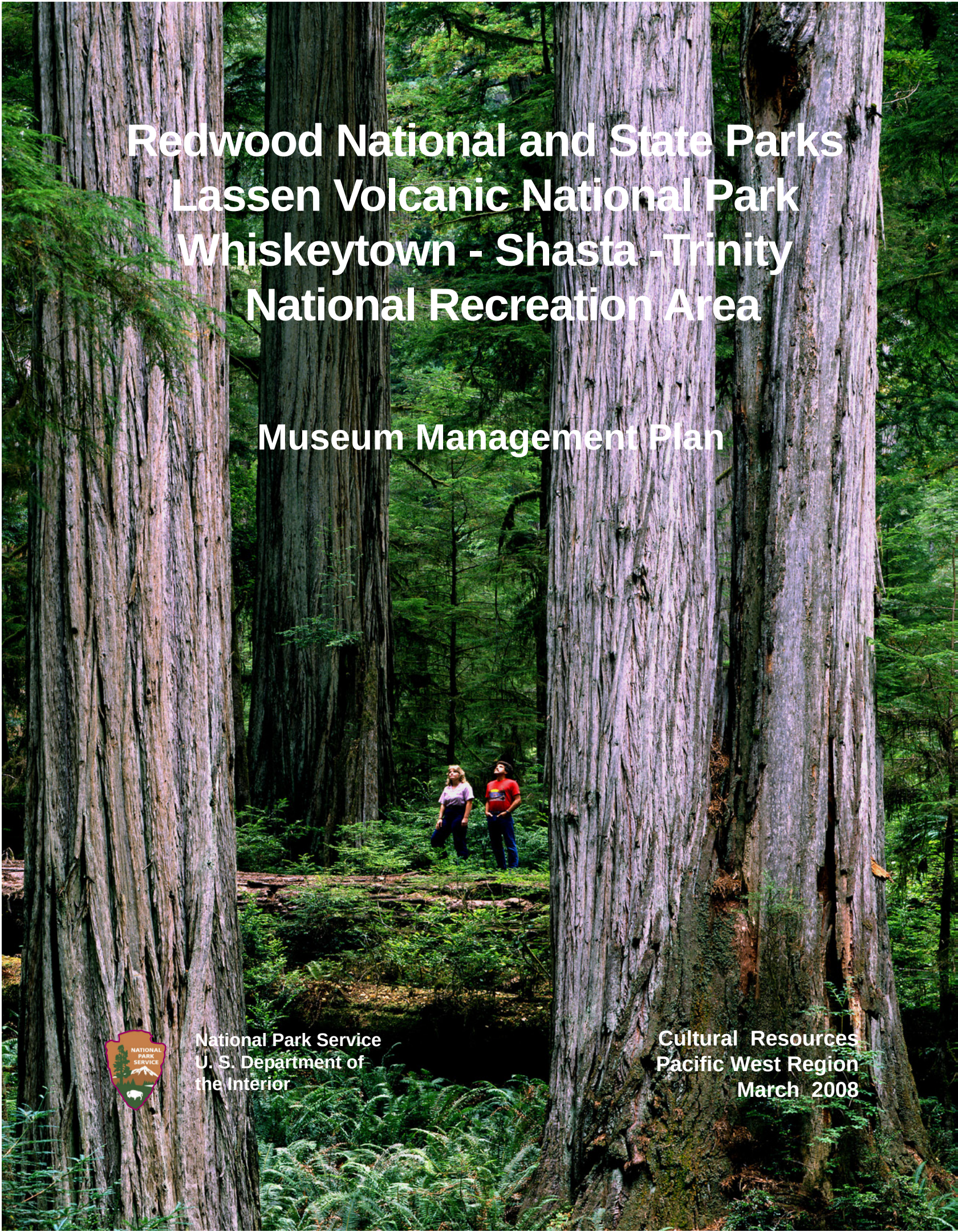
Redwood National and State Parks
Lassen Volcanic National Park
Whiskeytown - Shasta -Trinity National Recreation Area

Museum Management Plan



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Cultural Resources
Pacific West Region
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Redwood National and State Parks

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Lassen Volcanic National Park
Whiskeytown – Shasta – Trinity
National Recreation Area

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Department of the Interior
National Park Service
Pacific West Region
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Whiskeytown – Shasta – Trinity
National Recreation Area

Museum Management Plan

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Executive Summary

Redwood National and State Parks (REDW), Lassen Volcanic National Park (LAVO), and Whiskeytown National Recreation Area (WHIS) have museum and archive collections that reflect their rich heritage and biodiversity. This Museum Management Plan describes an approach for implementing improvements for the museum program over a five-year period, building upon past achievements and anticipating future challenges, with an emphasis on the efficiencies and savings associated with a multi-park approach.

This plan identifies the museum management challenges and opportunities facing these three parks, and presents recommendations to advance the program. A survey of the park staff was conducted to determine current informational and program support needs (see Appendix A). A team of museum management professionals developed this plan in cooperation with the staff responsible for managing park archives, museum collections, and library resources.

The archival and museum collections reflect the age and maturity of the different parks and are stored at the Redwood National and State Parks South Operations Center facility in Orick, California and other park locations. Providing controlled access to these important park-specific resources contributes to the efficiency of managing park operations. The recent initiation of a regional and national strategy for museum facilities supports the multi-park approach and helps justify the museum program's emphasis on Redwood as a three-park repository. This Museum Management Plan is organized around the concept of moving beyond the basic three-park repository approach and building a cooperative and integrated multi-park museum program.

The museum program can benefit from a variety of improvements within the next five years, including upgrades in the leased museum facility and development of Protocols and Standard Operating Procedures that define and support the cooperative approach.

This Museum Management Plan offers recommendations for actions designed to upgrade and improve the organization and preservation of park archives and museum collections. Through incremental improvements, REDW will be in a position to meet the standards for a professionally-run museum facility and serve all three parks as indicated in the Pacific West Region 2006 and the National Park Service 2007 Park Museum Collection Storage Plans.

Key Recommendations

The key recommendations are listed here, while more detailed action recommendations follow each issue section of the plan.

- Establish a "cooperative" through further development of vision and mission statements, and develop a "cooperative" written agreement among the three parks.
- Expand the archives program through jointly-supported projects to address existing and future archival record collections.
- Work with the South Operations Center building owner and GSA to effect improvements in the environmental control systems and other physical upgrades.
- Revise Scope of Collection Statements across all three parks and increase efforts to acquire significant collections that will add value to the museum resources.
- Conduct a workload analysis and initiate the development of annual work-planning that will assist in establishing and implementing a consensus based approach to the "cooperative."

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Introduction

The Museum Management Plan (MMP) replaces the Collection Management Plan (CMP) referred to in the National Park Service publications, *Outline for Planning Requirements,* DO-28: *Cultural Resources Management,* and the *NPS Museum Handbook,* Part I.

The CMP process generally concentrates on the technical aspects of museum operations, including a full review of accession files, status of cataloging, adherence to guidelines, and makes very specific recommendations for corrections and improvements. In contrast, the MMP evaluates the museum programs within a park and makes a series of recommendations to guide development of park-specific programs that enhance the mission and goals of the park.

The MMP recognizes that specific directions for the technical aspects of archival and museum collections management exist within the *NPS Museum Handbook* series. The MMP does not, therefore, duplicate that type of information. Instead the MMP places museum operations in context within park operations by focusing on how various collections may be used by park staff to support park goals. Recognizing that there are many different ways in which archives, libraries, and museum collections may be organized, linked, and used within individual parks, this plan seeks to provide park-specific advice on how this may be accomplished.

Prior to the site visit by the museum management planning team, park personnel were surveyed to collect baseline data concerning archival and museum collections, the library, and related services needed by the staff. This information allowed the team to make a quick evaluation of many issues relating to these operations. The survey also provided insights into ways in which a well-designed museum management program might address the needs of the park staff. The results of this survey appear in Appendix A.

The park staff and MMP team worked together over the course of the team's visit to develop the issue statements contained in this plan. Topics addressed meet the specific needs of Redwood, Lassen, and Whiskeytown

and do not necessarily cover every aspect of collection management concerns. The recommendations are intended to guide the parks through the process of implementing and enhancing a workable museum program that supports all aspects of park operations, while at the same time providing opportunities for growth and development of the museum and archive collection.

Members of the MMP team were selected for their ability to address the specific needs and concerns of the parks. Jonathan Bayless was the planning team leader and worked closely with the parks to organize the team's site visit over a two-week period in May, 2007. While the team worked collaboratively to integrate the plan's approach, sections were written by individual authors. Authors were James O'Barr for History of Collection Management, Jonathan Bayless for Issue A, Kirsten Kvam for Issue B, Brigid Sullivan for Issue C, Mary Benterou for Issue D, and Steve Floray for Issue E.

The team wishes to thank the staff of all three parks for the courtesy, consideration, and cooperation extended during this planning effort, and REDW Branch Chief for Cultural Resources Karin Anderson for her extra level of support.

Their time, effort, and involvement have been very much appreciated, and served to make the team's job much easier. It is apparent that these individuals are dedicated and committed to the preservation of park resources.

History of the Museum Collections

The traditional museum collection management history summary covers the entire history associated with collections management in a park. However, this summary continues the collection histories begun in the three parks' Museum Management Plans, completed in 1999 for Redwood National and State Parks (REDW), 2000 for Lassen Volcanic National Park (LAVO), and 2001 for the Whiskeytown Unit of the Whiskeytown, Shasta, Trinity National Recreation Area (WHIS). This section will cover the period approximately between 2000 and the present for the three parks.

Shared museum management responsibilities among the three parks began in 1996 with the hiring of the first REDW museum curator. At that time REDW Chief, Cultural Resources Branch, Resources Management and Science Division Ann King Smith (retired) had for almost a decade supported the cultural resources programs in three other parks: WHIS, LAVO, and Lava Beds National Monument (LABE). That assistance seemed to indicate that help with museum curation might be a logical program follow-on.

Redwood National and State Parks (REDW)

By 2000, implementation of the REDW Museum Management Program had begun in earnest. Archivist Lynn Marie Mitchell, who had assisted with the REDW Museum Management Plan, returned to survey the park archival collection, and identified 600,000 items to capture and process.

Cataloging funding acquired through regional project monies allowed the park to embark upon a plethora of projects including awarding University of Arizona, Tucson funding for completing archival projects through WACC, and cataloging natural history specimens through the Humboldt State University Biology Department. Collections were consolidated from around the park in the central park facility.

The REDW 1999 Museum Management Plan had recommended the development of satellite museum collection storage areas. However, the park was unable to accomplish this original plan because of a variety of factors. Rather than the development of satellite facilities around REDW, planning focused on museum collection storage in a General Services Administration Build-To-Suit (GSA BTS) office facility at Orick, California. "Build-to-suit" meant that anything required by the building occupant beyond the minimum building requirements of the GSA must be outlined in a Request For Quote (RFQ). Requirements for museum collection storage space would be a huge piece of this plan.

Figure 1 REDW headquarters at Crescent City, built in the early 1970s. Small attic facility here was used for museum storage until 1996. Objects were moved to Arcata Office building in 1998, then the new Orick South Operations Center in 2003.

Museum collections had been brought from Headquarters in Crescent City at an earlier date and managed in Arcata. Vacated space in the building was used for managing collections and centralizing the materials scattered around the park. These would then be moved in one effort to the new collection space. Professional museum storage areas and a research room would be developed temporarily.

Beginning in 2001, archives collections were processed using a term archivist with the assistance of a Volunteer in Park (VIP). In addition,

significant records related to the Park Lands Rehabilitation and Restoration projects were assembled and re-housed. WACC staff also processed archival collections and completed an archival assessment of all collections. Finally, significant inroads were made with cataloging natural resource specimens.

The REDW curator worked with members of the Klamath Biological Network to determine guidelines for archiving field records associated with the NPS Inventory and Monitoring Program. The guidelines were incorporated into the Network's formal study plan.

In 2002, the REDW park curator became the permits manager for park scientific research and collecting; that responsibility still remains. He implemented the ANCS+ program conversion from Rediscovery to Visual Rediscovery for REDW, and worked with the REDW Interpretive Division on an exhibit for the Kuchel Information Center. He continued to work with park staff, GSA, and the building contractor to ensure appropriate furnishings were installed and museum standards were met for the new GSA build-to-suit facility in Orick. That move was planned for late spring, 2003.

REDW staff moved into a new office facility in May as a result of base increase funding for FY 2003. The facility is located in Orick, California and consolidates southern park activities into a single South Operations Center. In addition to other park operations, the new facility provides adequate storage and work space for the parks' museum management program, formerly in Arcata, 35 miles from other park functions in Orick and 55 miles from Headquarters at Crescent City. Funding was acquired from the Museum Collection Preservation and Protection Program (MCPPP) to augment object moving costs and to purchase specialized museum furnishings.

To aid REDW, WACC conservation and archives program staff were detailed from the Western Archeology and Conservation Center. They packed sensitive museum objects and helped manage the movement of archival and other museum collection materials. A student intern from Humboldt State University also participated in the project. Over 1000

boxes containing archival, archeological, ethnographic and natural history collections, as well as museum furnishings, were moved during the project. A SpaceSaver™ unit for archival materials and equipment for storing wet specimens, purchased earlier with MCPPP funding, were also installed at this time in separate areas. The new facility houses consolidated collections totaling about 450,000 items.

The curator served as a field member of the Records Advisory Council, whose purpose is to advise the Washington Office on records management issues and to enhance effective communication and management across the organization on best management practices and policies.

Substantial time was devoted to environmental monitoring in collections storage and identifying deficiencies with HVAC systems. Numerous discussions occurred between GSA, the building owner and park staff and centered on conditions generated by equipment failures, lack of maintenance and poorly designed equipment.

In 2004, the museum program worked closely with the Yurok tribe on issues concerning the Native American Graves Protection and Repatriation Act, contaminated artifacts and museum collection management. The park's Research Permit and Reporting System online software was managed by the park curator, and logged some 26 permit applications. An Oral History project was initiated by the museum program in anticipation of a park administrative history project. The project was aided through assistance by the volunteer program. Fifteen interviews were conducted which helped provide understanding of past biological projects and park records.

After many years of staff discussions, REDW developed an agreement with Humboldt State University Special Collections for surveying and processing university field data concerning REDW. The agreement was established for two years to address the existing backlog of archival processing and archival re-housing.

Resource Management subject matter specialists continue to assist the museum in cataloging natural history specimens and photographing plant

specimens. A REDW botanist serves as herbarium collection's manager, assisting the curator with access and quality control for all aspects of herbarium specimen creation, recordation and storage.

Lassen Volcanic National Park (LAVO)

In 2001, Scott Isaacson's collateral curator position was vacated at LAVO. Significantly, his last major museum accomplishment was to facilitate a museum exhibit in the north park Loomis Museum. That exhibit remains, and annual exhibit changes are managed by park staff. During the winter, two specialized storage tote containers are filled with artifacts from the exhibits and stored at park headquarters in Mineral, California.

With Isaacson's departure, LAVO management hired Cari Kreshak in 2001 to become the park's first cultural resources manager. An archeologist by training, and familiar with museum collection management, Kreshak during the next four years addressed cataloging and storage problems the park had suffered for decades.

By 2002, natural history collections at LAVO had been surveyed to determine what catalog backlog existed. REDW Curator O'Barr assisted and worked with LAVO Ecologist Dr. Arnie Peterson who was beginning to address the herbarium cataloging backlog in that park as a result of work verifying the park's 80% requirement for the Inventory and Monitoring Program.

As a result of Project Management Information Statements written by Lynn Mitchell, Kreshak had acquired regional museum project funding by 2003. She hired a museum technician and utilized a Cultural Resource Diversity intern and Library Sciences intern. This team conducted a 100% inventory of cataloged objects in museum collections. All old catalog records were updated (e.g., "blue books") with new location information. Missing records were identified and copies of missing records were ordered from NPS National Catalog to complete the records.

A system of regular environmental monitoring of collections storage room using data loggers was established. All manual cultural resources and natural resources catalog records were entered into ANCS+. Accession

folders were reviewed and updated with additional paperwork necessary to make folders complete. Materials were ordered for improving collections storage and several improperly stored collection items were re-housed. New objects were accessioned and cataloged into the park collection. Standard NPS museum management protocols were enforced for intra-park object loans (e.g., "placeholder" tags, Receipt for Property).

At LAVO in 2004, a major photograph collection archival project was created through CESU agreement with the University of Washington. The project continued through 2006 and resulted in the processing, re-housing, and description of the entire LAVO photograph collection, including negatives and prints. Gina Rappaport, a student at Western Washington University, also completed her Master's degree using the project as the focus of her thesis.

Whiskeytown National Recreation Area (WHIS)

Park Ranger Clinton Kane has management of museum collections as one of his collateral duties. The museum program at WHIS has not been as active as either LAVO or REDW but the opportunity to receive the services of a professional curator as well as to properly store the collections had been identified in the 2001 Museum Management Plan. With the completion of the facility at Orick for REDW and the finalization of the curator-of-record agreement with REDW, these plans came to fruition.

O'Barr continued assisting Lassen Volcanic National Park and Whiskeytown National Recreation Area with their museum collections projects, for the areas had only collateral-duty staff assigned to manage artifacts and archival materials. A joint cataloging statement for REDW and LAVO was funded by the region. Further collections were transferred to REDW, mostly the Cooke Collection, for cataloging by Kim McFarland along with collections at REDW. A STEP museum technician completed the re-housing and cataloging of the REDW archeology collection backlog.

Figure 2 Bally Building at WHIS. Collections removed from this building were taken to REDW SOC museum storage area in 2005.

Joint Management

In 2004, curatorial assistance continued to grow exponentially with LAVO and WHIS progressing toward an agreement for the REDW museum curator to serve as curator-of-record for the two parks. A PMIS statement was written to create a collection management plan addressing all three parks and to store LAVO and WHIS collections at REDW until those parks could manage their own collections in an appropriate local museum facility. Preliminary planning began for WHIS and LAVO objects to be moved to REDW South Operations Center Museum Collection Storage facility. LAVO archives were moved from WACC to REDW along with new storage equipment for the rest of the LAVO objects. Archeological materials at WHIS were inventoried and re-housed in preparation for the move to REDW. A Student Conservation Association volunteer request was implemented to continue initial move preparations in FY 2005.

In 2005, the superintendents finalized the curator-of-record relationship between Redwood National and State Parks and the two other parks. Combining forces to create a network museum management program was quite an endeavor for a group of parks divided by a mountain range or

two. But persistence prevailed and today the combined cultural museum collections of REDW, WHIS, and LAVO reside at the Redwood National and State Parks South Operations Center museum facility in Orick, California.

