Conservation Management Plan for the Royal Mail Ship Queen Mary

October 2010

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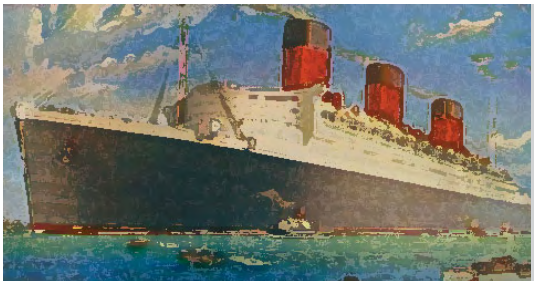

Conservation Management Plan for the Royal Mail Ship Queen Mary

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EXECUTIVE SUMMARY

The mission of the City of Long Beach, California for the RMS Queen Mary, berthed in Long Beach Harbor since 1967, is to serve the community of Long Beach by providing for the sustainable operation of the ship as a hotel while also acting to preserve and conserve the RMS Queen Mary and her valuable historic assets and cultural significance as one of the finest and oldest surviving luxury ocean liners. The RMS Queen Mary is listed in the National Register and houses an extensive collection of fine art, decorative arts, maritime equipment and other artifacts that are on exhibit as well as integrated into the public and private areas of the ship, largely in their original locations. The RMS Queen Mary is owned by the City of Long Beach (City) and is permanently berthed in Long Beach Harbor, secured behind a man-made protective jetty. The ship functions as a hotel, houses a variety of eateries and concessions, and is frequently used as a venue for a variety of public and private events. The City of Long Beach, and/or third party lessees or any subsequent ship operators will work as a team for the long term preservation of the RMS Queen Mary and her historic assets and art, decorative arts and artifacts. Restoration and preservation planning, interpretation, exhibit development, collections management, and accessioning of artifacts work will be performed in accordance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties with guidelines for Preserving, Rehabilitating, Restoring & Reconstruction Historic Buildings* and the Secretary of the Interior's *Standards for Historic Vessel Preservation Projects with Guidelines for Applying the Standards* as well as the California Environmental Quality Act, and be consistent with the provisions of the Tidelands Trust.

At the request of the City, **PCR Services Corporation (PCR)** in collaboration with **Hudson Conservation Studio LLC** prepared a Conservation Management Plan (Plan) for the fine and decorative arts on board the Royal Mail Ship (RMS) Queen Mary. Through a comprehensive process both general and specific conservation issues were identified, priorities established, and recommendations for future actions outlined. While the Plan recognizes the full spectrum of conservation needs, the focus is on those prioritized actions that can be realistically accomplished with existing or obtainable resources. Following upon the previous Survey of Original Fine and Decorative Arts on the Royal Mail Ship Queen Mary (PCR April 2009), the Plan lays out a conservation management program that takes into account the current and future uses of the ship in support of the City's objectives, and provides for continuity and consistency in conservation of the ship's art and artifacts over the short and long term. The Conservation Management Plan was accomplished in three phases beginning with a Phase I Conservation Assessment Survey to document existing conditions and identify conservation priorities. The Management Capacity Assessment, Phase II, analyzed existing supportive policies, strategies and procedures required for fundamental planning, implementation and accomplishment of overarching preservation goals. Phase III then synthesized the information gathered into this comprehensive Conservation Management Plan which will serve as a long range planning tool.

This Plan approaches conservation of the ship's art and artifacts from both the an objects conservation perspective as well as a preventive preservation view. This is because the ship is a not a traditional museum environment. One of the most important outcomes of this study is the recognition that careful and knowledgeable management of the ship's environmental conditions, collection inventory, housekeeping practices, staff and visitor education, and security measures in light of the identified conservation needs is of key importance and is probably the least costly and most effective way to ensure the long-term preservation of the ship's valuable assets.

With regard to the environmental conditions, water, light, humidity and changes in temperature are key factors that adversely affect the condition of the ship and her collections. Evidence of deterioration on the ship's exterior is due primarily to the age of the ship, deferred maintenance and the effects of the harsh marine environment on the steel hull, metal equipment and teak decking. The ship has suffered over the years from water leaks associated with rain and occasional plumbing and drainage failures which has caused discreet, localized damage to the ship's artifacts, features and finishes. Exposure to sun and artificial light has caused damage to materials and artifacts regularly exposed to light. Environmental conditions aboard the RMS Queen Mary are not climate controlled, except for individual control systems on localized equipment. Environmental conditions are currently maintained for human comfort standards suitable for the current hotel use, but which are not conducive to the preservation of the ship's valuable assets and collections. Public spaces and guest rooms where fine art and other valuable objects are located have doors and windows that are currently opened to provide ventilation. Likewise, conditions in exhibit areas are uncontrolled environmentally and have fluctuating temperature, humidity and light levels. The Plan includes recommendations to monitor and control these conditions.