Each park's collection consists of unique elements. LAVO's collection, in addition to telling the story of Photographer and Naturalist B.F. Loomis and documenting the explosive force of an active volcano in photos, is replete with archival materials documenting the early decades of park management.

WHIS, on the other hand, while focusing upon the creation of the Central Valley Project lake and dam at Whiskeytown, also features the site of one of the only NPS units dedicated to the California gold mining story and history of the extractive industries after that time. Collected documentation of the Tower House Historic District, a venue figuring largely in the extractive industries economy of northern California, can be found in the collection through historic paintings, photos, and historic archeological collections. In all, this project took four weeks, 108 carefully packed boxes, and 45 hours on the road.

As O'Barr continues to refine the facility at Orick and work on planning the management of archival collections at REDW, the consolidation of these three park collections in one location appears to be working. Funding requests continue to be refined and other plans are underway, including a collection storage plan and an archival processing plan. Additional staff is needed, but the parks will have to rely on project funding and non-permanent or contract staff to assist them.

Issue A — Multi-Park Cooperative Concept

Issue Statement

Building an integrated three-park museum repository at Redwood will require continued resource-sharing and the development of a long-term approach with a strong commitment to a shared vision. This issue addresses the concept of a "cooperative" approach that the parks can adopt to significantly increase the efficiency and effectiveness of their museum programs.

Background

The three parks covered by this plan each have their own unique enabling legislation, history, resources, and museum collections that have developed independently over the life of the parks. With differing time since their inception, and various geographical, social, and biotic backgrounds, the parks have followed their own internal logic, challenges, and missions over the course of their histories. A glance at the three Museum Management Plans (MMP) for LAVO 1999, REDW 2000, and WHIS 2002 provides an understanding of the challenges facing each park at the time. Table 1 provides a listing of recommendations included in the Executive Summaries from the three MMPs. A discussion of their common features is worthwhile and will show that the parks had overlapping needs.

The three MMPs show very similar concerns and needs in their Executive Summaries (see Table 1 on next page). The need for adequate space that meets or exceeds museum standards is covered in all three parks (L-#1; R-#2; W-#2). A desire to make collections accessible is a concern throughout these plans (L-#3, 4; R-#4; W-#4). The importance of professional staff with museum or archives expertise is shown in the LAVO and WHIS MMPs, where the parks lacked any museum positions on staff (L-#2;

W-#3). Finally, the need to direct the growth of the collections to build high-quality collections was a concern at two parks (R-#1; W-#1).

Table 1 Recommendations from Executive Summaries of three Museum Management Plans

LAVO (L)	1. Retrofit existing space to address inadequate space until a modern facility can be built.
	2. Develop professional program and staff to meet mission of preserving cultural resources.
	3. Complete documentation of archive and museum collections.
	4. Improve information and image management systems to utilize resources in support of park and partnership programs.
REDW (R)	1. Develop protocols to direct growth of collections of archives, museum, and library resources and provide information for future use.
	2. Develop work, storage, and study areas necessary to house resources and make them accessible.
	3. Develop an archival program.
	4. Implement a digital information system to provide access to archives, museum, and library resources.
WHIS (W)	1. Develop protocols necessary to direct growth of collections in a manner that provides the best and most accessible information.
	2. Create both short- and long-term work, storage, and study areas.
	3. Provide adequate staffing to manage resources to professional standards.
	4. Develop information and image systems to utilize resources in support of park and partnership programs.

In the mid-1990s, a major reorganization of regions occurred and resulted in the merger of the former Pacific Northwest Region and the Western Region to form the current Pacific West Region. This brought the states of Oregon and California (as well as other states) under the same administrative regional umbrella. In addition, the National Park Service developed a special relationship between parks through the Natural

Resources Challenge, Inventory and Monitoring Program, in adjacent or similar environments that came to be called "networks."

Redwood, Lassen, and Whiskeytown are all part of the Klamath Network of parks, which also includes Crater Lake, Oregon Caves, and Lava Beds parks. Efforts to plan and address natural resource issues at the network level increased and spread to all other park divisions as the NPS began organizing its funding and management around the network model. Examples include allocating representation on regional advisory groups by networks; all the superintendents from a network meeting regularly to address joint concerns; and the development of written network strategies to define targets and goals at the network level.

During the late 1990s, the Pacific West Region pioneered the use of the curator-of-record (COR) agreement among parks to share the expertise of the limited number of NPS professional journeymen curators or archivists (GS-11 and above) with parks that maintained museum collections but lacked museum curators. The COR agreement between two or more parks provided for professional oversight and assistance to parks by a curator from one park who could either travel to the parks or assist remotely though consultation and review. The need for such agreements had been shown many times where parks suffered mistakes, losses, and setbacks to their museum collections caused by lack of professional curatorial oversight. In 2005, the curator at Redwood National and State Parks became the COR for Lassen and Whiskeytown. The agreement greatly increased the links among these parks' museum programs, improved the management of museum resources, and made the reporting, planning, and programming for these resources more efficient.

It was out of the context of the development of networks and the curator-of-record agreement that the development of a three-park repository arose. In 1999, Redwood National and State Parks were able to begin planning a move to a new office and operations center in the town of Orick, California. From the beginning of planning, the move was intended to address the need for high-quality museum storage and office space. Built by a private owner and used by the park under a GSA lease-agreement, the South Operations Center (SOC), as it is called, greatly expanded and

improved conditions for the majority of Redwood museum collections. It would later be shown to have some significant issues involved with maintaining the environment to museum standards. Since the government does not own the building, physical improvements are not simply a matter of obtaining funding, but this discussion is more fully addressed in this plan as part of Issue C, Preservation.

The original space and layout for the museum area in SOC was designed solely for Redwood's use. In 2005, the decision was made to transfer collections from Lassen and Whiskeytown to SOC, and thus create a three-park storage repository. The decision was made during the process of developing a regional and national strategy for museum facilities as called for in a congressional appropriations act. A dialogue between the three parks and the region at the staff level led to an agreement that Redwood would serve as a repository for the majority of collections from Lassen and Whiskeytown. Plant specimen herbaria at the two parks, as well as some insects and historical items, would remain on-site where they were being used. The Regional Museum Strategy states that:

> REDW collections [will be] located in the GSA-leased building at Orick, CA. The park will develop a collection storage plan for the space to more efficiently house the three parks' collections.
>
> - Park has journeyman level GS-1015-11 curator.
> - Facility meets NPS museum standards.
> - Park is repository for LAVO and WHIS collections.
>
> LAVO cultural museum collections and some natural collections are located at REDW; WHIS museum collections to be stored at REDW facility with the exception of the herbarium which is to be located in Natural Resources Offices. For both:
>
> - Curator-of-record is at REDW (GS-1015-11).
> - Herbarium and other actively used collections located in natural resource management space needs upgrade to meet NPS museum standards.

No specific agreements were developed during this time, and a statement of intent was made to develop a "strategy for the storage and care of artifacts" (C. Kane email on 12/9/05).

It is from this point of development that this plan now looks to the next five to ten years and addresses a vision of what the program could be at the end of this time.

Discussion

Redwood operates a multi-park repository that cares for the collections from Lassen and Whiskeytown. The need exists to develop both broad and specific direction as to what this arrangement entails and the roles and responsibilities of each park involved. The three parks desire to have more than simply a convenient and efficient physical storage arrangement. They also want to capitalize on the opportunity to build a program that can better meet the curatorial needs of all three parks.

In meetings of the three parks' staff during the MMP site visit, the concept of developing a cooperative approach was seen as essential to creating a shared vision of a multi-park museum program. With an understanding of the current strengths and weaknesses of the current operation, it became clear that a process of incremental steps should be taken to move the program forward and expand its capabilities.

Cooperative Concept

The management of museum resources in the National Park Service is a component of the mission of most of the parks in the United States. They are considered part of the park's resource base, and contribute to the knowledge and appreciation of the park. Traditionally, the guidance for parks in managing their collections is based upon the arrangement that each park independently houses and cares for its own museum resources. There are exceptions to this, such as archeological centers which have been established to care for numerous park collections, for example, the Western Archeological and Conservation Center in Tucson, Arizona. A number of multi-park repositories exist in the Service, such as the four-park repository at Everglades National Park. So while the approach at

Redwood is not unheard of, the specific design of a cooperative approach is still a goal that must be built from the ground up, tailored to fit the specific resources, program goals, and needs of the three parks.

So just what is a "cooperative," and how would it differ from a multi-park repository? This fundamental question can be addressed by understanding the degree of resource-sharing, coordination, and how responsibilities are allocated in this new program approach. The following three tiers of coordination provide direction for future discussions and planning.

(1) Park-specific Programs

Each park is mandated to preserve and protect its resources and provide for its enjoyment. Operating self-sufficient resource programs and allocating scarce staffing and budget resources is a primary responsibility of each park. Parks have numerous responsibilities that they may not re-delegate, nor should they. In the museum program, responsibilities for acquisition and de-accession decisions, ensuring property accountability, and meeting the reporting and documentary requirements are all park-specific management duties. There are on-site activities at parks, such as exhibit operations, dealing with donors, or handling surface finds that are site-specific and difficult to deal with other than using an in-house approach.

However, many tasks within the park's museum responsibilities can be shared and/or assistance sought and provided across parks. This leads to the next level of coordination.

(2) Park Resource-sharing

Parks work together toward common goals at the network or regional level, take advantage of the efficiencies of sharing staff expertise, and cooperate to jointly fund a project. These are all examples of resource-sharing. Such sharing may be as basic as consultation between one park staff professional with staff at another park. Or it may involve substantial investments on the part of two or more parks bringing together staff, funding, and a shared project outcome. The curator-of record agreement is

a form of resource-sharing that builds links and promotes best management practices across the three parks' museum programs.

While resource-sharing occurs more and more frequently between parks, much of it occurs on a case-by-case or project-specific basis, where little long-term commitment is made or expected. Agreements are seldom developed that codify the roles and responsibilities of the parks, or help establish broader, more permanent program links. In cases where agreements are put in place, especially involving outside partners, the emphasis is on the working relationships and outcomes. There have been some strong, relatively permanent multi-park programs developed in other areas, such as the Inventory and Monitoring programs that helped establish the network approach. However, there are few, if any, multi-park museum programs that have developed such arrangements. A longer-term, formal agreement can develop into the highest level of resource-sharing, which is a cooperative approach.

(3) Cooperative Approach

Resource-sharing across parks that is intended in a long-term, enduring context with the highest level of coordination and efficiency is herein called a cooperative approach. The goal of building a cooperative program cannot be achieved quickly, as it involves the development of a strategic vision recognized through formal agreements and the subsequent development of protocols and standard operating procedures. When a cooperative program is developing new, innovative methods as it is here, it needs to proceed with an adaptive management approach where trial tests and prototypes are used to evaluate the success and usefulness of proposed solutions. Adaptive management calls for feedback and measured outcomes to be incorporated into future operations and plans.

Implementing a Cooperative Approach

For a better understanding of the differences among the levels of resource-sharing discussed, and to help in creating the definition of the cooperative approach discussed in this plan, Table 2 gives examples of the difference these approaches would take toward tasks and challenges facing the museum programs at the three parks. While no sharp divisions exist

among these levels, they provide a conceptual framework to clarify any protocols developed to implement a cooperative approach.

Table 2 Comparison of three approaches to program goals

	Level of Resource-sharing		
Program Objective	Park-specific	Resource-sharing	Cooperative
Revise park Scope of Collection Statement and develop acquisition strategies and priorities.	Each park revises SOCS on their own timetable, using in-house staff resources and considers only their own park objectives.	Parks coordinate revision through curator-of-record, and use similar approaches where possible. They share similar timeframe for completion.	Concurrent revision of three SOCS as a single project. Acquisition strategies are shared across parks and priorities closely coordinated.
Update and maintain museum database ANCS+ through Backlog Cataloging project.	Parks maintain database as individual responsibilities. Backlog reduced as funding is available. No linkages or shared expertise.	REDW maintains all three databases, assists with access needs and training, and coordinates backlog projects for all three parks.	REDW maintains all museum records and provides access and reports. Oversees and manages backlog projects for all three parks.
Conduct three-year archives project to acquire and catalog appropriate park records into collection.	Parks attempt to obtain funding independently. Problems with competing at regional level with smaller needs priorities. Funding may be at too small a level to hire professional staff.	Parks share a joint archives project, with each park allocated project resources based upon their contributions. REDW coordinates and provides oversight.	A single project serves all three parks. Priorities are established jointly based upon significance and urgency of record groups.

Initial Cooperative Planning Meeting

During the first week of the development of this plan, the cultural resource and interpretation staffs from the three parks were able to hold their first discussion about the vision of how a cooperative approach would be developed.

The first attempt at scoping a Role and Function Statement, created on May 4, 2007 and drafted by two staff from each of the three parks is given here:

Cooperative Vision and Mission Statement

The ____[name here]____ Cooperative provides for the preservation and access of the parks' museum that fulfills the NPS mission.

As a cooperative we will:

Manage the collections in progressive and innovative ways,

Actively participate to share knowledge, information, and ideas,

Develop management strategies and protocols that enhance efficiencies,

Facilitate the development and use of the collection by park staffs, and

Promote these collections as significant resources we preserve and manage for the purpose of education and scientific research.

Possible names for this new entity should include the desire to identify the region or part of the geographic coverage, such as South Klamath Network, and a program identifier for understanding what topics are covered, such as "museum" or "curatorial," and then a noun that shows that this is an actual physical and operational entity, such as "alliance," "center", or "cooperative." The last term was preferred by the planning team during initial discussions.

Continued Development

As soon as this plan is completed, and even before its final approval, the museum and park resource staff can begin implementing many of its recommendations. A management document should be developed that creates a tracking mechanism on the progress made in the plan's implementation. The document should characterize goals as short- or long-term, with an eye toward creating a timeline sequence, and should distinguish between those that require substantial funding or staffing increases and those achievable given currently available resources. By stating objectively what program priorities and commitments are being made, it will help establish a track record on where the program is headed. This will also help provide a basis for the development of a multi-park agreement on the vision, role and function, and mission of the new cooperative.

Recommendations

- Continue development of the draft. Vision and Mission statement for the cooperative. Attempt to settle on a name that conveys its intended meaning to a broad audience.
- Establish targets for completing goals and objectives set forth in this plan, and track and report accomplishments on a regular basis.
- Develop and seek approval for a three-park agreement on the role and function of the cooperative. Involve regional and even Washington museum experts in consultation and review as is prudent and efficient.
- Codify recognition of the cooperative throughout other park programs and public involvement.
- Ultimately, seek partnerships that enhance and support the cooperative's programs, which, of course, are directly tied to the mission of the three parks.

Issue B — Archives

Issue Statement

The three parks need to manage a centralized and shared archival program and develop and implement protocols for bringing archival park records into the collections. Use of digital resources will speed access to widely-requested information.

Background

Progress Since the 1999 Museum Management Plan

The archives program at Redwood National and State Parks has come a long way since the 1999 Museum Management Plan (MMP). At the time of the team's visit in 1997, there was an estimated backlog of 400,000 archival items, nearly 85% of the museum collection. Under the direction of the park's first professional curator, James O'Barr, approximately 85,198 archival items have been cataloged. This has been accomplished through a combination of term archival positions, an agreement with Humboldt State University, and the utilization of the Intermountain Region Museum Services Archive Program processing services. A number of finding aids have been produced that are available to all employees on InsideREDW, a park intranet portal. One finding aid has been made available online to the general public at the Online Archive of California http://www.cdlib.org.

The first MMP team documented that an attempt had been made by the regional curator in 1986 to identify park records in the field that were eligible for inclusion in the park archives. They were referenced in the 1994 Park Scope of Collection Statement. A professional archival records survey was conducted in May of 2000 by Lynn Marie Mitchell of the Western Archeological and Conservation Center (WACC). This survey identified nearly 400 linear feet of unaccessioned field records, resource management records, photographs, maps, and drawings located throughout the park. The 2006 REDW CMR lists a backlog of 132,215 archival items.

This number does not include the hundreds of linear feet of unaccessioned records in the museum facility and park offices. The true REDW archival backlog is at least 1,000,000 items, or 625 linear feet.

Whiskeytown National Recreation Area (WHIS) also had a records survey conducted in July of 2000. REDW Curator James O'Barr and WACC Archives Technician Khaleel Saba identified 67 linear feet of documents, 8000 images, and 16 map cabinet drawers of oversized materials, as well as three file drawers of digital back-up files and numerous digital files residing on personal computers. The majority of these materials, excluding digital resources, was sent to WACC for processing and a large portion has been completed and returned for storage at REDW, leaving about twenty drawers of maps and drawings that need processing.

Lassen Volcanic National Park's (LAVO) archives collection has increased from 14,401 items in 1996 to 153,630 items in 2006. WACC's services have also been used for archival collection processing. The LAVO photo collection was recently processed through a CESU agreement with the University of Washington and is now stored at REDW.

South Operations Center Museum Facility

In 2003, the new museum collection storage facility opened at the South Operation Center (SOC) in Orick. In conjunction with this move, several offices decided to turn their older records over to the archives. Without the time or ability to adequately sort through the large number of records, the curator brought the bulk of the material into the museum storage area to protect it from destruction. Although some of these records have been processed and cataloged, a large portion remains unaccessioned and stored in the museum storage area. Other unaccessioned groups of records are also in the museum storage area waiting for processing, pending available funds and personnel.

The museum collections of WHIS and LAVO were moved to REDW in 2005 for permanent storage. Further discussion of this move is in the History of Collections section above. The bulk of the archival collections of all three parks is stored together in SpaceSaver™ mobile storage units.

Each park has its own shelves in the units, and each park has its own map cabinets. The organization of the archives has been dictated by when the collections were brought into storage and is therefore separated haphazardly according to space available at the time, rather than strict groupings by originating office or project.

Park Records

Records management is a critical aspect of the park's management of its operations, a subject thoroughly covered in Section 1.2 of *Director's Order #19: Records Management*.

The National Park Service currently offers little training in records management. Likewise, many parks lack a well-run archival program. Consequently, park divisions are often left to manage their records on their own, meaning that quality varies by division. Like most other parks, REDW does not have a coherent records management program. This means there are no established and implemented procedures for active records oversight, no regularly scheduled surveys and dispositions or mandatory employee checkout with the curator, and no formalized method of bringing records into the archival collection. The situation is likely the same at WHIS and LAVO. This promotes a circle of confusion in which no action is taken because no one is certain what to do with their records. At REDW, the museum storage facility houses some groups of records to preserve those that need to be removed from park offices. These records are for the most part unprocessed and their final disposition is not certain.

All three parks have a significant amount of electronic records that they would like to manage. These records include data sets, reports, and maps to name a few. REDW particularly has a large number of GIS files that are being managed by the GIS coordinator. This type of file is digitally-born and would be meaningless if it were printed out on paper. Some digital media have made their way into the archives on CDs, DVDs, and diskettes, but digital files in the park are being managed mostly by the creators. Most of these files have been stored systematically on the park's local area network, or LAN. A dedicated server at both the South

Operations Center and the Arcata Office are utilized to store GIS projects and products.

Digital Access

An online method of accessing information in active park records as well as those in the museum collections of all three parks is needed and desired. A large reason for this is the distance involved in traveling between park offices and the archives facility. This is especially true now that the archives of LAVO and WHIS are located outside of their parks.

Issue D of the 1999 Redwood National and State Parks MMP recommended the establishment of a team to explore the form and direction that online access should take. The result of this undertaking is InsideREDW, a content management system designed as a portal for park employees to access digital information. Brought online during the summer of 2006, it is based on the structure of InsideNPS. It provides access to digitized files stored in the park as well as links to outside sources. It was created so that individual divisions can independently manage their page content. InsideREDW eventually may be the unified system that all park employees will use to provide access to the data they wish to share with others. So far, about 20 employees are actively using it to post information. One of these is the REDW curator, who has posted the park's finding aids, park management documents, oral histories, and frequently-requested documents.

Discussion

Storage and Physical Access

The storage plan for the archival collections needs to consider the present and future needs of the three collections. The archives should be organized in a logical manner that allows room for growth. There should also be consideration of different types of storage for different types of media. For example, paper collections in uniformly sized boxes can easily be stored on the existing shelving units, but there is enough electronic media, such as cassettes, video tapes, CDs, and DVDs, to consider investing in a dedicated media storage cabinet. The parks should consider writing a

Project Management Information System (PMIS) statement for Museum Collection Preservation and Protection Program (MCPPP) funding for an Archival Collection Condition Survey as a basis for requesting conservation funds.

The collections storage plan should consider the needs of users, including visiting park staff, outside researchers, and collection processors. The Cultural Resources space at SOC has expanded from its original purpose. New personnel are currently occupying the office space that was intended for use by researchers and collection processing. With the possibility of a new archivist on staff, the need for creating a designated researcher and processing area and rethinking the staff office space is great.

The team evaluated the space for potential reorganization. The museum laboratory, library, and office cubicles were all considered for a researcher and processing area. The lab was rejected because of lack of space and visual oversight, and the current set-up of the cubicle area is better suited for office space. The library was originally designed as a museum and archives reference library, but it now also serves as a processing area and temporary office. It might be used more efficiently as a dedicated processing and researcher space. The glass windows would allow the curator to monitor researchers, while the closed door would reduce noise from the office spaces. See Appendix D of the *NPS Museum Handbook*, Part II for more information about setting up research rooms.

The park might also consider a longer term possibility of converting some of the unfinished space directly outside the collection storage room into office space. If the Cultural Resources division continues to grow, more office space will be needed.

Collection Organization and Physical Control

With three park collections stored together, it is essential that the collections are clearly labeled and identified by park. Care should be taken not to intermingle cataloged and uncataloged materials (especially pre-accession items). Storing similar types of materials together is acceptable as long as access to each park's holdings is fast and efficient.

Figure 3 View of archives processing area in new facility at Orick

The individual park's archives also need to be better organized and labeled. For example, while the records in REDW's collection are mostly organized on the shelves according to the creating division, not all boxes are labeled as unaccessioned, accessioned, or cataloged, and their contents are not clear. Better labeling of the archival boxes should be undertaken immediately. All boxes and flat files should be labeled with the park acronym (i.e. REDW, LAVO, WHIS), the contents of the box, and the number of boxes in the group (e.g. Administration Files, 1987-2000, Box 1/8). Any associated tracking numbers such as accession numbers or pre-accession numbers should be clearly visible. If the collection has been cataloged, all boxes should be neatly labeled with the name of the collection, the accession number, the catalog number, and the number of boxes. Using a color-coded system, i.e. different colors for each park or accessioned and cataloged collections, would aid in collection identification and retrieval.

Archival appraisal and archival collections, especially park records, because of their nature are not always immediately accessioned. It is not always clear if an archival collection is worth accessioning until it has

been surveyed by a trained archivist. Incoming collections should be tracked and labeled until the disposition of the collection is determined. A "pre-accession" or registration spreadsheet and corresponding tracking system should be created.

Archival collections often contain information that needs to be restricted, such as archeological site locations, endangered species information, social security numbers, or law enforcement records. These collections need to be kept secure and access to them limited. Storage in the collection storage room is adequate if access is controlled and monitored. When restricted files are a part of a larger collection or record group, they should be clearly marked, preferably in red, as "RESTRICTED" on the folder, container, and finding aid. When a researcher asks to look at a collection containing restricted records, determine whether or not the researcher has the right to access those records. A question to ask is whether or not the information is required for the research. If the answer is no, simply pull the restricted file(s) out of the boxes when they are brought to the researcher. See the *NPS Museum Handbook*, Part II for more information about researcher access to archival collections.

Park Records and Backlog

Attempts have been made at each of the three parks to formalize the process of bringing records into the archives. These have not been fully successful in part because of the lack of professional museum staff at WHIS and LAVO and a lack of archives staff at REDW to create a coherent program and implement the procedures. Management of park records according to the mission and directive of the NPS requires that all three parks develop records management programs. The combined resources and dedication of the three parks should provide the impetus and support for this project. A professional archivist can develop and implement an archives acquisition policy and advise park administration on the creation of a more formalized records management program.

A description of the NPS Records Management program is included in Appendix C. It discusses the current status of the program and what it hopes to provide for the NPS in the future. The National Archives and Records Administration (NARA) is the final repository and records

manager for federal agencies. The Federal Records Center (FRC) is the branch of NARA that stores inactive records that may or may not be included in the permanent NARA archives collection. Parks can use the FRC for records storage, but it does cost money and the centers are often distant from the parks. The National Archives is also an option for the permanent care of park records that have permanent value. Parks also have the choice of retaining mission-critical records on-site. Retaining and processing the records at REDW seems to be the better alternative because of the complexity of the three parks' resource management records and their importance to their missions.

An informal survey of the NPS offices at SOC and communication with the curator led the team to notice that REDW appears to have a significant amount of inactive records that may be appropriate for the park archives. The same situation is likely true at the other parks. These records should be surveyed for inclusion in the museum collection. If the records have passed their *NPS-19* disposition date but are still in active use by the generating division, the records may stay in the division offices. The division does, however, have a responsibility to preserve the quality and integrity of the records and keep them secure.

The REDW curator and his staff, working with park staff, need to develop an archives strategy to further develop and implement the existing procedures for bringing park records into the archives. A professional NPS archivist should be brought in to assist the curator in developing the plan. The plan should standardize the way records come in to the archives, how to handle collection accretions, appraisals, and collection-naming conventions. The purpose of the plan would be to give the curator enough archival guidance to be able to confidently manage incoming park records. It would also provide a method of prioritizing the processing of the existing backlog of accessioned and unaccessioned records in the museum storage facility.

Electronic Records

The significant number of digital files in the three parks demonstrates a need for electronic records management and preservation. As explained in Appendix C of this plan, the National Park Service has not developed a

viable system for the electronic storage of records. Nor has NARA, which is tasked with the preservation of the electronic records of the U.S. Federal Government. Therefore, any attempt by individual parks to preserve their electronic records is without directive from above. Currently, each division is responsible for the management of its electronic records on shared servers. The quality of each division's records varies. This is a service-wide problem to which there are no easy answers. It is important to remember that electronic records are not separate from paper records. Regardless of format, a division's records are a cohesive whole and the plan for their long-term storage and preservation should be mindful of this.

The current accepted standard is to print out electronic documents and preserve them as paper hardcopies. This is not feasible for some digital-born types of data. An option is to preserve electronic data on DVDs, CDs, portable hard drives, or some other sort of media and store them physically with the paper records. This is not a perfect solution since the data would need to be migrated as technologies change and the physical media deteriorate.

Suggestions have been made to digitize all materials as they go into the archives and make the documents available online. While this is possible and a good idea for final projects and some data sets, it is unrealistic for most archival collections. Not only does the sheer volume of most record groups preclude the digitization of the entire collection, but often much of the information contained in an archival collection doesn't warrant broad distribution. Sensitive information inside a group of records can be more easily restricted when the records are in paper form. Records also lose much of their intrinsic value when they are reorganized into a different format. The value of a record group is the knowledge you can gain from seeing the individual documents in context with each other, an organizational aspect that is lost in digital filing.

Digital Access

A viable method for online access for park employees to digital information needs to be developed. InsideREDW has the potential to fulfill the parks' requirements. However, it is not and should not be considered an archive of important documents. Online access to files is not

the same as archiving records. A portal such as InsideREDW is a form of digital reference library where documents are stored for reference but not for preservation.

Development and management of the InsideREDW online website is not the sole responsibility of the park's museum staff. A group of park employees should continue to periodically evaluate the site and improve it as possible. The group would include an IT specialist, at least one member of senior management, the curator, and other staff members with a vested interest in the site, such as GIS specialists. The park might want to consider consulting with an archivist or data manager from another park. The curator should continue to make finding aids and other research tools available.

Recommendations

Short-term (within the next 1-3 years)

- Label all archive boxes and map folders so collections are more easily identified and physically controlled. This could include a color-coded design.
- Prepare an Archives Strategy Report to:

  A. Develop protocols for bringing records into the archives. This should include notification to the curator of staff turnover, office moves, etc. The current SOP should be modified to recommend bringing materials into the collection as groups of records rather than as individual items.

  B. Determine procedures for appraising records by a qualified archivist or NPS Records Manager *before* accessioning into the collection to protect their integrity, organization, inventory, etc. Train museum staff in archival appraisal so they can better assist project archivists.

  C. Prioritize collections for processing and cataloging. This will help reduce the archival backlog.
- Create a designated archives research and processing area to provide access to collections and adequate space for researchers. This element is crucial to promoting use of the collections and is an integral part of a Collections Storage Plan. (See Issue D on storage planning).

- As part of a park-wide effort, continue to develop and populate InsideREDW, NPS web delivery systems, and other digital information organization systems to provide online access to information.

Long–term (within the next 4-10 years)

- Build in-house capabilities to keep up with the expected growth of the museum archives from preserving park-generated records. Leverage a permanent GS-11 archivist position, currently a park OFS request (10615A), which would provide a longer-term solution to managing the archives and records management programs.
- Process and catalog the archival backlog of the three parks and manage the acquisition of park records. This could be accomplished through hiring a GS-9 or 11 archivist on a multi-park project basis. Ensure that products are compliant with ANCS+, Dublin Core, DACS, and EAD standards.
- Undertake a Collection Condition Survey and implement the recommendations.
- Develop outreach for collections use.

Figure 4 SpaceSaver™ shelves housing archival materials in the new REDW SOC museum storage area

Figure 5 Archeological materials in the LAVO museum collection

Issue C — Preservation

Issue Statement:

Implementing sound preventive conservation practices for museum collections will promote long-term preservation of cultural and natural collections for research and use.

Background

Construction of the multi-agency South Operations Center in Orick in 2002-03 marked enormous progress in museum collections care at Redwood National Park. As designed by GSA in 1999, the structure includes a dedicated contiguous suite of museum-use areas located on the second floor in the Cultural Resources section of the Center. The suite includes a large general collections storage room, a smaller room for storage of natural history biological wet specimens, an adjacent processing laboratory with fume hood and sink, and a curatorial supply room. Separate from the contiguous suite is a library/archives room accessed through the Cultural Resources general office area.

The primary park exhibits located in the Kuchel Visitor Center were installed in 2005. The exhibits feature baskets and other ethnographic objects.

In 2005, collections from nearby Whiskeytown NRA and Lassen Volcanic NP were moved to the Redwood South Operations Center after agreement among the three parks to provide upgraded curatorial storage—which on-site park facilities at LAVO and WHIS lacked.

Discussion

Museum Environment

Mechanical System

The HVAC system designed and installed by GSA falls short of accepted museum conservation standards as specified by the National Park Service in the contract documents. Although the performance standards for climate control were clearly articulated in the specifications presented in the Solicitation for Offers document in Section 9, Special Requirements (1999), the specifications were not met. Nonetheless, the completed work was accepted by GSA regardless of non-compliance with written performance specifications. E-mail and written correspondence from the park curator, Denver Service Center, and the building contractor about the failure of the HVAC's performance to specifications has been essentially unheeded four years after completion and occupancy of the building.

Although specified as a performance requirement, dehumidification capability was not provided in the mechanical system. Specifications stated a relative humidity range of 50% RH +/- 3% with an operating range of 45% to 60% permitting a 10% seasonal drift from summer to winter conditions. This is normally and most reliably achieved by reheat capability which is absent from the system altogether. In his review commentary, Denver Service Center Mechanical Engineer Andy Roberts requested an elaboration of contract specs from Contractor Architect David Pierce: "Describe dehumidification and reheat control sequences" (comment no.82). David Price replied that the control function table is presented in sheet M1, which when reviewed, showed no dehumidification or reheat control. O&M Industries in Arcata is contracted to maintain the HVAC system twice yearly and stated in a phone conversation with the MMP conservator during the site visit that the system has no dehumidification capabilities at all and 100% make-up air. Environmental monitoring data recorded with an ACR data logger set to approximate real time shows frequent excursions of relative humidity in the mid 70s% and as high as 80% from the main storage room.

Surprisingly, in the humid environment of the northern redwoods Pacific coast, the contractor included a humidification system in the HVAC

design. The added humidification steam injection system has created such high and widely fluctuating RH% conditions in the storage room that the curator asked the contractor to disable the controls in 2005.

As designed, the HVAC outside air dampers in the South Operations Center operate by enthalpic controls, which means that the sensible temperature (dry bulb) and latent temperature (wet bulb) in the air are measured. The enthalpy of the external air is measured and compared with the enthalpy of the internal air, and whichever air mass has an enthalpy closer to that required within the building, is used to provide the greater part of air being moved by the HVAC equipment according to a fixed air volume controlled by a timing mechanism. The minimum fresh air provision during occupied time is 10%, and during unoccupied times, the dampers are closed allowing no influx of makeup air.

This is a common system for cost savings in residential and commercial buildings, but inappropriate for maintenance of a stable climate in a museum storage area located in a generally humid environment where prescriptive performance is easily defeated by outside air. The general response by the builder's architect David Pierce to review comments and queries by the NPS Denver Service Centers' Engineer, Andy Roberts, was that "the review comments suggest design criteria over and above the customary requirement of a commercial building in this area, and if required by GSA, will cost more money to design and construct added criteria" (General Response A). There was no acknowledgement on the part of the builder that the original climate specifications set forward in the Special Requirements on the Solicitation for Offers document were essentially ignored in designing the system.

The system is controlled with a Honeywell Series 2000 Commercial Microelectric Thermostat capable of setting, reviewing, modifying, and programming times and temperature settings. The Honeywell controls are capable of storing 28 specific time and temperature settings and have been programmed by the builder/owner's engineers according to engineering algorithms set on economy of operation.

Given the present HVAC system configuration, possible actions to improve present environmental conditions include:

- Disable the intelligence for outside air intake and disconnect economizer controls.
- Install electric strip heaters downstream of AC coils to provide reheat appropriate to relative humidity control in museum storage areas.

A conversation with Mr. Dudley Walters of O&M Industries HVAC maintenance contractors in Arcata, California [(707) 822-8800] during the site visit confirmed the possibility of this retrofit.

Figure 6 Basket (LAVO 2373) woven by Atsugewi Nellie Cayton with combination "flying geese" and "butterfly" design; 14" diameter; donated to LAVO by the Loomis Museum Association, 1967.

Target Ranges for Climate Control

Following the above actions to bring relative humidity extremes under control, the revised target ranges for preservation of REDW collections are as follows:

Ethnography Collection

The ethnographic collection includes structurally complex composite objects, objects under tension and objects with secondary decorative

elements such as paint, embroidery, beadwork, and so on, which have a moderate tolerance range between 55 to 72º. Within this range, sudden changes should be avoided and daily drifts should ideally not exceed 5 degrees. Acceptable RH range is 45-55% with no more than 5% daily drift. Slow seasonal drifts of 10% RH and 10º F are acceptable.

Archeological and Geological Collections

Target range: General material: Moderate to wide tolerance range between 40 to 75 º Fahrenheit (ºF). Human comfort usually dictates the ideal range of 65 and 72 degrees. Seasonal temperature drift should be as gradual as possible. Relative Humidity (RH %) should be below the mold threshold of 65-70 RH%.

Most of the inorganic archeological and all of the geological material in the collection is virtually climate-insensitive and requires minimal climate control for long-term preservation. Organic archeological material such as wood and leather, and composite materials may be more climate-sensitive depending on its burial context, dimensional characteristics, and archeological processing techniques. Often, however, unconstrained archeological wood and other organic material no longer have the hygroscopic ability to be significantly and continuously affected by fluctuating RH. Usually cracking, splitting, and other dimensional distortions of organic archeological material occur shortly after excavation when the material must adjust to ambient conditions of cycling temperature and relative humidity. Hygroscopic response to fluctuating conditions from that point on is often insignificant.

Natural Science Collections

Target range: A fairly stable point between 35 and 65% RH should be acceptable if short term fluctuations of temperature and relative humidity are not excessive.

Herbarium specimens are mounted to allow for some movement in terms of expansion and contraction, but the plant material has already been desiccated in processing and has lost significant ability for hygroscopic reaction to ambient RH. The most significant threats to herbaria are mold and insect infestation as well as excessive light and high temperatures

which promote chemical and molecular deterioration of the mounted specimens. Chitin, the major biological material of insects, is very durable in terms of climate variables, but protein-eating insects are serious problems for long-term preservation. Study skins and skeletal material are negligibly climate-sensitive, but vulnerable to insect attack depending on their method of preparation. Wet specimens require moderate climate conditions, but most importantly, safety from mishandling and impact breakage.

Printed and Holographic Manuscript Material and Rare Books

Target range: Chemical deterioration of paper-based material accelerates as temperature rises. Ideal temperature conditions for exhibiting and storing paper and photographs should be as cool as achievable. This means conditions below human comfort temperature range for long term storage, in the range of 45-55 degrees Fahrenheit with RH at 30-40%.