With regard to care and management, the ship's extensive collections are largely still in their original locations or kept on display in exhibit areas. These collections have been under the care of the ship's staff since the Queen Mary arrived in Long Beach and, thanks to their efforts, these collections have survived in fair to good condition for over 40 years. However, there are no specialized conservation or collections management personnel on staff, nor is there a dedicated position responsible for collections care; although there is an individual staff person who generally oversees the security and disposition of the ship's collections (which is not a part of her regular job description), and there is a full-time engineer who maintains the ship's functional and mechanical systems. Display methods for small objects of art and artifacts are generally inside cases and vitrines with glass and acrylic glazing, illuminated by exterior sources. Primary works of fine art and decorative art are integrated into the public spaces and are largely in their original locations, but are generally unprotected which has resulted in some damage to the art works. Where protective barriers occur, they are generally easy to breach. There is no electronic monitoring or alarms associated with the display or storage areas. Housekeeping staff and maintenance personnel provide general cleaning and repair but are not currently trained in appropriate cleaning and conservation methods. Over the years, this has resulted in unintentional wear and tear and some minor damage to the ship's art works and decorative features. As the 2009 survey of fine and decorative arts found, the vast majority of the existing valuable assets identified are currently in fair to good condition with only minor conservation necessary, a minority of art objects are in poor condition in need of conservation treatment, and very few items are in excellent condition. Hence, the primary conservation needs include appropriate day-to-day monitoring and control of environmental conditions, implementation of a regular on-going staff and visitor education program for the care, protection and security of the art works to avoid future damage, development of a collections inventory and management system by a responsible trained staff member(s) and/or qualified collections manager to keep track of the art works and artifacts to avoid future damage, misuse or loss, and a conservation program focused on the assessment and conservation treatment of individual works of art by a qualified conservator where necessary.

The ship's archive, artifact and ephemera collections are primarily stored in the forward Decks "C", " D", and "E". The ship's archive is located in aft "F" Deck. Office records of recent history are stored in several rooms on "R" Deck. While access to storage areas is very limited, there is no alarm system. There are presently no policies regarding storage area monitoring, collections management, registry, or for moving of materials in and out of storage. While the storage area is extensive, it is not organized, the environmental conditions are

poor, the collections are not archivally protected and they are vulnerable to pests, mishandling, and security breaches. The items in these storage areas and in the ship's archive include paper, textiles, ceramics, art glass, wood furniture, metal (silver, bronze, etc.) and various other fragile materials. Continued storage of these items under current conditions is not advisable. It is recommended the items in storage and in the ship's archive be inventoried, cleaned and archivally re-housed by a qualified conservator and relocated to an appropriate environmentally controlled and secured (locked) storage area.

During the development of this Plan, PCR and HCS staff conducted several meetings with City staff and the ship's administration, collections and maintenance managers to analyze and develop achievable policies, strategies and procedures for planning, implementation and accomplishment of overarching preservation goals. As a result of these efforts, a mission statement and vision were developed for the RMS Queen Mary, conservation goals and strategies were identified, and governance of preservation activities was delineated. The capacity assessment summarized in Chapter 1.0 shows that the City is in a relatively strong position and presently possesses considerable capacity among existing staff and the ship's operator to begin the development of an achievable conservation program for the RMS Queen Mary. One of the Plan's key recommendations is the creation of a preservation management team with designees from the City, ship's operator, and conservation and maritime preservation consultants to monitor and document progress, and conduct specific projects/activities. In addition, it is recommended the City adopt the Conservation Management Plan as a parallel component to the existing Base Maintenance Plan, and begin implementation of the Conservation Management Plan starting with the short term preservation recommendations for priority conservation projects, to be reviewed regularly by the preservation management team. The overall long-term preservation and conservation strategy should include but not be limited to 1) a maritime survey to assess the existing condition and life expectancy of the ship's hull, structure and systems; 2) an historic structure report to assess and document the ship's significant architectural features and provide preservation treatment guidelines for compliance with CEQA and the Secretary of the Interior's Standards; and 3) a capacity development program to meet future funding and staffing needs. It would also be advantageous for the City to develop partnerships with agencies such as the National Park Service and/or California Department of Parks and Recreation to assist in the development and implementation of a comprehensive five-year preservation master plan for the RMS Queen Mary. The master plan could entail preservation of the ship and her valuable assets alone, or could be part of a larger redevelopment project for the ship and surrounding area. Engaging the services of an experienced, highly qualified fundraising professional to strategize and implement a fundraising campaign for long term preservation goals is also highly recommended. The Plan is designed to be used in part or whole within grant applications and to support fundraising campaigns. Once benchmarks and goals are met, the City's preservation management team would routinely revise and update strategies to ensure ongoing progress.

The Conservation Management Plan conclusions and recommendations are discussed in Chapter 2.0. The necessity for developing collection management policies is vital for successful preservation and protection of the RMS Queen Mary's valuable assets, and should include acquisition, condition reporting, access, visitor awareness, light levels, decoration, special events, commercial filming, housekeeping, and integrated pest management. In addition to policies, a collection information management system or collection catalog should be utilized, such as a licensed software program or a relational database designed for collections management, to record information about each item in the collection and its location and condition. Currently there is no established policy or practice for tracking and documenting the movement of artifacts from one location to another on board the ship. It is highly recommended that an object tracking system be readily implemented using the example provided in Chapter 2. This information can later be kept in the

collection database catalog. Maritime and museum conservators have identified ten universal agents that cause maritime vessels, art and artifacts to deteriorate. Identifying and analyzing exposure to and impact from any of the agents help to understand why deterioration occurs and suggest how to eliminate or mitigate risks to maritime vessels, art and artifacts. They include custodial neglect, direct physical force, light and UV radiation, water, temperature, humidity, pests, contaminants, theft or vandalism, and fire. Chapter 2 includes a table summarizing how the agents of deterioration affect the RMS Queen Mary and her valuable assets, and the steps necessary to mitigate risks by category of risk is provided. The Plan then summarizes conservation priorities, and short and long term preservation recommendations for the ship as a whole, for the architectural, decorative and fine art features, for the artifacts in storage, and for the exhibits. The Plan also includes helpful information on selecting a qualified conservator, conservation treatment, recommendations for further evaluation, guidelines for handling artifacts, a meteorological conditions monitoring plan, fundraising strategies, code of ethics for conservation of historic and artistic works, and bibliographic references.

INTRODUCTION

PCR Services Corporation (PCR) in collaboration with **Hudson Conservation Studio LLC** appreciates the opportunity to submit this draft Conservation Management Plan (Plan) for the fine and decorative arts on board the Royal Mail Ship (RMS) Queen Mary, owned by the City of Long Beach (City). Conservation planning is the process through which specific and general conservation issues are identified, priorities are established and recommendations for actions are outlined. While the Plan recognizes the full spectrum of conservation needs, the focus is on those prioritized actions that can be realistically accomplished with existing or obtainable resources. The resulting plan lays out a conservation management program that takes into account the current and future uses of the ship, supports the City's objectives, and provides for continuity and consistency in preservation and conservation over the short and long term.

Development of the Plan was accomplished in three phases, of approximately three weeks each. Phase I involved a Conservation Assessment survey to document existing conditions and conservation issues. Phase II, a Management Capacity Assessment, analyzed existing supportive policies, strategies and procedures required for fundamental planning, implementation and accomplishment of overarching preservation goals. Phase III synthesized the information gathered into the comprehensive Conservation Management Plan which will serve as a long range planning tool.

Project Team

The PCR team was led by Margarita J. Wuellner, Ph.D., Director of Historic Resources. Dr. Wuellner provided overall project management, coordination and quality control. Project support was provided by Amanda Kainer, M.S., Assistant Historian, and Terrance Keelan, PCR's database and publications manager. The HCS team was led by Lisa Forman, M.F.A., Project Coordinator & Lead Conservator. She was assisted by Caroline Sakaguchi Kunioka, M.A., Principal Objects Conservator. Project support was provided by Caitlin Brewer, B.A., World Culture and Arts. David Dolim, M.A., provided assistance with collections and information management. David Mathieson, B.F.A., a specialist in maritime conservation, provided recommendations. Cherilyn Parsons, M.A., Funding and Development Consultant, provided funding strategy recommendations.

Phase I: Conservation Assessment

The Conservation Assessment is a comprehensive evaluation of the current conditions of the historic ship and its artifacts, conducted through meetings, informational interviews and site visits. The goal of assessment was to identify conservation issues and prioritize recommended actions. The findings informed and shaped the development of the Conservation Management Plan. Ms. Kunioka and Ms. Forman conducted the assessment and prepared a summary of findings, presented in Appendix A. The categories of interest included, but were not limited to: condition of site and artifacts, collection storage conditions, existing climate and environmental controls, current exhibition and display of artifacts, collection management policies and practices, issues of health and safety, security and access protocols, housekeeping procedures and disaster and emergency preparedness.

Methods

HCS reviewed all reports and findings previously provided by PCR to prevent duplication of work and gain a broad perspective of the history and significance of the ship and artifacts. HCS conducted a walk-through of the RMS Queen Mary and her storage areas. The purpose of the walk-through was to visually examine and document relevant conditions observations and select representative public spaces for closer examination. PCR accompanied HCS on the initial walk-through to orient and familiarize the HCS team with the ship and its collections, train HCS in the use of the inventory database, and review conservation issues previously identified by PCR during the Phase I survey. Ms. Kunioka and Ms. Forman prepared worksheets and/or checklists that were used during the follow-up site visits and assessment process, including informational interviews. Mr. Mathieson then reviewed the draft conservation assessment checklist. HCS forwarded a copy of the conservation assessment checklist to PCR for review prior to submittal to the City. HCS incorporated PCR and City review comments, as appropriate, and provided PCR and the City with a final draft of the Conservation Assessment Checklist.

HCS conducted informational interviews with key personnel, identified by the City and RMS Queen Mary, who are responsible for operations and maintenance, housekeeping, security, and food services, etc. These interviews were conducted to understand existing operational and maintenance practices, special events and filming activities, security and emergency plans, pest monitoring, health and safety issues and collections policies and protocols. Insight into the day-to-day operations of RMS Queen Mary allowed HCS to make recommendations that minimize disruption of current activities.