Plans, Maps, Blueprints, Diazoprints and Park Records

Target range: Park records and institutional archives have a fairly wide range of tolerance to general conditions in normal ambient office conditions. Most damage to paper and other organic materials is incurred from conditions above the threshold for mold development of 65% RH with elevated temperatures above 75 degrees. Cold temperatures in the absence of RH control can create unacceptably high relative humidity.

Although these resources are paper-based, they are usually densely packed and therefore self-buffering to help maintain moisture equilibrium. Their biggest threat is biological in the form of mold and insect / rodent infestation and their long-term preservation depends chiefly on the prevention of biological problems through IPM strategies and very basic climate control to discourage mold growth.

Magnetic and Digital Media

Target range: Archival audiotape, videotape and electronic (digital) magnetic tape, CDs and DVDs and are best stored in cool dry conditions. *Conserve O Gram* 19/20 recommends long-term storage conditions of 40ºF and 20% RH. The park should develop a plan for data migration schedules for all electronic media.

Observed Conditions in Museum Areas

Room 212, Collection Storage – Size: 2000 sq. ft., dedicated zoned HVAC. The 2000 sq. ft. room has ample space for collections growth and can readily accommodate the anticipated growth in archeology and archival records when both horizontal and vertical space is used to advantage. Installation of more SpaceSaver™ storage units would efficiently add substantial, easily usable storage space for collections growth.

At the time of the site visit, the main storage room contained collections from REDW, LAVO, and WHIS stored in a variety of enclosed museum specimen cabinets and map cases, on open shelving, and in a five-unit range of SpaceSaver™ storage on tracks located in the southeast corner of the large room. The room contained collections-related materials, underused old storage furniture, and unused office and storage furniture awaiting determination of future utility.

Although steps can be taken now to improve the use of space and accessibility of collections in the room such as removing outdated, damaged, and unused office filing cabinets and removing the inefficient millwork (built-in counters, cabinets, and cupboards), a formal Collection Storage Plan should be developed based on analysis of the storage needs of the combined parks, the collections growth rate, access and research needs, and the specific climate needs of stored materials. A consultant with expertise in museum mechanical systems and engineering requirements (specifically floor-load issues) as well as environmental needs of collections materials should be selected to develop the Collection Storage Plan.

The floor loading issue is particularly important given the geometrical network of cracks in the poured cement floor that have spread, tented, and opened in the past few years. Evidence of cement core sampling by the builder for material analysis was visible in the unfinished corridor space around the perimeter of the storage area, but no report of findings was given to the park. The floor was poured in the late winter or early spring

when cement is not usually poured because of weather conditions and setting time.

The suggestion of geometric regularity of the crack pattern may correspond to architectural support of the second floor. The Solicitation of Offers for the Orick building states that the structural floor loading should provide a live load of 250 lbs per sq. ft., and to "provide heavy floor loading capacity for possible use of a storage mezzanine," but there is no indication of what that would be.

The ceiling height of 14 ft. was purposefully designed with the thought of adding vertical storage as the need arose through collections growth—such as the potential arrival of the Camden House furniture if the decision is made to include it in the museum collection. If a mezzanine configuration is pursued, the hanging fluorescent bar light must be raised. Light level in the storage room is not an issue because the collections are mostly enclosed in cabinets and boxes.

Problems with unsealed wall/floor junctures resulted in substantial water leakage in 2003. A gauge in the HVAC system water line blew along the north wall of the collection storage room and saturated the floor and cabinet bases and spiked relative humidity levels. Apparently, the wall baseboards along the perimeter of the room were not sealed as specified in building plans. The plans called for firewalls but the contractor did not put in fire caulking. The county did not catch the omission because county code did not specify a fire wall. GSA did not catch the problem either. Staff at Redwood found the problem when, after the HVAC humidifier water pipe burst and spewed water all over the second floor, it leaked down through the ceiling to the first floor. At the time of the site visit, metal perimeter baseboard strips along the exterior of the storage room were not in contact with the wall at all in many locations, making the room vulnerable to infiltration of unconditioned air as well as any future liquid water events due to malfunctioning of the mechanical system.

Room 211, Museum Laboratory – Size: 400 sq. ft., shared zoned HVAC with Room 209 (Wet Collections) and Room 210 (Curatorial Storage). This room was designed to house the frequently-used natural history herbarium collection and other natural science materials, and to serve as a processing lab for natural science. It is equipped with a fume hood and sink for use in maintaining the wet specimens with a 70% alcohol solution stored in Room 209, and a chest-deep freezer for freezing specimens. The climate in this room seems to be more unstable than that in Room 212. Sensible heat gain from continual operation of the chest freezer may contribute to this. At the time of the site visit the temperature was 76˚F, while in the large storage room, the temperature was 68˚F. According to the curator, the climate conditions in this room are frequently more unstable than other areas in the museum suite.

Room 209, Wet Collections – Size: 100 sq. ft. The collections are well stored and maintained in this area.

Room 210, Curatorial Storage – Size: 70 sq. ft. The room is small and overcrowded. However, if it were reorganized and non-curatorial materials removed, the size would be sufficient for storage of all curatorial supplies with use of metro shelving units on casters to replace the inefficient old utility cabinets. Non-curatorial office supplies could be stored in an enclosed or locked cabinet in the cultural resources area corridor as necessary.

Room 204, The Archives Research Library – Size: 500 sq. ft. With a wall of windows, the archives room is visually accessible to the open work area directly across from the enclosed storage room area and is equipped with its own dedicated climate control zone. This prime area is currently underused. At the time of the site visit, the space was used primarily for the processing of the Watershed Restoration Project archives. The room is equipped with perimeter shelving and desk areas with library shelf stacks along the center of the room. With reconfiguration and installation of SpaceSaver™ storage shelving, the room would be ideal for visiting researchers as well as for on-going archival projects.

The extremely valuable photograph collection, including glass plate negatives, is perhaps the most requested material for research use in the collection. It is also the most climate-sensitive. In this enclosed space, climate conditions could be efficiently controlled to museum standards recommended for photographs and paper-based material; moving the collection into this area would solve access and security problems associated with researcher use.

Miscellaneous books and journals now on the shelves are fairly random materials collected from personal offices and are not a purposeful collection of research materials. They should be evaluated for utility, and books deemed useful for on-going cultural resource activities could be placed, if necessary, in bookcases outside of the enclosed room so the Archives Research area could be dedicated to its originally intended purpose.

Environmental Monitoring Program

The park maintains only three ACR data loggers to monitor museum areas. One is installed on the underside of a shelf near the entrance of the main storage room; one is in the wet storage room, and the other is placed in an exhibit case at the Kuchel Visitor Center, one and a half miles south of SOC. The instruments are set with a six-minute recording interval which is very useful in tracking the performance of the mechanical systems, but should be downloaded and evaluated at least quarterly, and preferably every two months, given the erratic nature of the present HVAC system. When retrofits are made to include reheat and dehumidification, the performance should be evaluated monthly to track the success of the reheat strategy. Additional ACR units should be purchased and one installed in the perimeter space surrounding the large storage room and another should be placed in back of the storage room to identify microclimate issues.

Integrated Pest Management

Although sticky traps are placed in many locations in museum areas throughout the park, none are regularly checked, insects are not identified, and traps are not routinely replaced when they are full. This suggests that

trapping is done for simple insect kill rather than for strategic purposes of gathering information on points of ingress, biological data, and pest material targets for use in developing an effective strategy for excluding insects (and rodents) from museum areas. This should be corrected, and a museum-specific plan developed and implemented by museum staff.

Recommendations

- Improve the present HVAC system configuration. Possible actions include disabling the intelligence for outside air intake and disconnecting economizer controls.
- Install electric strip heaters downstream of AC coils to provide reheat appropriate to relative humidity control in museum storage areas.
- Arrange for a formal Collection Storage Plan by a qualified consultant with expertise in museum mechanical systems and engineering requirements (specifically floor-load issues) as well as environmental needs of collections materials.
- Return the present archives storage room to its originally intended function by reconfiguring the interior, installing compactor storage shelving, and housing the enormously valuable photographic archives and other historic paper-based material frequently requested for research by park staff and outside researchers.
- Reorganize the storage rooms, discarding old, damaged, or inappropriate storage furniture and removing all non-collection items.
- Arrange for a formal Archives Survey of boxed material stored on the space-saver shelving in the large storage room to identify and separate legitimate archives material from non-archival and duplicative materials.
- Improve the data gathering strategy for both the Environmental Monitoring and Integrated Pest Management Programs to provide data useful in on-going preventive conservation programs.

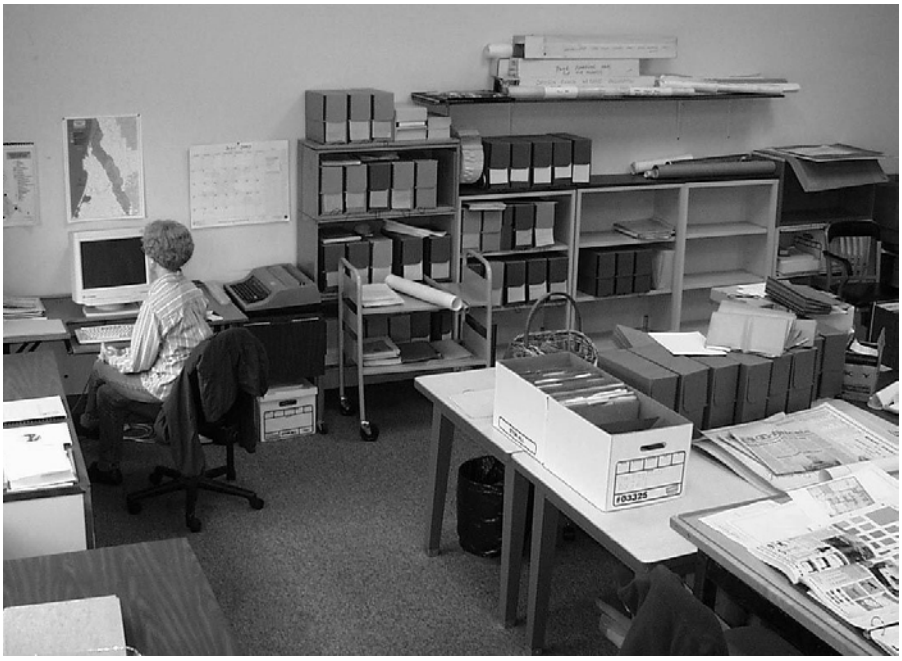

Figure 7 Archivist in old REDW museum, Arcata Office Stewart School Building, 2000

Figure 8 Maps and drawings storage in new REDW SOC museum storage area

Issue D — Program Growth

Issue Statement

Development of an integrated multi-park museum program will foster growth and use of the parks' collections while providing opportunities for collaboration among employees and partners.

Background

The NPS organized parks into groups based on bio-geographic zones in the 1990s, and these later were defined as "networks." The Klamath Network (KLMN) was formed by joining six NPS units—Redwood National and State Parks (REDW), Whiskeytown Unit of Shasta-Trinity-Whiskeytown National Recreation Area (WHIS), Lassen Volcanic National Park (LAVO), Lava Beds National Monument (LABE), Crater Lake National Park (CRLA), and Oregon Caves National Monument (ORCA).

On August 12, 2004 the Klamath Network Board of Directors (BOD) adopted a Charter wherein the role of functional teams within KLMN was defined. This emphasis on cooperation among network parks continues today:

> Functional teams may be formed by the BOD within a specific function, i.e., maintenance, protection rangers, or across functional lines. Functional teams are to provide input and recommendations to the BOD and to work collectively to develop and implement joint work plans and efficiencies across the KLMN. They will accomplish this by joint sharing of resources, organizational efficiencies across park lines, priority setting, program reviews, tracking special program annual allocations and/or accomplishing special projects and fostering intra-network communications.

In conjunction with these changes, the PWR adopted a policy requiring a "curator-of-record" to provide oversight for parks lacking journeyman GS-11 curators. Within KLMN, the REDW curator serves as curator-of-record for LAVO and WHIS, while the CRLA curator serves LABE and ORCA.

Letters of Agreement for the services of the REDW museum curator as curator-of-record for LAVO and WHIS were signed in April 2005. The Letter of Agreement Concerning Museum Collections Management between REDW and WHIS, as well as the Agreement between REDW and LAVO, states:

> The purpose…is to provide necessary and required accountability, storage and treatment of [unit's] cultural and scientific museum specimens at the most cost-efficient rate and in the most effective manner.… Portions of [unit's] collections may be moved to the new Redwood National and State Parks facility for proper preservation and protection under the direction of a professional museum curator.

The REDW Museum Management Program moved to a newly completed "build-to-suit" facility located in the South Operations Center at Orick, California, in 2003. The majority of the collections from LAVO and WHIS were moved to this facility, spring 2005. According to REDW curator James "Bow" O'Barr, in his article "Museum Collections Management Networking,"

> The REDW Museum Management Program, located on the building's second floor provides a space to professionally study, store, and preserve museum objects, in addition to providing research and work space for scholars and staff. Since WHIS and LAVO lacked such professional facilities, it made sense to manage their collections at REDW until such time as the parks could create and maintain their own museum facilities.

As of the collections move in 2005, museum collections remaining at LAVO and WHIS consisted of specimens currently in use, primarily the herbaria of each of the parks, and some actively-used archival and research materials. The majority of the three parks' collections are now housed at the REDW South Operations Center.

The PWR / NPS Museum Facility Strategy (2006) prepared in response to a Congressional query, indicates that no new facilities will be constructed at LAVO or WHIS. The approach in the Strategy is to use the REDW facility as the primary storage for the two parks' museum and archives collections. In light of this, what was originally thought to be a temporary solution has become a long-term situation.

Working cooperatively with guidance from all levels of the NPS organization, LAVO, WHIS, and REDW resolved the critical need for collections storage. The three parks are now poised to continue their forward-thinking—to work cooperatively to preserve collections in the best possible environment, and to provide access and room for anticipated growth while collaborating with employees and partners.

Discussion

Collection Growth

The table below delineates the composition by discipline of the three parks' collections as reported in the Fiscal Year 2006 Collections Management Report. These data, when compared with previous years' reports, provide the starting place for an analysis of possible growth in the various collections. What cannot be gleaned from these data is the multi-faceted nature of these collections—from valuable artwork to irreplaceable natural specimens, from archeological artifacts of infinite value to collections of priceless images. Even though the ability to foresee the future is limited, based on current collections composition, research interests, management concerns, and parks' interpretive themes, one is able to make an educated guess regarding potential collections growth.

Table 3 Collections management report data from fiscal year 2006

	Archeo	Ethno	History	Archives	Biology	Paleo	Geology	Totals
LAVO Objects								
Cataloged	11,369	465	7,954	82,776	2,742	0	188	105,494
Backlog	270	3	0	70,854	4,923	0	7	76,057
Totals	11,639	468	7,954	153,630	7,665	0	195	181,551
REDW Objects								
Cataloged	25,397	54	2,007	153,358	30,882	4	333	212,035
Backlog	350	11	0	139,415	112,087	0	291	252,154
Totals	25,747	65	2,007	292,773	142,969	4	624	464,189
WHIS Objects								
Cataloged	140,913	0	3,479	7,130	1,306	0	0	152,828
Backlog	66	0	221	109,222	0	0	0	109,509
Totals	140,979	0	3,700	116,352	1,306	0	0	262,337

The standard document used to guide acquisition in museum and archival collections is the Scope of Collection Statement (SOCS). The SOCS aids in acquisition decision-making. For example, the SOCS will assist in making the decision whether or not to accept a particular donation. The SOCS defines where collections may grow, if objects are to be actively sought to expand the collections, and any limitations on adding to the collections.

The three parks involved in this plan will be updating their SOCS in the near future. This will help to standardize the process for acquisitions in each of the parks. Each park's SOCS should address how park-specific acquisitions fit into the multi-park museum program.

Continued growth of all three parks' collections is anticipated. Specimen and artifact collections are expected to grow as the result of discovery. From 1995 to 2005, LAVO and WHIS collections grew less than 1% per year, while REDW collections grew approximately 11% per year. The vast majority of these additions were archival.

The quantity of REDW archeological collections is expected to double over the life of this plan. REDW historical collections may grow as the park celebrates its 40th anniversary. Various specimens and materials collected from the state parks within REDW boundaries could be stored at the South Operations Center in the near future. WHIS celebrated its 40th anniversary in 2005 and could see additional historical and archival materials as a result of the associated publicity. WHIS and LAVO both may need space to store historic furniture.

Natural science specimens from all three parks are housed at various universities and other federal agencies. This is not expected to change over the life of this plan. As researchers retire, however, it is possible these collections may need to be considered for inclusion in NPS collections to ensure their preservation in perpetuity. This would present an unknown quantity of specimens to be added to the collections. Each park's herbarium is expected to continue to grow apace, presenting in-park space challenges for both LAVO and WHIS.

Ensuring directed acquisition and growth of collections is essential to answering the increased levels of accountability and scrutiny in reporting requirements. Recent guidance from PWR (February 2007) advises parks to avoid increasing their cataloging backlog. Parks are not to acquire more than they can manage. Additionally, project funding must include money for cataloging. The PWR Natural Resources Advisory Committee and Science Council have assigned a regional workgroup to identify how natural resources programs can improve collections management. Research permits must indicate where collections will reside, who will do the cataloging, and how the cost of cataloging will be covered.

Prior to accepting new objects for the museum and archives collections, an acquisition assessment and evaluation should be completed. This is best done by a group rather than an individual. The group, or "acquisition team," consists of the museum curator, subject matter experts, park specialists, and other specialists as appropriate. The composition of the team changes depending on the type of object or specimen being considered. Using a team approach broadens the expertise available to assist in making decisions regarding the significance and value of potential collections materials. With the SOCS as a point of reference and a broad base of expertise, the opportunity for success is greatly enhanced.

In keeping with the multi-park approach to museum management, the REDW curator should be included in all three parks' acquisitions decisions. For example, the curator-of-record should be involved with respect to the collection and final disposition of natural resource specimens for LAVO and WHIS. This consultation needs to take place even though the permit processes for each of the parks are, and will continue to be, handled independently by each park's research permit coordinator.

Collections Access

In-depth discussions of museum storage space and environmental requirements can be found in this document at Issue C: Preservation, and a consideration of intellectual access and archives can be found at Issue B:

Archives. This section focuses on concerns surrounding accessing the three-dimensional objects and specimens in the museum collection.

Policies define who can access the collections (both staff and public), what types of uses are appropriate, and under what conditions. Representatives from each administrative unit (division, branch) need to be involved in the development of these policies. Each area of emphasis will have a different view of what they require and how their needs can be met. Access may involve things as diverse as taking paint samples or measuring sign lettering, to a compact disc containing digital images. These policies should be the best match possible between providing access and collections care. Successful access policies are codified and institutionalized.