In order to make relevant recommendations for conservation actions it was important to document current conditions and environments as well as to consider the full impact of these conditions on the artifact collections. Throughout the survey the HCS conservators recorded light levels and described sources. They observed safety and protection of assets, security concerns, housekeeping, pest activity, food service, floral and botanical decoration, staff and visitor activity and any other pertinent conservation conditions. The survey began with a close examination of selected representative public spaces and specific artifacts to create an overall description of specific conservation issues. Room by room examination of the storage spaces and cargo bays recorded observations of pest and avian activity, overall physical conditions in storage spaces, health, safety and security factors, presence of non-collection items, operating equipment, exposed plumbing and wiring, and storage furniture, storage methods and materials.

Working with the PCR inventory, the conservators described the contents of individual rooms by types of materials and manufacture. Primarily they evaluated risk factors and object vulnerabilities, noting reversible and irreversible deterioration within the general categories of objects. During the evaluation process they noted conditions and objects that require immediate action to prevent further deterioration.

A similar process was undertaken to document the existing conditions in the ship's archive. Current displays and exhibitions were evaluated in terms of lighting exposure, case design, method of installation, frequency of object substitution, addition or removal, inventory of objects on display and any apparent damage or loss requiring immediate action.

Phase II: Management Capacity Assessment

The purpose of the Management Capacity Assessment was to align aspirations, goals, strengths, resources and challenges with current capacities while recommending actions to maximize effectiveness of current capacities and strengthen core competencies. The Management Capacity Assessment is a means of structuring, fulfilling and sustaining the management of preservation objectives. While a Conservation Management Plan is essential for implementing conservation activities, it is of limited usefulness if not aligned with the mission, vision and capability of the governing organization. Success in executing the Conservation Management Plan for the RMS Queen Mary hinges upon the capacities of the City, RMS Queen Mary and lease holder to adapt and transform to fulfill their respective preservation aspirations and obligations.

It is important to recognize that demonstration of the ability to manage and sustain preservation activities beyond funded projects is critical to successful fundraising, and will be crucial for the future success of the RMS Queen Mary conservation project. Funders scrutinize proposals and applications for evidence of organizational competencies in planning, implementation and sustained conservation management. Inclusion of a Management Capacity Assessment in the preservation planning process demonstrates the intention and ability of the City to preserve the historic site and its associated artifacts.

Methods

During the Management Capacity Assessment process, information was collected on existing organizational and operational capacities. The categories of interest included, but were not limited to: mission and vision statement review, overarching goals, governance and budget management, legal and liability management, fundraising and development, operational policies and strategies, volunteer management, communications and outreach. This information was gathered by a variety of means including review of pertinent documents, PCR reports, informational interviews and meetings.

The findings of the Management Capacity Assessment, presented in Chapter 1.0, will assist the City in developing strategies for expanding, improving or establishing core capabilities needed to support successful long-range preservation of the RMS Queen Mary. Management Capacity development strategies combine prioritized long-range objectives, short- to medium-term initiatives (one year or longer) with actions that address immediate needs (less than one year).

Ms. Forman, Mr. Dolim, and Ms. Parsons created a Management Capacity Assessment questionnaire to structure information gathering. PCR coordinated with the City to identify appropriate participants for the capacity assessment who attended meetings and interviews. Participants identified were individuals with deep knowledge of current governance and management of RMS Queen Mary, as well as those who are responsible for implementing the conservation program. Small group and/or informational interviews were scheduled by PCR in the first two weeks of the management capacity assessment process. HCS conservator Lisa Forman and Caroline Kunioka and PCR project manager Margarita Wuellner conducted the informational interviews and meetings. At the conclusion of the information gathering interviews, HCS prepared a Capacity Assessment Report for the City.

Phase III: Conservation Management Plan

A Conservation Management Plan (Plan) should dovetail with other key management tools and resources of an organization or institution. The Plan was created within the unique context of the RMS Queen Mary, her artifacts and history. The guiding rubric was the institution's mission statement, vision statement and overarching goals, as developed in the Capacity Assessment (Chapter 1.0). The Plan is predicated upon the mission, vision and overarching goals of the City for the RMS Queen Mary and is a springboard for action, not a static tool. Ideally one City department or one staff member will be responsible for carrying out and keeping the Plan updated and current.

Methods

Ms. Kunioka, Ms. Forman, and Ms. Brewer organized the body of information gathered during the Management Capacity and Conservation Assessments into a format that is a practical and concise management tool. The Plan developed prioritized recommendations for short term collection care and forms the basis for the development of a long range conservation program. Appropriate conservation strategies are based on the specific needs and characteristics of the historic site (vessel) and its artifacts. Mr. Mathieson added appropriate recommendations to take into consideration the vessel as a whole and the conservation implications for short, medium or long-range planning. PCR's Air Quality Division conducted a meteorological conditions analysis and prepared a meteorological conditions monitoring plan (MCMP) to evaluate temperature and humidity conditions and identified potential sources of airborne contaminants responsible for degradation of the artifacts. PCR prepared a technical memo report as a separate addendum to the Plan, included as Appendix B. Fundraising Strategies for Conservation and Ongoing Care of the RMS Queen Mary (Appendix C) outlines several angles the City could take for fundraising and identifies potential sources of support. The fundraising study was prepared by Cherilyn Parsons, M.A., President, Strategic Communications, in coordination with HCS.