Physical access to natural resource collections may be provided in several ways. Herbaria located at LAVO and WHIS are each managed by subject-matter specialists who provide access to their respective collections. These individuals are trained in the care and keeping of the specimens and are responsible collections managers. Adapting this approach for other natural resource disciplines may be a way to provide access without the need to hire additional staff. Trusted and trained experts from other areas of resources management such as geology or entomology could be assigned to handle and provide access to their specialty collections.

One idea for reconfiguring the lab/natural resource specimen storage area at the REDW facility may provide better access to specimens. The current pedestrian traffic through the center of the room could be diverted and these spaces used to store and/or provide space to study, photograph, and analyze museum objects and specimens. Primary access to the larger storage room could be provided through the door near the elevator. This would open up additional options and possibilities for reconfiguration of the lab space. Museum requirements for controlled access could be accomplished with appropriately locked doors and cabinets.

The current configuration of collections storage, with the three parks' collections in relatively close physical proximity to the REDW Information Technology (IT) staff and the museum curator, is to the

benefit of the museum program. The REDW curator is able to work closely with the professional IT staff to provide intellectual access more efficiently.

Ideally, all possible collections data will be available via the Intranet site, InsideREDW, which coincidentally is maintained by REDW IT staff. There is no need to be properly trained in handling or caring for specimens, or to schedule access around building operations or staff working hours. No matter how distant the objects or specimens are from the researcher or manager, the information is at their fingertips.

For those collections stored at non-NPS institutions, the REDW IT staff would be able to advise and assist the REDW curator in determining best practices for sharing and accessing information from these repositories. Agreements with off-site repositories may include a proviso that they prepare web-capable finding aids to their specimens linked to or posted on InsideREDW.

Collections information posted on the website could provide pre-visit search capabilities. Those desiring to look at objects can gather information ahead of their visit to the collections. The researcher or manager might be surprised to discover during their search that they do not need to travel to access the original object or specimen. Searchable records provide all researchers with the ability to know what can be found where, and who is responsible for providing access to the specimens or objects. Remote collections can be more accessible, and obtaining physical access may seem a less daunting task if information can be readily found on the desktop.

Interactions and Partners

Cultivating communications and coordination among all employees and partners is key to a thriving multi-park museum management program. LAVO, REDW, and WHIS have demonstrated their willingness and ability to cooperate in an effort to preserve valuable resources. The parks can continue to build on this successful communications foundation.

The following list of interactions and groups is by no means complete. This list was compiled from conversations and group discussions that took place during the team visit to REDW. Many interactions and consultations are already taking place among these groups. Expanding on these may stimulate additional ideas and possibilities. Interactions include:

- Within park intra / inter divisional (Cultural Resources, Natural Resources, Information Management, Maintenance, Administration, Interpretation, Education, Visitor Protection, Fire)
- Three parks in cooperative (LAVO, REDW, WHIS)
- State parks (Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, Prairie Creek Redwoods State Park)
- Network / NPS (Pacific West Regional Office, Point Reyes National Seashore, Western Archeological Conservation Center, CRLA, LABE, ORCA)
- Federal agencies (Fish & Wildlife Service, Geological Survey, Forest Service, Bureau of Land Management, National Oceanic and Atmospheric Administration, National Archives and Records Administration)
- State of California (Departments of Parks and Recreation, Fish and Game, and Transportation [Caltrans])
- Associated tribes (Yurok, Wintu, Atsugewi, Maidu)
- Universities (Humboldt State, University of Washington Seattle, California State University at Chico, University of California at Berkeley, University of California at Davis, Southern Oregon University)
- Museums (Natural History Museum of Los Angeles County, California Academy of Sciences, Turtle Bay)
- Formally recognized park partners (Friends of WHIS, LAVO Foundation, park concessions, park cooperating associations)
- Historical societies (Shasta County Historical Society)
- Non-governmental organizations (Save the Redwoods League, Sierra Club)

The 21st century high-speed, high-tech culture calls for an adaptable approach to processes and policies where the only constants are the need for frequent communication and continuing cooperation.

Recommendations

- Convene a working group to focus on defining and standardizing processes and decisions involved in multi-park museum management program.
- Define and follow written collections acquisition policies and procedures; identify and assign responsibilities.
- Define and follow written collections access policies and procedures; identify and assign responsibilities.
- Ensure organizational identity of multi-park facility through publicity and marketing.
- Identify and explore possible cooperative interactions and partnerships to enhance resources preservation and management.
- Identify and ensure efficient and effective use of off-site repositories for collections storage and access.
- Maintain professional oversight agreements with REDW museum curator serving as curator-of-record for LAVO and WHIS.

Figure 9 Thomas H. Kuchel Visitor Center, Redwood National and State Parks

Issue E — Cooperative Center Operations

Issue Statement

Management of the archives and museum collections of Redwood National and State Parks, Lassen Volcanic National Park, and Whiskeytown National Recreation Area requires an integrated multi-park Cooperative Museum Management Program.

Background

All three of the National Park Service units which are the subject of this Museum Management Plan have been in existence for many years. The youngest of the three, Redwood National and State Parks (REDW), was established by Public Law 90-545 in 1968 "In order to preserve significant examples of the primeval coastal redwood (Sequoia sempervirens) forests and the streams and seashores with which they are associated…" Another product of the 1960s enlargement of the National Park System is Whiskeytown-Shasta-Trinity National Recreation Area, established in 1962. The Whiskeytown Unit (hereafter referred to as Whiskeytown National Recreation Area or WHIS) of the recreation area is managed by the National Park Service, whereas the other two units are managed by the U.S. Forest Service. (This MMP does not include the Forest Service lands and operations.)

Lassen Volcanic National Park, the eldest of the three parks, was created in 1916 when Cinder Cone National Monument and Lassen Peak National Monument (both designated in 1907 by President Theodore Roosevelt) were dissolved and the lands included within the newly-established national park.

Although they were established to preserve natural resources or provide recreational opportunities for visitors, all three parks nonetheless contain and protect significant cultural resources. These include collections and

sites related to the various Native American tribes associated with the parks' lands, and historic sites, structures, and collections dating from the California Gold Rush through the mid-20th Century. This includes resources related to the early years of the National Park Service, the Civilian Conservation Corps, and the establishment and history of each park.

Notwithstanding their age and the various cultural resources contained within and protected by each park, museum collections management duties at REDW, LAVO, and WHIS have, until relatively recently, been under the purview of Interpretive Rangers—all of whom have possessed varied degrees of museum management experience and expertise. This statement is not intended as a criticism of those individuals' efforts on behalf of the three collections; in fact, personnel at each park have historically expended Herculean efforts in an attempt to provide a proper level of care to the collections. However, even the most dedicated labors were destined to come up short because of the size, nature, and complexity of the three collections. Proper management of such museum collections cannot be carried out on a part-time basis, even by the most knowledgeable and experienced curator. The three parks recognized this fact, and beginning in the 1990s, all three were able to devote additional staff and funding toward their museum programs.

Whiskeytown: The park's GS-025-09 Interpretive Ranger with collateral museum duties attended NPS Curatorial Methods training and has continued to attend various NPS museum training opportunities throughout his tenure. Unfortunately, because of the park's staffing shortage, he is able to devote only about 5% of his time to museum collections management.

The FY 2007 budget at WHIS is $3,143,000 of which only a small fraction is for Cultural Resources. Funding allocated for cultural resources management at WHIS is derived mostly from the Interagency fire effects program, archeologist budget, and special projects. About $2500 is set aside for the museum program from the park base accounts.

Lassen Volcanic: For 2½ years prior to hiring the GS-12 Chief of Interpretation & Cultural Resources in 1998, cultural resources management and interpretation operations were included under the GS-12 Chief of Natural Resources.

The park hired its first CRM specialist in 2001. Previously, curatorial duties at the park were assigned to a collateral-duty interpretive ranger. An archaeologist by background, the incumbent is a GS-11 and is able to devote approximately 20% of her time to museum management issues. The FY 2007 budget at LAVO is $4,081,000 of which only the CRM specialist's GS-11 salary and benefits is for Cultural Resources.

Redwood: As noted in the Redwood National and State Parks 1999 Museum Management Plan, beginning in 1978, curatorial duties were carried out by a number of individuals in the Division of Interpretation. Some of these staff members possessed various levels of NPS museum management expertise. However, by 1991, an operations evaluation team visiting the park concluded that the museum program was deficient, and curatorial responsibility was transferred to the park archaeologist. After a short-term re-allocation of the program to Interpretation, curatorial oversight was permanently lodged with the new Branch of Cultural Resources in the late 1990s. In 1996, the chief of CRM hired the first (and current) REDW curator.

REDW management was committed to assisting the museum programs at the other Northern California parks from the very beginning of establishing its permanent professional curator position. The first paragraph of the Curator's Position Description (1998) acknowledges this stance by stating that "The incumbent also provides museum curation assistance to…Lassen Volcanic National Park, Lava Beds National Monument, and Whiskeytown National Recreation Area." In 2005, this arrangement was strengthened when the superintendents of REDW, LAVO, and WHIS signed two "Letters of Agreement Concerning Museum Collections Management." In addition to other provisions, the Letters of Agreement included the following:

- Designation of the REDW curator as the curator-of-record for LAVO and WHIS
- Supervision by the REDW curator of all registration, processing, and cataloging of LAVO and WHIS museum collections
- Preparation, with LAVO and WHIS staffs' consultation, of all annual reports pertaining to museum collections
- Review and update of the LAVO and WHIS Scope of Collection Statements as necessary
- Preparation, with LAVO and WHIS staffs' consultation, of museum planning and funding documents as required
- Possible moving of portions of Lassen Volcanic collections to the new Redwood National and State Parks facility for proper preservation and protection (The REDW-WHIS Letter of Agreement contained this same language. It is assumed that this was a typographical error and that the intention was to note that portions of WHIS collections would be similarly relocated to REDW.)

In FY 2007, the REDW budget was $7,490,000, of which about 33% or $2,449,975 was for the Resources Management and Science Division. Of these funds, $117,809 was devoted to the Cultural Resources Management Program and about half that, almost $ 50,000 was devoted to the museum program; $48,508 for the curator's salary (GS-1015-11/9); and $1450 for collections supplies and support. The remaining CRM program funds support the salaries of the chief of Cultural Resources Management and the assistant archaeologist, as well as a small amount for supplies and support.

Museum collections managed by the three parks approach nearly 1 million objects and specimens—cataloged items number 470,357, with an estimated backlog of 437,720.

Although the REDW park-wide library is under the management of the Division of Interpretation, a reference library also is maintained by the Branch of CRM. The CRM Library consists of books, journals, and potential archival materials used by CRM staff in the course of their duties. The CRM library is housed within a separate room with a locking door, located on the second floor of the South Operations Center, adjacent

to the archaeologist's office. Once the materials housed within this space have been assessed for their archival significance and the resulting archives removed to collections storage, this area appears to be an excellent location in which to house researcher workspace—a critical program deficiency due to the CRM program's recent staffing increases in the adjacent office areas. As noted in Issue C: Preservation, another alternative is to continue to use this area for both researcher use and archival processing. The addition of compact storage would allow increased flexibility and more effective use of the space. Both of these options should be explored in the forthcoming Collection Storage Plan, scheduled for the near future.

Discussion

Redwood National and State Parks, Lassen Volcanic National Park, and Whiskeytown National Recreation Area are part of the Klamath Network of the Pacific West Region. The three parks' museum programs have benefited tremendously by sharing program resources and expertise. This success was enlarged upon by the Letters of Agreement (2005) which established a sub-Network museum program of hiring a professional curator at REDW, providing the basis for developing the curator-of-record agreements with LAVO and WHIS, as discussed earlier. That same year, the majority of LAVO and WHIS museum collections were removed from substandard storage at those two parks and housed in the newly-built REDW museum storage facility located at the GSA-leased NPS South Operations Center in Orick, California. Other than the WHIS and LAVO herbarium collections, which are frequently used on-site by both parks' botanists, and a limited number of historic furnishings and other artifacts at WHIS, all of the three parks' collections in storage are housed at the new REDW facility. All three parks have collections on exhibit at visitor centers.

In keeping with the Pacific West Region Museum Collection Curatorial Facility Plan (May 2006), there are no plans (nor regional support) for additional museum storage at either LAVO or WHIS, other than the two herbaria. All other collections are to be stored at REDW. It is important to point out that the regional plan notes that both herbaria require "upgrades

to meet NPS museum standards." Perhaps funding could be obtained from the two parks' Natural Resources Divisions (the primary users and generators of these collections) to assist in funding these needed upgrades.

Finally, although a limited number of environmental, access, and storage arrangement issues have yet to be resolved, the REDW museum facility is a tremendous asset to the three parks' curatorial programs and provides a high degree of preservation and protection for the collections housed within it. (See Issue C: Preservation for additional information.)

The REDW curator, working with WHIS and LAVO Interpretive and CRM staffs, has been most effective in sharing museum staffing resources to the benefit of all three parks, utilizing project funds and the limited base funding available. Besides the REDW curator's salary, the only other available base funds have been the cataloging base increase, which unfortunately was recently reduced by the Washington Office to fund the new ANCS+ cataloging system upgrade.

In 2001, REDW developed an Operations Formulation System (OFS) statement (subsequently updated by the park in 2005) to address museum needs: "Protect and Provide Access to Park Museum, Archival, and Library Resources" (OFS 10615A). Although it states that "Expertise and assistance will also be shared with other parks in the Klamath Biological Network," this request, as written, is almost exclusively devoted to the needs of REDW.

At the same time, the current REDW OFS Request notes that, if funded, 10% of the operational increase would be devoted to archaeological site inventories and evaluations. With the recent addition of a full-time, permanent archaeologist to the REDW staff (in addition to the chief of CRM, who also is an archaeologist), it would appear that the archaeological component to the request can be eliminated. More importantly, to reflect the current situation of the three-park museum program; the parks' numerous funding and staffing needs related to curation; and the wish to more completely incorporate these operations into a truly cooperative museum program, this OFS Request should be revised accordingly. One possibility is to rename the request "Develop and

Implement a Multi-Park Museum Program" with revised descriptive text and justifications in support of a truly integrated cooperative approach.

Workload Analysis and Staffing

An analysis should be undertaken to determine the complete workload related to museum management for the three parks. This analysis may be completed by the three parks' CRM staffs, REDW curator/curator-of-record, and peer-reviewed by the Pacific West regional curator. This analysis can be broken down into the following areas:

- Core work elements that are basic requirements and responsibilities for managing the three museum programs
- Current hours and full-time equivalent (FTE) positions currently being expended
- Additional hours and FTE needed to meet all basic curatorial requirements
- Needed support costs to administer the museum programs beyond salary requirements. Such funding would cover contracting for specialized services, transportation costs (especially travel in support of the REDW curator's on-site work at WHIS and LAVO), as well as supplies and materials.

Appendix B includes a suggested workload analysis spreadsheet that has been used for museum planning at other NPS museums. Data in the spreadsheet should be used to support development of the core operations for the three parks and inform the budget cost projections for the parks. It also provides the foundation for developing other museum planning.

When the workload analysis has been completed, an annual work plan addressing core work elements, the annual reports required, and the parks' strategic plans should be developed and implemented. At the end of the fiscal year, a report outlining what elements of the annual museum work plan have been completed, what have not and why should be completed and sent to the three superintendents.

The position description for the REDW curator was classified in 1997 and approved in 1998. It was developed using the National Park Service Benchmark Position Description GS-1015-11 and revised to reflect the special needs of Redwood National and State Parks. Although the position

description does note that the REDW curator provides assistance to LAVO, LABE, and WHIS, the 2005 Letters of Agreement have further reinforced the multi-park relationship beyond what was the case (or probably even envisioned) in 1998. As a result, once the cooperative museum program is further implemented, the REDW curator position description should be revised to quantify the expanded role and responsibilities of the multi-park program manager.

Research and collecting permits issued at REDW are seamlessly integrated into the overall resources management and archival programs, as the REDW curator also serves as park research coordinator. With the planned implementation of a cooperative museum program, it will require expanded contacts between the WHIS and LAVO research coordinators and the REDW curator to develop and implement similar programs and standard operating procedures to ensure the capture and accessioning of all scientific data, specimens, and archival materials resulting from research in the other two parks.

As noted in Issue B, the need for a holistic program for the management of permanent records, their transfer to the parks' archives, and expanded strategies and procedures for ensuring access to archived records have been identified as an issue of concern to staff from all three parks. Management needs to coordinate and make decisions on how these important resources will be managed to their fullest extent with the goal being access to important information and preservation.

Planning

The three parks need to complete a number of planning documents to provide for the protection and preservation of their museum collections. Fortunately, many of these plans involve various aspects of the cooperative museum management program. Such documents can take a collaborative approach to identifying deficiencies, stating recommended outcomes, and developing both interim and long-term action plans to accomplish these common preferred end products.

Examples of plans that can take the collaborative approach include the Collection Condition Survey, Museum Collections Emergency Operations Plan (MCEOP), Integrated Pest Management (IPM) Plan, and the Museum

Preventive Maintenance Plan. These plans could be approached cooperatively since the majority of the three parks' collections are maintained at REDW. Plan components pertaining to collections located at WHIS and LAVO could easily be incorporated into the larger Cooperative Plan as well as existing as shorter, stand-alone documents at each park.

Other planning documents, the Scope of Collection Statement in particular, should be developed individually by each park. The cooperative curator would most likely take the lead in developing all three parks' revised SOCS, in consultation with, and assisted by, each park's CRM, Interpretive, Natural Resources, and other interested staffs.

Many of these plans can be funded through the MCPPP program described below, although some do not qualify.

- Scope of Collection Statement (SOCS) – No fund source is available for this document. It is generally completed by park staff. The need for each park to update its SOCS at the earliest opportunity was a critical issue identified during the scoping session of this Museum Management Plan.
- Collection Condition Survey (CCS) – This is Museum Checklist standard H6. A deficiency / need for a CCS identified on the Museum Checklist can be funded through MCPPP. Conservation treatments cannot be funded from MCPPP, although CRPP-BASE and CCM funds can be used.
- Museum Collections Emergency Operations Plan (MCEOP) – Every park needs a MEOP, which should be a component of the park's overall Emergency Operations Plan. Museum Checklist standard E8 pertains to the MEOP. Preparation and implementation of a MEOP qualifies for MCPPP funding.
- Integrated Pest Management (IPM) Plan – This plan should be part of the park-wide IPM plan. Museum Checklist standard H8 pertains to the Museum IPM Plan. Preparation and implementation of a museum IPM Plan qualifies for MCPPP funding.
- Museum Preventive Maintenance Plan (called a Housekeeping Plan in the Museum Checklist) – This is Museum Checklist Standard H9. Preparation and implementation of a museum Preventive Maintenance Plan qualifies for MCPPP funding.