1.0 CAPACITY ASSESSMENT

A. MISSION

The mission of the City of Long Beach, California for the RMS Queen Mary, berthed in Long Beach Harbor since 1967, is to serve the community of Long Beach by providing for the sustainable operation of the ship as a hotel while also acting to preserve and conserve the RMS Queen Mary and her valuable historic assets and cultural significance as one of the finest and oldest surviving luxury ocean liners.

Recommended Future Actions:

The mission statement will be publicized, universally held and understood as the statement of commitment and purpose.

Continue to review and modify the mission statement as needed.

B. VISION

- To preserve the RMS Queen Mary and her assets, a National Register of Historic Places landmark and once the fastest, most luxurious Art Deco Ocean Liner in the Cunard fleet
- To preserve the 1936-1939 character and beauty of the RMS Queen Mary as the "Ship of Beautiful Woods"
- To preserve the RMS Queen Mary and her valuable historic assets, decorative and fine art and artifacts
- To interpret the history of the RMS Queen Mary including her role in World War II (1940-1945) as the troop carrier the "Grey Ghost"
- To interpret the post-World War II history of the RMS Queen Mary
- To present innovative and engaging guest and visitor experiences through educational programs, exhibits, cultural events and community outreach

Recommended Future Actions:

The vision statement will be publicized, universally held and understood as the statement of purpose and guide to action.

Continue to review and modify the vision statement as needed.

C. OVERARCHING GOALS

City of Long Beach, and/or third party lessees or any subsequent ship operators will work as a team for the long term preservation of the RMS Queen Mary and her historic assets and art, decorative arts and artifacts.

Restoration and preservation planning, interpretation, exhibit development, collections management, and accessioning of artifacts work will be performed in accordance with the Secretary of the Interior's *Standards*

for the Treatment of Historic Properties with guidelines for Preserving, Rehabilitating, Restoring & Reconstruction Historic Buildings and the Secretary of the Interior's *Standards for Historic Vessel Preservation Projects with Guidelines for Applying the Standards* as well as the California Environmental Quality Act, and be consistent with the provisions of the Tidelands Trust.

Recommended Future Actions:

Overarching goals will be universally known and consistently drive decision making.

D. OVERALL STRATEGY

Create preservation management team with designated decision makers from the City of Long Beach, ship's operator and maritime and preservation consultants to monitor and document progress and actions.

Adopt and begin implementation of the Conservation Management Plan beginning with the short term preservation recommendations including feasible timelines and concrete outcomes for priority preservation projects which are reviewed regularly by the management team.

In addition, develop an overall strategy for historic preservation and conservation that should include but not be limited to a maritime survey, historic structures report, and capacity development program as components of a larger preservation master plan. Develop partnerships with agencies such as the National Park Service and/or California Department of Parks and Recreation to develop and implement the preservation master plan over a four or five-year period.

Engage the services of an experienced, highly qualified fundraising professional to strategize and implement fundraising campaign to fund long term preservation goals.

Seek advice on non-profit tax law to assist expanding development and fundraising efforts.

Recommended Future Actions:

As benchmarks and goals are met, the management team will routinely revise and update strategies to ensure ongoing progress.

E. GOVERNANCE

The City of Long Beach, California owns the RMS Queen Mary and her historic assets, art and artifacts. Operation and maintenance of the RMS Queen Mary are delegated to a ship's operator by contractual agreement that in turn contracts the day-to-day management of the RMS Queen Mary to a private management company.

Recommended Future Actions:

Consider amending the Base Maintenance Plan to include the Conservation Management Plan as a parallel component similar to but separate from the existing Base Maintenance Plan.

F. PRESERVATION MANAGEMENT TEAM

The City of Long Beach's Department of Public Works team members have diverse backgrounds and areas of expertise though not in the area of long range conservation and preservation of this maritime asset though within the team there is a general understanding of the challenge of preserving and conserving the Queen Mary.

Ship's operators are recommended to engage a qualified preservation consultant team for the maintenance, conservation and preservation of the ship and her historic assets and collections.

Recommended Future Actions:

In light of the complex management landscape, the City Master Lease Administrator from the Department of Public Works will coordinate overall preservation and conservation actions including project design, approval, review, documentation, and implementation.

City, ship's operators and third party lessees are encouraged to engage a qualified preservation consultant team for the maintenance, conservation and preservation of the ship and her historic assets and collections.

G. STRATEGIC PLANNING

The City of Long Beach has the expertise and ability to analyze complex realities, make informed decisions, identify priorities and develop high-level strategic plans. At this time, the City is preparing a management plan for the conservation of the ship's decorative and fine arts. The City is also establishing policies and procedures for compliance with the California Environmental Quality Act and conformance to the Secretary of the Interior's Standards.

Recommended Future Actions:

Preservation Management Team will continue to develop concrete, feasible, detailed routine procedures and long term preservation projects using the Conservation Management Plan.

H. DECISION MAKING PROCESSES

Decisions regarding preservation management of the RMS Queen Mary and her valuable assets are de-centralized and typically set by lease and operating contract between the City and the Lessee as well as the Base Management Plan prepared annually by the Lessee. Serial changes in management of the RMS Queen Mary contribute to lack of continuity in long term decision making and fulfillment of the Base Management Plan directives.

Recommended Future Actions:

Designate decision makers to develop a set of structured processes for analyzing problems and prioritizing objectives when making decisions which affect the integrity and status of the RMS Queen Mary as a historical resource pursuant to CEQA, and as a National Register resource, to ensure compliance with the National Historic Preservation Act, Secretary of Interior's Standards and Guidelines, and California Environmental Quality Act laws and standards.

Legal requirements may include compliance with Section 106 of the National Historic Preservation Act (when federal funds or grant monies are involved), and compliance with the California Environmental Quality Act (CEQA) for discretionary improvements. Additionally, physical changes that may adversely impact the resource and its contributing features and valuable assets such that its historic significance may be materially impaired would be considered potentially significant impacts, and should be avoided. However, projects that conform to the Secretary of the Interior's Standards are generally considered exempt under CEQA. Similarly, projects that conform to the Standards are generally considered to result in no adverse effect under Section 106. Both the federal and state compliance process should be predicated on a National Register significance statement that defines the significant elements, features and artifacts of the resource; however, the existing National Register nomination is brief and limited in scope and should be revised. A survey of the ship should be conducted by a team of qualified maritime and preservation consultants, and the National Register nomination form should be amended and submitted to the National Register.

I. STAFF DEVELOPMENT

Queen Mary staff, who have valuable experiential knowledge of the ship and her assets, will receive additional training to undertake day-to-day operations and maintenance in conformance with CEQA and Secretary of Interiors standards to ensure the preservation of the Queen Mary and her assets.

Recommended Future Actions:

Conduct on-board training sessions with conservators to improve basic artifact cleaning and handling.

Encourage current department heads and designated staff to participate in ongoing preservation training available through local and national educational workshops.

Recruit preservation and marine specialists to conduct on-board preventative maintenance and preservation activities.

J. VOLUNTEER MANAGEMENT:

The use of volunteers can be a positive benefit in assisting with the conservation and preservation of the Queen Mary and her assets. In the past volunteers have assisted in the inventory and housing of art and artifacts in storage on deck levels "C", "D", "E" and "F".

Recommended Future Actions:

The City and ship's operator should determine if there is an appropriate and role for volunteer presence on the RMS Queen Mary to support conservation and preservation goals. If volunteer presence is determined to be feasible and would be desirable to assist in meeting conservation and preservation goals, the Ship's Operator should develop a volunteer recruitment program which identifies volunteers with desirable skills and relevant experience, offers appropriate training and supervision as well as recognition of their contributions.

K. COLLECTION INFORMATION MANAGEMENT

The existing collection information system shall be expanded for comprehensive collection information management.

Recommended Future Actions:

Build upon the existing inventories and purchase a system such as PastPerfect Museum software, to fully document all information about the ship and her valuable assets, art and artifacts, aggregating full descriptions, condition documentation, treatment reports, assigned values, locations, use and movement of objects, and legal status of gifts into relational database. Provide staff training and implement fully into day-to-day collection management activities.

L. REVENUE GENERATION

The cost of maintaining and preserving the RMS Queen Mary and her valuable assets, art and artifacts is primarily dependent upon revenues generated from hotel occupancy, conference and event hosting, tours and special events and retail shop rental.

Recommended Future Actions:

Develop and increase sustainable sources of revenue from multi-faceted strategies including expanded programs and attraction development.

Incorporate these strategies in long term strategic planning and annual budget projections to adequately provide for basic maintenance and to support further conservation and preservation activities of the ship and her assets.

M. ATTRACTION DEVELOPMENT

Attraction development and operations are managed by the ship's operator under lease and operating agreements with the City. Economic conditions coupled with serial changes in third party involvement have restrained attraction development.

Recommended Future Actions:

Attraction development including all services and programs need be aligned with the mission and vision statements. Frequent assessment of existing and potential services and programs enable effective and innovative development.

All development must comply with city, county, state and federal laws and regulations applicable to the RMS Queen Mary's historic status.

N. COLLABORATIVE RELATIONSHIPS

The City has the experience and capacity to build collaborative relationships with other similar for-profit, non-profit and public organizations, and is currently exploring beneficial relationships for the conservation and preservation of the Queen Mary and her historic assets. The ship's operator should also review and develop possible collaborative relationships in partnership with the City.

Recommended Future Actions:

Build and maintain strong, long term and mutually beneficial collaborative relationships with similar for-profit, non-profit and public organizations including other historic hotel, maritime history, museum and preservation organizations.

Develop partnerships with agencies such as the National Park Service and/or California Department of Parks and Recreation to develop and implement the preservation master plan over a four or five-year period.

O. FUNDRAISING AND DEVELOPMENT

The scope and unique challenges of maintaining and preserving the RMS Queen Mary are daunting, nonetheless, her beauty and renown provides a wonderful opportunity for fundraising and development. Absence of budget surplus and revenues results in limited ability for the City and/or third party (ship's operator) to use budgeting as an operational tool for preservation planning.

Recommended Future Actions:

Develop fundraising activities including solicitation of monetary contributions, and requests for donations from individuals, businesses, charitable foundations dedicated to the preservation of the RMS Queen Mary.