Funding

Two sources of NPS funding are available for the museum collection: project funding, as identified in PMIS, and base funds or Operation of the National Park Service (ONPS) funds.

Project Funding

Project fund sources available for the museum collection are: Cultural Cyclic Maintenance (CCM); Museum Collections Protection and Preservation Program (MCPPP); Backlog Catalog Program (BACCAT); and Cultural Resource Preservation Program Base (CRPP-BASE). Each year about $100,000 in CRPP-BASE funds is set aside for cataloging museum collections (CRPP-MCBC). Once the park has identified collections in need of cataloging (and accessioned the items), it then can request funds through BACCAT and CRPP-MCBC to address the need. Likewise, deficiencies identified in the Museum Checklist (the Automated Checklist Program [ACP] in ANCS+) can be eliminated with funds from MCPPP. Finally, projects that provide for preventive conservation or by performing suitable treatments on objects themselves can be funded through CCM.

To qualify for project funding, an up-to-date PMIS Project Statement is needed for each corresponding proposed project. Competition for project funds can be intense, so it is vital that the three parks' PMIS Project Statements reflect current needs and provide clear and concise descriptions, justifications, and budget projections—address the question: "Why should this project be funded over some other park's proposal?"

All three parks have a number of Project Management Information System (PMIS) project statements to fund critical programming and planning needs. However, some of the project statements are no longer relevant; are duplicates of other park projects (for example, both REDW and LAVO have proposals for Collection Storage Plans, and only one, at REDW, is needed); are not eligible for the various cultural funding sources; or need to be revised to more accurately reflect current needs and conditions. It also is important to recognize that multi-park projects rank higher in the regional prioritization process. Keeping the cooperative museum program approach in mind, it would be of tremendous benefit to the three parks to

assess all existing and potential PMIS Project Statements to ensure that any project that can be approached through a multi-park process is so noted in PMIS.

ONPS (Base) Funding

As previously noted, REDW has developed an Operations Formulation System (OFS) statement to provide additional support to the museum program: "Protect and Provide Access to Park Museum, Archival, and Library Resources" (OFS 10615A). The request mentioned providing support to other Klamath Network parks but, as written, the request is almost exclusively devoted to the needs of REDW.

During the MMP scoping sessions, all three parks identified a critical need: the establishment of a cooperative archivist position. This program deficiency was recognized by all participants, park staffs, and MMP team members. REDW PMIS Project Statement #110981 "Preserve, Appraise, Process and Catalog Critical Klamath Network Parks' Archival Collections" attempts to fund a three-year term archivist position to begin this important work. The parks may want to revise this PMIS Project Statement into an OFS Request, perhaps rolling this need of a cooperative archivist into a thorough revision of the current REDW OFS Request #10615A, "Protect and Provide Access to Park Museum, Archival, and Library Resources," noted above.

However the three parks decide to tackle these funding issues, it is important to revisit all museum-related funding requests in PMIS and OFS to ensure that they are up-to-date, relevant, substantiate the needs, and provide thorough and easy-to-understand and concise descriptions and justifications.

Well before the next Servicewide Comprehensive Call, the REDW curator and the CRM staffs from WHIS and LAVO may want to devote a couple of days to meet and prioritize the three parks short- and long-term project needs and develop a strategy to address them by revising current, and developing new, funding requests.

The Museum Checklist and MCPPP Preservation Funding

As noted above, the "Checklist for Preservation and Protection of Museum Collections" (Museum Checklist) is an important planning and prioritization tool, as it:

- Establishes the standards under which a park's museum collections are to be maintained and against which a park evaluates itself.
- Documents the preservation of the park's museum collections at a particular point in time.
- Determines the funding needed to bring a museum collection up to NPS standards.

It is critical that the three parks continue to update their Museum Checklists on an annual basis. MCPPP funding is based on the data received from a park's Museum Checklist—a carefully completed up-to-date Checklist is necessary for adequately estimating the needs of the park. Servicewide funding for this program is allocated by a formula based on the total needs across all seven NPS regions. Projects requested under MCPPP that are not listed in a park's Museum Checklist will not be funded, no matter how great the need.

The three parks' Museum Checklists would benefit from a thorough review and update to reflect the cooperative museum program approach and reflect current conditions and programming initiatives. For instance, the LAVO Checklist notes funding for a new facility in order to address deficiencies B1 – B14. However, the same cost figures of $1 million are noted for each deficiency which equates to a total cost of $14 million, which is not in keeping with the findings of the Pacific West Region Museum Collection Curatorial Facility Plan (May 2006) that authorizes only an herbarium at the park. Other museum standards currently identified as deficiencies at WHIS and LAVO may be not applicable as the bulk of their collections, as well as their accession books, files, and the master ANCS+ database will reside at the cooperative storage facility at REDW.

Collections Management Report and Backlog Cataloging

The Backlog Cataloging Program and CRPP-MCBC fund distribution is based on the data that parks report in their annual Collections Management Report (CMR). As a result, it is critical that the CMR

accurately reflects the total museum collection—especially with regard to uncataloged backlog. The distribution of backlog cataloging funds is based on the backlog reported on the Collection Management Report. As noted above for MCPPP, cataloging funds will only be distributed to those parks that show an uncataloged backlog.

Other Potential Funding Sources

Additional sources of funding are available for the museum collection. The *Save America's Treasures* program provides grants for the preservation and/or conservation work on nationally significant intellectual and cultural artifacts and nationally significant historic structures and sites. This program requires a dollar-for-dollar non-federal match for all projects. The non-federal match can be cash or donated services and does not have to be "in the bank" at the beginning of the grant. The National Park Foundation, Redwood Park Association, Lassen Loomis Museum Association, Lassen Park Foundation, or Western National Parks Association could provide assistance in securing the non-federal match.

The National Endowment for the Humanities (NEH), the National Endowment for the Arts (NEA), California Arts Council, California Council for the Humanities, and other granting agencies and institutions might also provide funding for museum projects. The NPS cannot receive grants directly from NEA and NEH or most State organizations. It can, however, be a full partner with other institutions such those listed in the previous paragraph to develop other programs that would further the preservation, protection, and use of the Cooperative Museum Collection.

Possible Intern and Student Assistance

Graduate programs may provide interns to do professional-level museum project work under the direction of the cooperative curator. The website **http://www.gradschools.com/programs/museum_studies.html** lists accredited programs by geography. Two programs that national parks in the PWR have used are in the San Francisco Bay Area: John F. Kennedy University and San Francisco State University. The University of California at Riverside has masters programs in both museum and archives studies and California State University at Long Beach has a certificate program. The University of Nevada at Las Vegas has a public history

program that is developing an internship program that might also provide students for museum support work. Western Washington State University has an archives management program as does California State University at San Jose. The latter is part of the Masters of Library Science program which might also provide the park with assistance with the library. Additional library or information science programs may also be located by searching the American Library Association's website, **http://www.ala.org/ala/accreditation/lisdirb/lisdirectory.htm**

The NPS has a cooperative agreement with the National Council for Preservation Education that provides a clearinghouse for interns from appropriate college and university programs for parks. In addition, the Cooperative Ecosystem Studies Unit (CESU) through the University of California has been successfully used with the San Francisco State University museum program to provide museum studies graduate students to complete projects for parks in the San Francisco Bay Area and Yosemite and could be used for projects at other parks.

The American Institute for Conservation has a list of conservation programs at: **http://aic.stanford.edu/education/becoming**. Funding for stipends from project funds, Redwood Park Association, Western National Parks Association, Lassen Loomis Museum Association, Lassen Park Foundation, or NPS Volunteers-in-Parks would also provide an excellent opportunity for students to work with an interesting museum collection and learn about the NPS museum program, while the cooperative museum program benefits from trained people.

The cooperative museum program also may wish to partner with one or more local and regional colleges and universities for interns and volunteers, including undergraduate students who are interested in a museum career. Although undergraduates will not possess the same level of experience as an individual enrolled in a graduate level museum, archival, or conservation program, and will probably require additional levels of supervision and mentoring, the right undergraduate candidate may nonetheless be an important benefit to the cooperative museum program. Potential sources of undergraduate interns and volunteers are Humboldt State University, College of the Redwoods (which offers a Historic Preservation certificate program, among other options), and

Southern Oregon University (with programs in history, library and information science, art, the sciences, and other options).

The lack of adequate numbers of park housing units available for museum interns and volunteers was identified as a potential roadblock to implementing an expanded museum intern or VIP program. One potential option to address this need is to explore partnership options with Humboldt State University and other local colleges to utilize any existing/unneeded student housing during the summer months. Channel Islands National Park has utilized such a partnership with California State University at Channel Islands. REDW staff may wish to contact the CHIS Division of Administration to inquire as to how this program was established.

Recommendations

- Continue to build upon the planning for the cooperative museum program concept by implementing a consensus-based approach to management of the cooperative's museum collections. This promotes the highest levels of preservation and protection, ensures access and use, promotes the free flow of ideas, and enhances operational efficiencies to the benefit of all.
- Revise the March 29, 2005 "Letters of Agreement Concerning Museum Collections Management" between REDW, LAVO, and WHIS with a new Superintendents' Center Agreement. Continue the working relationships within the Klamath Network to expand upon any efficiencies of operation in staffing or funding to maintain, preserve, and provide access to the cooperative's collections.
- Develop a new Position Description and Performance Plan that implements the curator's position in the cooperative; revise each park's organization chart to reflect the new multi-park position. This personnel action would transform the current REDW curator / three-park curator-of-record position into a multi-park cooperative curator that manages a fully integrated three-park museum program.
- Initiate and implement a Collection Storage Plan (CSP) for the cooperative museum storage facility. The CSP would include recommendations and design options for more effective use of museum offices, work space, and researchers' work space.

- Revise and update all museum PMIS project statements at the three parks to reflect staffing and funding needs, regional and Servicewide requirements and initiatives, and to support a five-year integrated museum program. Projects that can meet the needs of two or three parks should be promoted whenever possible; such projects receive precedence when regional project funding is prioritized. Revise PMIS Project Statement #110981 "Preserve, Appraise, Process and Catalog Critical Klamath Network Parks' Archival Collections." The current PMIS Project Statement would probably be better received as an OFS base increase request. The PMIS Project Statement could then be revised as a term position devoted to backlog cataloging and the elimination of Checklist deficiencies. As a three-park position, the proposal would have a good chance of being approved during the regional prioritization process.
- Complete a workload analysis for the program to assist in establishing staffing and funding needs. Revise the current REDW base funding request (OFS #10615) to provide for an expanded program based on the workload analysis, identified curatorial needs, and appropriate museum grade levels. Ensure that all three parks' base increase for museum cataloging is available for support of the cooperative museum management program. Complete an annual work plan for the cooperative museum management program. At the end of the fiscal year, complete an accomplishment report that indicates what has been completed. Consider producing a "newsletter" version with lots of photographs for public distribution.
- Conduct a Scope of Collection Statement (SOCS) scoping session at all three parks. In addition to the curator and the three CR program managers, each park planning team might include representatives from Interpretation, Natural and Cultural Resources Management, and other interested parties, including State Parks personnel and park partners to ensure that each park's collection is relevant to its mission. Based upon the findings of the SOCS Update Scoping Sessions, initiate and implement revised and updated Scope of Collection Statements for all three parks.
- Establish Collections Advisory Committees (or also called Acquisition Committees) at all three parks. This could be implemented in tandem with the SOCS Update Scoping Sessions, and include some of the same participants. The Collections Advisory Committee will probably function best if organized with a small group size of 4-6 people,

composed of the cooperative curator, each park's CR manager and/or collateral-duty curator, and a representative from Interpretation, Natural Resources, and one other division staff who is interested in the museum program.

- Update all three parks' Museum Checklists each year to reflect current information.
- Establish a system of regularly scheduled quarterly meetings and/or teleconferences between the cooperative curator and the program managers at LAVO and WHIS. If travel funding is available for the cooperative curator, at least one annual on-site meeting at each park should be held.
- Identify other funding sources (such as those listed on page 75 and 76) from which funds can be requested. Explore funding from the State of California through Proposition 84 Funds. (In 2006, Proposition 84 authorized over $5 billion in general obligation bonds; $500 million of which is to be devoted to "state parks and nature education and research.") Consider fundraising possibilities including publications, postcards, artwork, prints, and posters featuring museum collections. Such sales items might be a cooperative effort of the NPS and all three cooperating associations.
- Establish an internship program and contact college programs for candidates who would assist with accomplishing the goals of the museum program. Potential sources of interns include the Student Conservation Association (SCA), the NPS Cultural Resources Diversity Internship Program (a NPS-SCA partnership), history, museum studies, and resources management programs at universities.
- Establish a Museum VIP (Volunteer-in-Parks) Program. Potential museum volunteers include students from Humboldt State University, College of the Redwoods, and other area schools and interested local residents. An advertisement seeking candidates could be placed in the park newspaper and student newspapers as well as online lists such as that maintained by the California Association of Museums. The lack of park housing available for museum interns and volunteers is a potential roadblock to any intern or VIP program. Investigate partnership options with Humboldt State University and other local colleges to utilize any available student housing during the summer. Channel Islands National Park has such a partnership with California State University that could be investigated as a model.

Appendix A — Archives, Library, and Museum Collections Survey Results

These questions will help determine use patterns for museum, archives, and library collections. For the purpose of this survey, a "visit" to the collections also includes verbal, telephone and e-mail requests for information that would require the collections manager to find and communicate that information to you.

1. Do you use the park library? No **(18)** Yes (**40**)
   If Yes, about how many times in the last year? **289** total (**8** average)

2. Do you use the park collections/archives? No (**27**) Yes (**32**)
   If Yes, about how many times in the last year? **530** total (**18** average)

3. Do you use non-NPS libraries, collections or archives? No (**26**) Yes (**31**)
   If Yes, about how many times in the last year? **190** total (**7** average)

4. What parts of the park collections/archives do you use (check as many as apply):

Cultural Resource Collections		Natural Resource Collections	
❒ Historic Archives and Records (Non-NPS)	(**13**)	❒ Mammals and Birds	**(7)**
❒ Park Cultural Resource Records	(**8**)	❒ Reptiles, Amphibians, Fishes	**(3)**
❒ Park Administrative Records	(**8**)	❒ Insects and Invertebrates	(**4**)
❒ Photographs and Images	(**25**)	❒ Herbarium / Plants	(**8**)
❒ Archeological artifacts and materials	(**2**)	❒ Paleontological fossils and traces	(**1**)
❒ Historic artifacts and objects	(**5**)	❒ Geological rocks, minerals, samples	(**2**)
❒ Ethnological & Native American Collection	(**6**)	❒ Natural records, maps, images, reports	(**14**)

5. What are the primary reasons you use the collections (check as many as apply):

- ❒ Address Internal NPS information needs (**27**)
- ❒ Address Non-NPS information needs (**9**)
- ❒ Explore needs for new information (gaps) (**8**)
- ❒ Develop Interpretive Programs (**12**)
- ❒ Develop Exhibits (**7**)
- ❒ Develop Publications (**11**)
- ❒ Develop Inventory & Monitoring Programs (**6**)
- ❒ Resource Management Research (**16**)
- ❒ Maintenance/Repair Information (**2**)
- ❒ Historic Structure Information (**2**)
- ❒ Information for planning / compliance (**11**)
- ❒ Identification & comparison (**6**)
- ❒ Personal learning (**15**)
- ❒ Other (list): Yurok; Power point; Fire Management (**3**)

SECTION II

We realize there might be many different reasons park staff may or may not make use of the museum, archives, or library collections in their work. Below are areas that may have problems and need improvements. Let us know where you think improvements are needed.

6. What improvements are most needed? (check as many as apply):

- ❒ A. Expand the collections to contain artifacts, specimens, or information that I need (**6**)
- ❒ B. Combine collections with supporting archives and/or library references (**12**)
- ❒ C. Relocate the collections to a location more accessible to my location (**6**)
- ❒ D. Reorganize collections to make them more accessible (**9**)
- ❒ E. Improve electronic access to museum collection data and object information (**22**)
- ❒ F. Provide listings and finding aids of what is in the museum collection (**23**)
- ❒ G. Provide on-line or remote access to databases (**17**)
- ❒ H. Provide remote computer access to collections/archives (**10**)
- ❒ I. Provide a work area (**5**)
  - ❒ Wet lab ❒ Table space (**4**) ❒ Other: (Map layout, **3%**)
- ❒ J. Provide data access and a computer workstation. (**9**) Other needs include:
  - ❒ Printer (**4**) ❒ Copy machine (**3**) ❒ Scanner (**3**) ❒ Other:
- ❒ K. Staff collection with at least one professional position (**10**)
- ❒ L. Provide additional professional staff to assist collection users (**9**)
- ❒ M. Provide additional professional staff to organize and work on collections (**15**)

❒ N. Improve customer service provided by museum staff (**2**)

❒ O. Increase hours the museum collections are open **(5)**

❒ P. Improve the preservation and physical condition of the collections (**3**)

❒ Q. Other (please list): (**3**)

7. In the list above, what are the highest priorities at the current time? (Use letters above)

E = 8 **F** = 8 **M** = 8 **C** = 4 D = 4 L = 4 O = 4

8. What are the second most important priorities for improvement?

F = 6 G = 4 J = 4 K = 4 M = 4

SECTION III

In order to assure a well represented response from a cross section of park staff, we would appreciate a minimum amount of demographic information.

8. Number of years in the NPS total = **791** years, average = **15.2** years

9. Number of years at current park total = **553** years, average = **10.8** years

10. Number of years in current position total = **424** years, average = **8.5** years

11. Current work assignment:

Administration = **3**

Interpretation = **9**

Maintenance = **6**

Ranger = **3**

Resource Management = **22**

Other = **4** (Fire Management, I&M)

12. Are you currently:

Permanent staff = **45**

Term/Temporary = **4**

Volunteer/Non-Govt Employee = **1**

13. Please estimate the time you spent responding to this survey:

Total = **399** minutes, average = 7.7 minutes

Appendix B — Suggested Workload Analysis

This appendix provides an example of a system for analyzing museum management program work elements. By completing this chart the total staffing needs will be documented. Additional work elements relating to park records management, library, and the permit process could be added.