Expand fundraising activities to include: evaluating future financial needs for preservation and conservation goals; creating a long-range fundraising plan and updating it yearly; instituting a public-relations program; maintaining fundraising records; researching and writing grants; reporting to foundations or large donors on specific projects; and visiting major donors. These activities are ideally overseen by a highly experienced development director on staff or paid consultant.

Preservation and conservation projects are developed in accordance with universally agreed upon priorities and compliance with National Historic Preservation Act and California Environmental Quality Act laws and Secretary of the Interior's Standards.

2.0 CONCLUSIONS AND RECOMMENDATIONS

A. COLLECTION MANAGEMENT POLICIES

1. Purpose

Adoption and implementation of Collection Management Policies (Policy) is vital for successful preservation management and protection of the valuable assets of the RMS Queen Mary as well as preserving her status as a historic property listed in the National Register of Historic Places. The Policy will be consistent with the mission of the RMS Queen Mary and reflect the highest preservation and conservation standards and applicable laws.

In accordance with preservation and conservation standards for collection management, the RMS Queen Mary should maintain accurate, up-to-date records on the identification, location and condition of all objects in the collection in addition to establishing preservation policies for the management of hospitality and special event activities, tours and exhibitions.

Written policies provide guidelines for all aspects of preservation management by ensuring valuable art and artifacts are inventoried, accounted for, locatable and legal ownership documented. Additionally these policies establish guidelines for:

- protecting, securing, caring for the ship and her valuable assets
- addressing preservation needs during ongoing for-profit activities and special events
- provide the basis professional development and preservation education for existing and new management staff and tenants.

Collections Management Policy consists of written policies regarding:

- Acquisitions
- Condition Documentation
- Access
- De-accession
- Receipt of Object(s) as gifts (legal ownership established)
- Visitor Awareness
- Light Levels
- Decoration and Floral
- Commercial Filming
- Special Events
- Housekeeping
- Integrated Pest Management
- Risk Management

2. Use

The Preservation Management Team will review provided sample policies, make necessary changes, adopt and distribute a written manual for RMS Queen Mary Collection Management Policy that can be referenced and used for staff education.

Ship Operator will undertake educational training and make copies of the Collection Management Policy available for staff that is responsible for maintenance, repair and care of the ship's valuable assets and artifacts.

Prior to beginning any preservation or conservation projects, the Collections Management Policy need to be in place as guidelines for how to protect and care for the RMS Queen Mary, her art and artifacts during the project. Development of future preservation and conservation projects will follow the policy and practices.

3. Collections Management Sample Policies

The following are samples of various policies which should reviewed, adapted and aligned with existing policies and practices. The various policies and intention of each policy as written should be retained and implemented for the long term preservation of the ship.

After the policies and suggested procedures are reviewed, adopted and they will be brought together in a manual that can be referenced and used for staff education. The policies will ensure consistent practices through administrative and staff changes. It is important that the manual reflect actual operating practices, be usable by anyone, and be short and easy to read. New staff members should be able to understand how to locate, handle and relocate objects easily in a short amount of time in accordance with the guidelines; if this is not possible, improvement is still needed.

A. Acquisition Policy

This collections management policy purposely omits any mention of acquisition policy, that is, what objects should be actively collected by the city or the ship staff, as active acquisitions are not being pursued at this time. If, at some time in the future, there is interest in and capacity for collecting Queen Mary related materials, an acquisition policy should be written and observed.

B. Condition Reporting

A condition report should be completed for each object to provide a baseline against which future examinations can be compared. The condition report is entered into the collections information management database. The following should be included in the condition report form:

- Unique identification number
- Object type and subtype
- Object description
- Measurement
- Materials of manufacture
- Description of condition

- damages (physical impact, chemical, light exposure, biological, presence of contaminants such as dust, foreign substances)
- extent of damage (minor, moderate, major, extreme)
- location of damage on object
- Examiner's name and date of examination

C. Access to Art and Artifacts in Storage or on Exhibit

Moveable artifacts, particularly those currently in storage on "C", "D" and "F" decks are vulnerable to misplacement or theft. Internal security measures should be discussed and controls for access determined within the context of the ship's operations based on patterns of use. The following should be considered:

- Designating key personnel who are authorized to access storage areas such as a staff member who functions as asset manager, and a staff member requiring access for emergencies
- Controlling access to keys to the storage area in a centrally stored location, checked in and out with signatures and dates
- Inspecting bags, purses, workmen's tool kits and equipment packages or boxes upon leaving storage areas
- A collections manager or other responsible staff member should accompany contracted workers when in collection storage. If not, then inspection of bags and packages should be rigidly enforced.
- Requirements of the insurer for protecting assets should be determined.

D. De-accessioning

The term "de-accession" refers to procedures to follow when objects which are removed from a collection or property and considered for legal disposal by sale or exchange. The criteria for determining whether an object should be de-accessioned include, but are not limited to, the following:

- The object is not relevant to the mission of the ship.
- The object lacks sufficient historical importance to warrant retention.
- The owner is unable to preserve the object in a responsible manner.
- The object is unduly difficult or impossible to care for or store properly.

A candidate for objects to be de-accessioned, for example, may be the ship models found in Archives or Library; not original to the ship, they are not stored properly and may not be relevant to the mission or history of the RMS Queen Mary. Additional this policy will provide guidelines for handling unsolicited and unwanted gifts.