Core Work Elements	Current (Hours)	Current (FTE)	Needed (Hours)	Needed (FTE)	Non-Pers. $
Acquisition of Collections					
Plan strategy for acquisition					
Identify sources of collections					
Survey for inclusion in park collections					
Appraisal and evaluation of proposed acquisitions					
Manage acquisition committee					
Manage park records					
Acquire rights and permission					
Subtotal					
Documentation of collections					
Accession new acquisitions within two (2) weeks					
Process archival collections including completion of ANCS+ catalog records					
Catalog museum objects					
Catalog library materials					

Photograph museum collections					
Maintain museum documentation					
Manage databases/knowledge systems					
Maintain documentation of treatment, use, etc.					
Maintain NAGPRA information					
Subtotal					
Preservation and protection of collections					
Maintain facility					
Provide for physical and operation security					
Ensure fire protection					
Monitor environment					
Monitor pests					
Ensure disaster preparedness					
Conduct housekeeping					
Ensure proper storage, including organization, equipment, and housing					
Conduct conservation program by assessing collection condition					
Treat items in need					
Subtotal					
Access and use of collections					
Provide for public and park access including reference services					

Develop and maintain exhibits					
Participate in curriculum-based education programs					
Conduct public program					
Produce publications					
Conduct research and obtain legal rights and permissions					
Loan collections for appropriate use by other institutions					
Develop and maintain internet/intranet access and website(s)					
Participate in NPS planning and compliance					
Conduct research					
Support appropriate reproduction of collections					
Subtotal					
Program administration and management					
Maintain up-to-date scope of collection statement					
Complete annual reporting: Collection Management Report; Annual Inventory; ANCS+ Database					
Manage annual budget					
Provide for future programming: PMIS and OFS					
Supervise paid and unpaid staff					
Develop and maintain up-to-date museum plans and policies					
Manage contracts					

Maintain information technology/management					
Provide administrative support					
Participate in park management and administrative issues					
Subtotal					
Total					

Appendix C — NPS Records Management

The underpinning philosophy and paradigm of records management within the National Park Service is being rethought in light of NPS best practices and continuing technological impacts on communications. The Department of the Interior (DOI) and NPS have identified the need for continuing management of park cultural and natural resources in two concepts: "Mission Critical Records," as presented in *Director's Order 19 (DO#19)* and "Resource Management Records," as presented in the DOI and National Park Service museum management policies.

DO#19 specifically identifies mission critical records as having the highest priority in records management activities. Mission critical records are all records documenting natural and cultural resources and their previous management. These records contain information crucial for the future management of the resources and include "general management plans and other major planning documents that record basic management and philosophies and policies, or that direct park management and activities for long periods of time." Other examples of mission critical records include records that directly support the specific mission of a park unit and the overall mission of the National Park Service. These records are permanent records that will eventually become archival records. Therefore, *DO#19* dictates that these records should receive archival care as soon as practical in their life cycle.

Similar to that of mission critical records is the concept of "resource management records." The DOI manual's definition says that resource management records are "made or acquired by the federal government to record information on cultural and natural resources." As described in the *Cultural Resource Management Guideline (NPS-28)*, resource management records document park resources and serve as key information for their continuing management. Accordingly, they are classified as "library and museum materials made or acquired and

preserved solely for reference or exhibition purposes." Therefore, these materials are excluded from the National Archives' definition of records.

However, in the last few years, the definition of resource management records has broadened beyond reference or exhibition materials. Many official records have also been designated as important for the long-term management of park cultural and natural resources. In the past, official records could not be added to a park's museum or library collection. But records generated by the planning process and compliance review actions of resource management are important official records that never reach an inactive status.

The past system of records management and disposition as promulgated in *NPS-19* focused on "official records" and "unofficial records." Official records were original documents created or received by a park in the course of performing the daily business of the NPS. Unofficial records encompassed duplicate copies of official records and documents generated in association with a resource management project (e.g., archeological field notes). Non-official records were materials not created by a government agency, and included donated manuscripts (e.g., letters written by an eminent figure associated with the creation of a park), collections of personal papers, organizational records of non-governmental entities such as businesses or civic groups, and collections accrued by private individuals.

Only unofficial and non-official records could be placed in a park's museum collection, after evaluation against the park's Scope of Collection Statement (SOCS) for retention, if appropriate. By law National Archives and Records Administration (NARA) has been responsible for the official records of the federal government, once the records are no longer actively needed and have reached their disposition date. Non-official records, such as manuscript collections, were not governed by the NPS Records Disposition Schedule and NARA and included in a park's museum collection based upon its SOCS.

Under the new methodology, instead of a record's importance being primarily dictated by its form (a signed original or a copy), a record's

primary importance is to be determined by the actual information it carries. This philosophy divides records into "permanent" and "temporary;" copies are to be considered just copies and so are not addressed. Permanent records have continuing value to resource management. Temporary records have a limited use life in the operations of a park (or support office).

There is also discussion of the notion of "permanently active" records, those materials needed for the long-term, ongoing management of park resources for the NPS to fulfill its agency mandate. The criteria for permanent and temporary also take into account the office of creation—a permanent record for one office, such as a regional office, may be temporary for a park because it is a distributed copy for general reference only. Temporary records are to be retained as long as indicated by the revised Records Retention Schedule. After their allotted retention time, temporary records may be disposed of by parks or retained longer if still needed.

Many of the disposition time frames outlined in *NPS-19* have been retained in the new *DO#19* retention schedule. This applies in particular to fiscal, routine administrative, law enforcement, forms covered under NARA General Records Schedule 20, and other daily operational materials. Permanent records may also be retained as long as actively needed for use and reference. Under the new *DO#19*, permanent records are to include land acquisition records, park planning documents, documents pertaining to cultural and resource management decisions and projects, and documents pertaining to the history of the administration and interpretation of a park.

The concept of resource management records has been broadened in *DO#19* from definitions in *NPS-19* that classified only associated project records as permanent, such as archeological field notes and natural history project data. Currently, the National Park Service Records Advisory Council (RAC) has suspended disposition of certain official records that may be important for parks to retain on-site. The new, broadened concept classifies as permanent a wide array of documents previously considered temporary (such as construction reports) because the subject of the

document is a park resource or substantially impacts a park resource. Thus, for example, previously all contracts were considered temporary, whereas the broadened definition of resource management records considers contracts on cultural resources (e.g., a historic building on the National Register of Historic Places) permanent.

Under the new NARA protocol, parks will have three avenues to choose among to provide accessibility to their inactive (no longer actively needed or in use) records before the records are permanently destroyed or retired to the National Archives. Under the new proposal, parks may still send inactive records to a NARA Federal Records Center for public access and storage following the current procedure, but now a fee will be charged by the Office of Management and Budget ($3.28 per cubic foot as of Oct. 2000). This charge is currently being paid by WASO for all parks.

Parks can now arrange for storage at an off-site commercial repository, or to retain their own records on-site. In both cases, professional archival parameters of preservation and access set by NARA must be met. These archival parameters include security, fire protection, appropriate storage techniques, climate controlled environment, and widely disseminated collection finding aids. Once the inactive records have reached their disposition date, records are to be destroyed or transferred to the National Archives for permanent storage. These new changes in records definitions and storage procedures will not be reflected in *DO#28 Cultural Resources Management Guideline* and the *NPS Museum Handbook,* Part II, Appendix D, "Museum Archives and Manuscript Collections," until these documents are revised.

Records managers recommend parks establish comprehensive, stand-alone project files for resource management, major special events, park infrastructure and research projects, and that these project files not be assigned NPS file codes. These files should contain copies of finalized contract documents including substantive change orders and specifications, DI-1's, "as-builts" for finished construction projects, related project planning documents, and all documents illustrating all decisions made and why.

For research projects, project files should also include copies of all researcher field notes, laboratory notes and results, a copy of the final report and report drafts, and any other materials generated by the project in question. Thus, staff are assured that a full set of documents covering an entire project are gathered, in order of creation and project evolution, in one place. It also averts problems when some fiscal records are filed separately from other project materials, thus potentially loosing critical data from a project's life history. These project files, upon completion of the project, should then be retired to the park's museum archives for long-term reference. The separation of routine administrative records from project records is recommended practice in the General Records Schedules as well. NARA expects that routine administrative records are temporary with short retention spans before destruction. Project records, on the other hand, are expected to have long retention periods, be permanent, and have potential (if not anticipated) archival value.

The *Museum Handbook,* Part II, Appendix D, "Museum Archives and Manuscript Collections," governing the creation and management of park archives and manuscript collections, does not reflect this paradigm shift. It reflects the guidelines of *NPS-19*, and states that non-official records, or only "associated project records," are eligible to be retained by a park for its museum collection archives. The new paradigm is also not reflected in *DO#28*, *Cultural Resources Management Guideline.* Both Appendix D and *DO#28* will be revised to reflect the changes in NARA policy and NPS records management upon their finalization.

Appendix D — Preparing Inactive Records for Transfer to Storage

The records management program is able to assist park divisions, branches, and offices to professionally and legally manage the records created and received in the course of performing the park's business. This program can provide legal and technical advice regarding the management of records in offices as well as in park retention storage locations housing inactive records. Retention periods for National Park Service records are specified either in the General Records Schedule (GRS), the Federal Government's guideline on retention/disposition of records common to all government agencies, and *NPS-19*, *Records Management Guideline*, Appendix B, Records Retention Schedule.

It is the responsibility of each park office wishing to retire inactive records to fully prepare them to the specifications that follow before they may be transferred to the park museum collection. Once this is done, the park curator or his/her representative will visit the office to verify the preparation and physically transfer the records to the museum collection. Of course, park museum staff will be happy to provide assistance in the interpretation of these instructions at any time during the preparation of records for transfer.

No records are to be dropped off at the curator's office without full prior preparation and approval of the curator.

Records received unannounced or unprepared will be returned to the owning office.

ALL files pertaining to agency business are government property, not the property of the individual employee.

Preparing Records for Transfer

- Use only approved GSA Records Storage Boxes, NSN 8115-00-117-8249, or approved archival boxes. These boxes can be ordered through GSA for large quantities of records, or the park museum may be able to provide boxes if only a few are required.

- Remove all files from hanging folders and three-ring binders. Place in appropriately sized (legal or letter) folders that fully contain the records without folding. Any file exceeding one inch in thickness, such as thick files contained in binders, must be split between multiple folders (place in two or more folders). This rule does not apply to Contracting Project files, which are self-contained packages and may be thicker. Number multiple folders "F1/2, F2/2", etc.
- Make certain EVERY folder has a clear label, typed or neatly handwritten, indicating a clear, descriptive title of the contents, the date or date range of the file and, preferably, a file code and retention period. NPS file codes are not mandatory, but they make records review and disposition actions must faster and simpler and provide a common scheme for filing of related documents. File codes are not necessarily appropriate for project files as they may contain a large variety of materials that do not fit within a file code.
- Remove all personal materials and multiple copies of documents (keep no more than two). Remove all blank forms.
- Remove all office supplies and computer materials such as desk supplies, computer manuals, miscellaneous diskettes, etc.
- Consult with Records Management staff for assistance with odd-size and unusual format materials such as engineering drawings, photographs, audio and videotapes, etc. Do not combine these materials in boxes with standard-sized records in folders, unless they are an integral part of a particular file. NEVER fold oversize materials to fit into record storage boxes.

Electronic Records

Many word-processed and other types of documents are now received in electronic format and are used that way in park offices. The preservation of records in electronic format is a very problematic issue, one which much larger agencies are having difficulty grappling with. The park curator advises all park departments that preserving records in electronic format is not possible at this time, as neither the hardware nor software capability to do so is available.

Make sure to print hard copy of critical and important records and interfile them with the related paper records. Hard copy records have a proven history of preservation capability. The curator will be happy to discuss the

management of databases in electronic form for long-term storage and preservation. All electronic mail and word processing documents that must be retained for either temporary legal purposes or are permanently valuable as archival materials MUST be printed and transferred to records storage in hard copy format.

Records Series and Records Disposition

In archives and records management terminology, records are dealt with in groupings called "series." A series is a group of records which may be defined either by format or conditions of creation or use. A more formal definition may be "file units or documents arranged according to a filing system or kept together because they relate to a particular subject or function, result from the same activity, document a specific kind of transaction, take a particular physical form, or have some other relationship arising out of their creation, receipt, or use, such as restrictions on access and use." A records series is generally handled as a unit for disposition purposes.[1]

Examples of series in National Park Service records include: contract project files; time and attendance records; alphabetical subject files; purchase orders; and press releases. Records are handled in series because these categories may be designated within the National Park Service Records Disposition Schedule for authorized legal periods of retention. Some series (such as budget, human resources, and contracting) records may be destroyed after keeping for a certain period for legal purposes. Other types of records, generally all records dealing with management of resources and administrative decision process, etc., have permanent value and are retained as archives collections. For this reason, the museum staff asks that records be managed and retired in identifiable series to increase the ease of handling when assigning retention periods and, later, in destroying or transferring records to appropriate locations.

[1] Definitions provided in this paragraph are taken from Appendix D: Glossary, Disposition of Federal Records: A Records Management Handbook, Washington, DC: National Archives and Records Administration, 1992.

"Disposition" in records management is defined as "the actions taken regarding records no longer needed for current government business." These actions can include transfer to storage facilities, destruction, or transfer to archives. In this instance, "disposition" does not automatically mean destruction.

Packing Records for Transfer

Try to place only one record series with one disposition date in a box. Records will later be disposed of by box, not by removing individual files from boxes. *Example:* Place all retiring DI-1s in a group of boxes. This is one 'series' of records, all one document type with all the same destruction date. If a single series doesn't fill a box, different series may be combined in a box for space economy, as long as they are clearly labeled.

Pack the files in the same sequence in the cartons as they are arranged in the file drawer, using the same filing system as that used in the office. Place folders with labels facing the front of the box (label area), or facing to the right of front if the folders are legal sized.

Do not over pack boxes. One must be able to slip a hand easily between folders and get into the hand-holds. If this is not possible, the box is too full.

Label each box as it is filled. Label only in PENCIL! Labeling should consist of the following: the owning office symbol plus fiscal year in the upper left hand corner label area and the sequential number in the upper right hand corner. Number sequentially, e.g., 1/12, 2/12, etc. If it is unknown how many boxes there will be, just enter the sequence number, then add the whole number to all the boxes after completion of the packing job, e.g., 1/ , 2/ , 3/ , 4/, then go back and add in the total box count at the end: 1/4, 2/4, 3/4, 4/4. The office may contact the museum staff for assigning a unique accession number prior to ascertaining boxes are fully identifiable, especially if multiple groupings of records, or series, will be retired at the same time. Each series group will be assigned a unique number by the museum staff for control purposes and to facilitate later destruction or other action. A fully labeled box may resemble this example:

ACP-99-2 BPA Records Box ½

This example identifies the second group of records (the "2" is assigned by the Records Center) retired from the Contracting & Procurement Office in Fiscal Year 99, which consists of BPA Records and is the first of two boxes in this grouping to be prepared and retired to the Records Center.

For security, as well as neatness, do not identify the contents of the box on the outside, beyond the simple title shown in the example above. The detailed contents will be outlined in the inventory document.

When packing records, do not stack boxes over four high, any higher tends to begin crushing the boxes. A stack of four boxes can easily be loaded on a hand truck for transport without additional handling.

Preparing Records Inventory or Transfer List

Prepare a records transfer document consisting of a general list of the contents and boxes. A detailed listing of folders is not needed because this information will be entered into the master database at the park museum. If everything is well labeled, this database input can occur very quickly at the museum, and a printed copy of the inventory will be returned to the office for incorporation into the Department's Inactive Records Binder. This is a good chance to double-check to ensure that adequate and consistent labeling has been applied to ALL folders in the box. The general listing may provide the name of the records series, the date range of the records, the number of boxes in the group to be retired, and disposition information if known, also any information that may assist the museum staff in preparing or managing the files during their retirement period.

Where there are multiple folders of a single records title and date range, they will be listed in the database inventory as a group as shown below rather than individually for space and time efficiency. Please ensure that related groupings are appropriately marked with sequential folder numbers, e.g. 1/3, 2/3, 3/3. The inventory listing will appear as:

BPA File - Ace Hardware - 3 folders

Some types of documents have their own unique number sequences, such as contract files, purchase order files, and time and attendance files by pay

period. These types of documents may continue to be in folders as they were in the department (e.g., accordion folders containing all time sheets for a single pay period, etc.). The complete number range of such documents should be correctly listed on the folders, so when the folder headings are used to create the inventory, the information is complete and correct. When preparing the inventory, list the documents in their normal numbering sequence. Consult with records management staff for assistance.

Transferring Prepared Records to the Park Museum

After all above steps have been completed, contact the curator to request physical transfer of the records. The curator or a member of the records staff will come to review the preparations and physically transfer the records to the park museum.

The records always should be physically transferred by museum staff, to protect against damage or loss to the records or personal injury during moving.

An appointment will be scheduled to complete the physical transfer to the park museum. Depending on the current demand, pick-ups may be delayed because of other records intake actions in progress which may be occupying the limited workspace. Records will be picked up as quickly as possible. PLEASE do not move the records to a dangerous storage environment while waiting for pick-up! This includes any basement or unheated building in the Park.

After-Transfer Actions

Museum staff will review records boxes and transfer documentation, and make any necessary corrections. Museum staff will perform database entry of the individual file folders in the records accession. Finalized copies of the inventories and transfer forms will be placed on file in the park museum with a tickler system for later action on the records. The staff will send a printout of the completed inventory back to the office, along with a revised Table of Contents for the Department Inactive Records Binder including the newly accessioned and processed material. Please follow the instructions with the

inventory and in the Records Binder to incorporate this new material into your department's binder.

Records that are retired by park offices to the park museum remain the property of the office. They will not be available for research to anyone except that office's personnel without the express written permission of the office head.

Records that need to be recalled by the office should be referred to by the accession number, the box number, and the folder title as listed on the records inventory in your department's Inactive Records Binder.

Office staff may request the return of records for a period of 30 days, renewable, or a photocopy of the records. This is to ensure that retrieved records do not become lost and unavailable for further review as needed. One office employee must sign for the records to ensure accountability during the time they are removed from storage.

As scheduled review dates for the records come up, the museum staff will communicate with the owning office regarding the ongoing value of the records for government business. Reviews should occur approximately every two years. These reviews form the basis for further records actions which are normal in the life cycle of records. Many financial and human resources records may be destroyed within a certain period of years. The Records Action Form will initiate further actions, such as a decision to retain records in the park museum for additional time, for destruction, or for transfer of permanently valuable records to the park's archives.

Appendix E — Transfer of Resource Management Field Records to Museum Archives

Suggested Standard Operating Procedure

The purpose of this SOP is to aid park staff in accomplishing their responsibilities according to *DO#77 (Natural Resources Management Guideline), DO#28 (Cultural Resources Management Guideline), DM 411 (DOI Property Management Regulations), DO#19 (Records Management Guideline)*, 36 CFR 2.9, and legislation associated with archiving resource management records.

The [name of park's] Museum Management Plan documents the need for guidelines on the management of archival material. Recommendations include retention of reports of archeological, historical, architectural, and other scientific research conducted within and for the park.

The parks' archives include many unique information resources that need professional organization and arrangement to promote their most efficient use. Park resource management staffs generate records on a daily basis that should be considered for inclusion in the park archives. Staff is creating data sets, photographs, maps, and field notebooks that future generations will need to access to research the history of cultural and natural resource projects at the parks.

Park staff are involved in capturing fire monitoring data, plant collections, air quality research, and a host of ethnographic and archeological research. Preserving the corporate knowledge of each of these individual activities depends ultimately upon the archival process. The organizing thread, then, should be the project itself.

Archeological Records

Government-wide regulations for the curation and care of federal archeological collections required by the National Historic Preservation Act (NHPA), the Reservoir Salvage Act, and the Archeological Resources Protection Act (ARPA) were issued in 1990 as "Curation of Federally Owned and Administered Archeological Collections" (36 CFR 79). These regulations establish procedures and guidelines to manage and preserve collections. They also include terms and conditions for federal agencies to include in contracts and cooperative agreements with non-federal repositories. This document covers excavations done under the authority or in connection with federal agencies, laws, and permits (Antiquities Act, Reservoir Salvage Act, Section 110 of NHPA, ARPA). It also applies to the collections and the generated data, or associated records and is applicable to both new and preexisting collections

Associated records are defined as "Original records (or copies thereof) that are prepared, assembled and document efforts to locate, evaluate, record, study, preserve or recover a prehistoric or historic resource. Some records such as field notes, artifact inventories, and oral histories may be originals that are prepared as a result of the fieldwork, analysis and report preparation. Other records such as deeds, survey plats, historical maps, and diaries may be copies of original public or archival documents that are assembled and studied as a result of historical research (36 CFR Part 79.4.a.2)."

These guidelines are provided so future materials can be processed and included in the collection in a systematic fashion. Staff may also use this procedure for materials already in their possession in preparation for the materials being accessioned or registered by the archivist under the park museum collection accountability system, the National Park Service Automated National Cataloging System (ANCS+). Accessioning is the preliminary step in identifying collections that will later be cataloged and processed to NPS archival standards. Eventually, finding aids are created to enable staff and researchers to easily access information in the collection archives.

Staff cooperation in carrying out this SOP will greatly accelerate the rate at which materials are processed. Subject matter specialists involved in the creation of these materials carry the greater knowledge about these collections. The quality of the final product will depend upon the quality of staff involvement in the process of identifying the exact nature of archival materials.

Checklist for Preparing Field Documentation

1) Obtain an accession number from the park curator at the commencement of all new field projects.

2) Label ALL materials with the project accession number. Use a soft lead pencil for marking documents or files and a Mylar marking pen for Mylar enclosures such as slide, print or negative sleeves.

3) Materials must be arranged by material type such as field notes, reports, maps, correspondence, photographs, etc. Each group of materials should be stored in individual folders or acceptable archival enclosures.

4) Resource management staff is responsible for turning over all project documentation to the park curator upon completion of a project. In the interest of preserving institutional knowledge, leave collections in their original order. Original order means the organization system created by the originator of a document collection. Resist the urge to take important documents from these collections. If something is needed for future use, copy it or request that the curator make a copy. After copying, replace the document or photo where it was found. Much information about past projects has been lost because collections has been picked apart. Remember these materials will always be available. That is the whole point behind establishing archives.

5) When the archival documentation is transferred to the park museum, the form below should be provided. This form includes the project title, principal investigator, date of project and a history of the project. The name of the individual who obtained the accession number should also be listed. The type and quantity of documentation would be included as well, such as maps (13), field notes (4 notebooks), Correspondence (3 files).

Project Identification Sheet **(Use one sheet for each project)**

Accession No: _____(Assigned only by Curator)

Your name, title, office: _____

Project Title_____

Principle Investigator and position during project. Please list staff who might have aided in the project implementation.

_____

Researcher's office location and extension, or current address, occupation, and employer or contact number.

_____

Type and quantity of materials in collection(s) (specimens, papers, files, reports, data, maps, photo prints/negatives/slides, computer media - format/software?) Condition. (i.e. infested, torn, broken, good) Attach additional paper if necessary.

_____

Scope of Project:

Is this collection part of an ongoing project to be updated annually? Yes ____ No____
Research goals or project purpose and published or in-house reports to which collection relates

_____

_____

Abstract of collection content. Keywords referring to geographical locations, processes, data types, associated projects. Indicate whether specimens/objects were collected. Attach additional paper if necessary.

_____

_____

_____

Planning for the Curation of Resource Management Records

Records in the Field

Anticipate the kinds of documents that will be needed in the field to record data and use archival materials to produce them (e.g., field excavation forms, field notes, photographic logs, transit data, maps, level records, and videotape). Use archival quality materials in the field. This can reduce the cost of copying information onto archival quality media later. Remember that documentation on electronic media alone is not sufficient because of the lack of long-term stability of these media and their contents.

The records created in the field, as well as in the lab, are vulnerable to insects, vermin, mold, humidity, light, temperature changes, and mishandling. They are also vulnerable to a variety of environmental threats, such as roof leaks, flooding, fire, and asbestos problems, and to theft or other malicious action. The following are a number of general recommendations to follow in the field and lab in order to promote the long-term preservation and viability of the great variety of records created:

- Use appropriate long-lived media for all record types.
- Use permanent and archival stock in paper, ink, lead pencil, folders, and boxes.
- Inspect and redo damaged or inadequate records.
- Label everything, or their containers.
- Use appropriate storage for all media in the field in order to protect them from poor environmental conditions and threat of fire or theft.
- Carefully consider existing guidelines and equipment for digital and audiovisual media, make sure backup copies and hard copy printouts exist, and migrate data to updated software on a regular schedule.
- Ensure that project information and data is captured by appropriately knowledgeable staff.

Paper records

A number of conservation principles should also be considered for each of the primary types of media used for associated records.

- Use high alpha cellulose, lignin free, acid-free paper, especially for field notebooks, and standardized forms.
- Record information using archival (permanent carbon) inks or #4 (HH) pencils.
- Protect paper from water and humidity, and minimize its exposure to light.
- Try not to fold or roll paper.
- Store papers in archival folders in polyethylene boxes.

Photographs

- Protect all photographic materials (e.g., film, prints, slides, negatives, and transparencies) from heat, rain, and wind. Store them in archival folders in polyethylene boxes.
- Maintain a log of all photographic images.
- Only handle photos along their edges. Do not touch the image with bare fingers.
- Do not use paper or plastic clips, rubber bands, pressure sensitive tape, adhesive or pressure sensitive labels, or Post-it® notes directly on photographs.
- Do not put photographic materials, except unused film, in cold storage without reformatting them for access and duplication.

Magnetic Records

- Protect all magnetic materials (e.g., audio tapes, video tapes) from heat, dust, and dirt.
- Consider the equipment required to play the audiovisual material and the longevity of that equipment.
- Label all records in a permanent, carbon-based ink.
- Store the records in their cases in polyethylene boxes.

Cartographic and Oversized Records

- Store oversized records flat in folders, preferably in map cases. Do not roll or fold.
- Protect paper from water and minimize its exposure to light.

- Protect oversized records from tears and rips during storage and use. Do not use tape to repair tears.
- Label the oversized folders in permanent, carbon-based ink.

Digital Records and Data

- Produce your master records in uncompressed TIF format, if possible. Avoid using proprietary file formats or lossy compression.
- Protect all digital records from heat, dust, dirt, and ultraviolet radiation.
- Choose a storage medium that is considered a standard and research its longevity.
- Keep digital records away from magnetic or electric fields that are created by old telephones, static, and field and lab equipment such as magnetometers and 12-volt transformers. Computer diskettes can be partially or completely erased by such exposure.
- Label the records in permanent, carbon-based ink.

Attachment A: Five Phases of Managing Archival Collections

(From "Museum Archives and Manuscript Collections," *NPS Museum Handbook,* Part II, Appendix D)

Phase 1: Gain Preliminary Control over the Park Records

Survey and describe collections; identify official/non-official records; appraise collections and check them against the Scope of Collection Statement (SOCS); accession collections; order supplies.

Phase 2: Preserve the Park Collections

Conduct the Collection Condition Survey; write treatment or reformatting recommendations; contract to conserve or reformat; re-house; prepare storage, work, and reading room spaces.

Phase 3: Arrange and Describe the Park Collections

Arrange collections; create folder lists; edit and index folder lists; update collection-level survey description; produce finding aids; catalog collections into the Automated National Catalog System (ANCS+).

Phase 4: Refine the Archival Processing

Locate resources; prepare processing plan and documentation strategy; develop a guide to collections; publicize collections.

Phase 5: Provide Access to Park Collections

Review restrictions; write access and usage policies; provide reference service.

Attachment B: Sample Archival and Manuscript Collections Survey Form

(From "Museum Archives and Manuscript Collections," *NPS Museum Handbook,* Part II, Appendix D), US Department of the Interior, National Park Service

COLLECTION TITLE (Creator / Format / Alternate Names/Accession/Catalog #s): Asa Thomas Papers DRTO-00008

DATES (Inclusive & Bulk): 1850-1925; bulk 1860-69

PROVENANCE (Creator / Function / Ownership and Usage History/Related Collections/Language): Asa Thomas (1830-1930) an American engineer, inventor, and explorer specializing in hydraulics created this collection as a record of his life, family, and employment history. Captions on some photos are in Spanish. Note: Must locate a biography of Thomas for the Collection-Level Survey Description. Check the *Who's Who in Science*. This collection was given by Thomas's third wife, Eva Bebernicht Thomas, to their son, Martin Thomas in 1930. Martin Thomas left it to his only daughter Susan Brabb, who gave it to the Park in 1976.

PHYSICAL DESCRIPTION (Linear feet / Item count / Processes / Formats / Genres):45 linear feet of papers including 15 diaries (1850-1925), 63 albums and scrapbooks, 10 lf of correspondence, and 2,000 blueprints.

SUBJECTS (Personal / Group / Taxonomic / Place Names / Eras / Activities / Events / Objects / Structures / Genres): This collection documents the life, family, inventions, instructions, and professional activities of Asa Thomas including engineering projects in the Dry Tortugas, the 1873 world tour, and hydraulic pump inventions.

ARRANGEMENT (Series/Principle of Arrangement / Finding Aid): Into four series by type of document: correspondence, diaries, albums and scrapbooks, and blueprints.

RESTRICTIONS (Check and Describe) Donor _____ Privacy/Publicity _____ Copyright __X__ Libel _____ No Release Forms _____ Archeological, Cave, or Well Site _____ Endangered Species Site _____ Sensitive _____ Classified _____

Fragile _____ Health Hazard _____ Other _____ The donor, A. Thomas's son Marvin, did not donate all copyrights. The papers are unpublished. Some inventions are patented.

LOCATIONS Building(s), Room(s), Walls(s), Shelf Unit(s), Position(s), Box(es): B6 R5 W2 S1-3, B1-40

EVALUATION (Check and Describe Status) Official Records ____ Non-Official Records ____ Fits Park SOCS _____ Outside SOCS _____ (Rate Collection Value: 1=Low; 3=Average; 6=High) Informational __6__ Artifactual __6__ Associational __6__ Evidential __3__ Administrative __3__ Monetary __1__

CONDITION (Check and Describe) Excellent ____ Good __X__ Fair ____ Poor ____ Mold ____ Rodents ____ Insects ____ Nitrate ____ Asbestos ____ Water Damage __X_ Other

OTHER (Please Describe)

_____

_____

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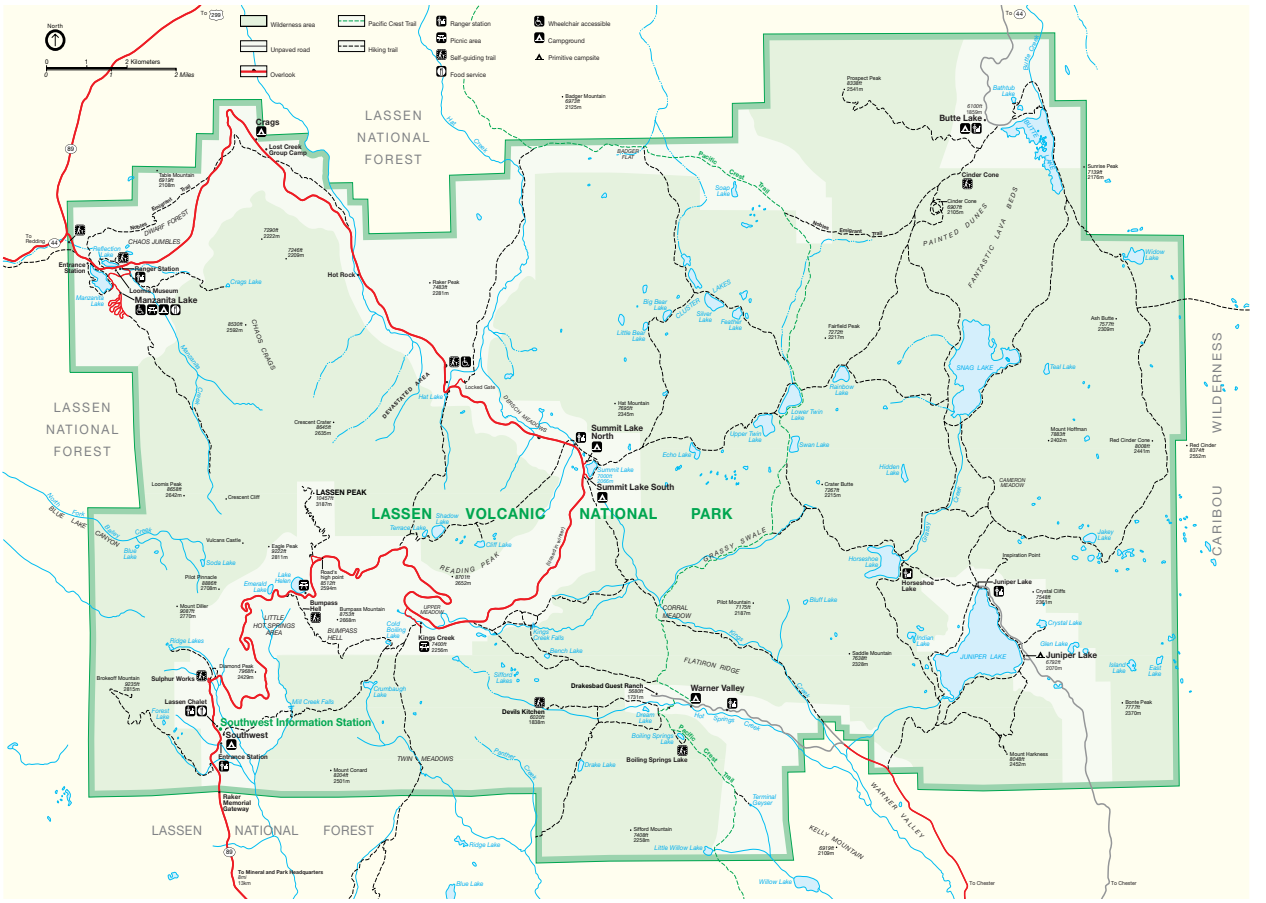
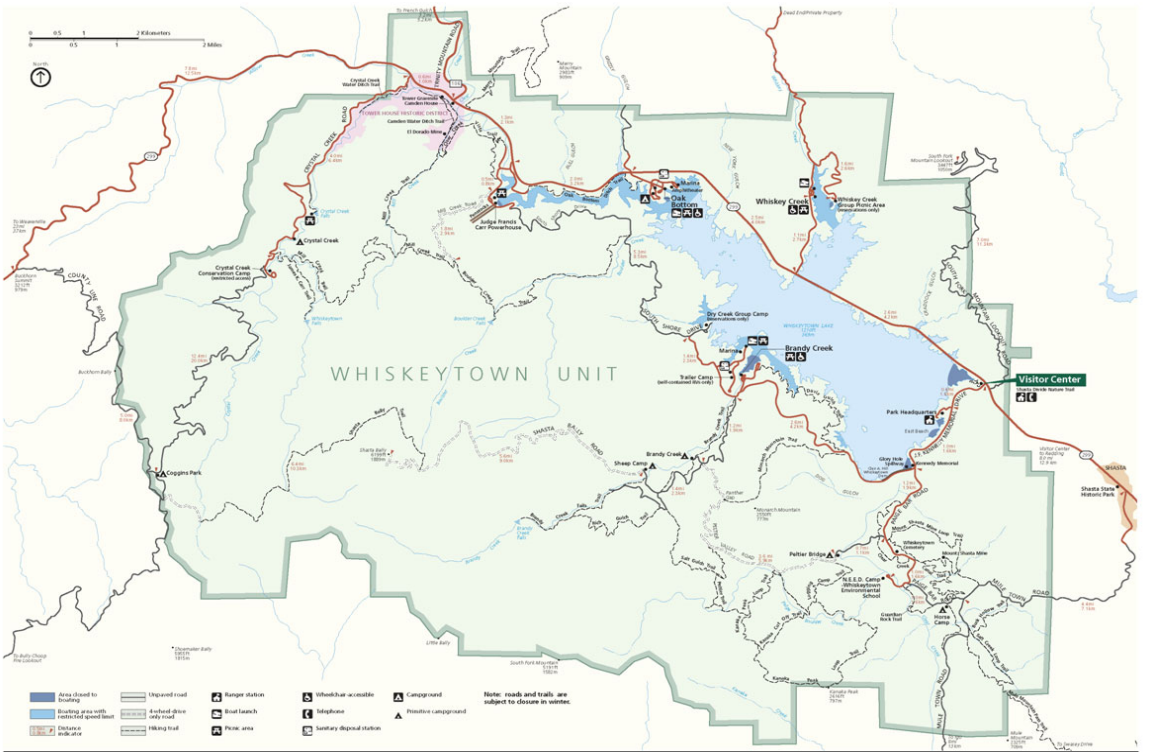


Lassen Volcanic National Park



Whiskeytown - Shasta - Trinity National Recreation Area