E. Receipt of Objects(s) as Gifts

Many artifacts originally on board the RMS Queen Mary are in possession of private individuals and business owners. Communication with veteran staff indicates that artifacts are returned to the RMS Queen Mary every year. A policy needs to be implemented to legally and ethically acknowledge receipt and transfer ownership.

Gift agreements are typically deeds of conveyance which would transfer ownership of objects(s) to the City of Long Beach.

A triplicate receipt form should be designed, with one copy kept by the City of Long Beach, one copy kept on board and one retained by the donor.

The form should contain the following information:

- Name, address and contact information of owner of object(s)
- Name of staff member to receive object(s)
- Date object (s) received
- How the object(s) was received (mail, personal delivery, etc.)
- Description of object(s) to be accepted including type of object(s), materials, dimensions, artist or origin and date of manufacture
- Unique accession number assigned
- Express of intent to donate
- Language waiving all right of ownership
- Language indicating the person giving the object(s) has the legal authority to give the object(s)
- Language that the gift is unrestricted and not subject to future transfer of ownership
- Language confirming the donor has not received goods or service for the donation
- Language acknowledging acceptance of the gift
- Signature and date of signing from donor
- Signature and date of signing from City of Long Beach authorized representative.

The United States tax code changes frequently, however it is the donor's responsibility to circulate an Internal Revenue Service Form 8283 "Noncash Charitable Contributions" acknowledging object(s) have been gifted. If a form is completed in association with the receipt of any object(s), a copy of the form should be kept in the collection files.

It is recommended that the City research this process to assure compliance with current tax code requirements for receipts of objects(s) as gifts.

F. Visitor Awareness

We highly recommend creating a visitor friendly, but explicit, policy reminding visitors and guests of the unique, fragile nature of the RMS Queen and her valuable assets, art and artifacts. They should be made to feel part of her preservation. There also may be a need to assess a fee for damages in rooms to furniture and veneers, etc. This would require close inspection of the condition of assets in the rooms before and after visitor stays. This would assist in reducing overall conservation costs of accumulated damages to the assets.

For example:

> "Thank you for choosing to stay aboard the RMS Queen Mary. We hope you appreciate the original furnishing in your room and aboard ship. Please treat them gently so future generations may enjoy her beauty as well."

G. Light Levels

Ultraviolet radiation does not enhance visitor experience, and is irreversibly damaging to organic materials so the sources of UV light should be eliminated or filtered to the fullest extent possible.

Daylight has the highest concentration of UV radiation, so filters should be applied to windows and portholes to absorb the UV radiation. Filters can be purchased as self-adhesive plastic films that can be removed when exhausted.

Unfiltered daylight should never be allowed to shine on an object. Control light levels with wattage, filters, shades and blinds. It may be necessary to use dark blinds that are not historic to the ship, which should be compatible in design and materials.

Doors should be kept closed. If necessary, create signage inviting visitors in to enter. The signage should be non-invasive, compatible and easily removable when installed on historic doors or walls.

Many energy saving CFLs emit UV radiation, but UV-safe models are available, and should be used near the art and artifacts. UV absorbing covers and sleeves such as 3M Scotch Shield or 3M Scotch Solar Control are very effective and readily available.

Exhibits should only be lit during public hours.

Length of time, type of illumination and location of exhibition or display should be documented in the collection management database.

All sensitive objects such as paper-based artifacts, photographs and textiles should be stored in dark rooms or light proof cabinets or containers. These types of objects should be exhibited for limited light periods then rotated off display. Objects which may be the last remaining examples should be not exhibited. Whenever possible, place objects further away from light sources.

Typical office light levels are too high; do not display original objects in offices for extended periods of time. Paper-based artifacts should be displayed for two to three months and not returned to display for two to three years.

Professional photographers' tungsten-halogen lights are very hot and emit a significant amount of UV radiation. Sleeves cannot be used on these light sources, but the Policy will require light sources to be placed as far away as possible for the shortest length of time possible.

H. Decoration and Floral

The following is an example of communication of a policy to a sub-lessee, event-holders, and brides-to-be aboard the ship:

> "Thank you for choosing to have your event aboard the Queen Mary. The Queen Mary is a beautiful historic ship, and many of the woods and decorations you see are unique to the ship and not available any more. The staff of the Queen Mary requests that you observe the following rules when planning decorations for your special day."

No scotch tape on wall surfaces, valuable assets, art or artifacts. Absolutely no nails, screws, stick pins, staples or thumbtacks are allowed.

No masking or duct tape on any surfaces. The only tape allowed is painter's tape which must be totally removed at the end of the event.

Fountains and/or buckets, tubs or pools of water are not approved for use on board.

Objects hung from or put on or in the ceiling must be pre-approved by Queen Mary Staff.

Decorations may not be hung from light fixtures.

Glitter or confetti, in any form such as rice or bird seed, is absolutely prohibited. Its use will result in additional charges and loss of future use of facilities.

Decorating must be done within the scheduled use time and all decorations must be removed from the building by the sponsor (host) immediately following the event. If not, labor charges will be assessed for removal and destruction.

All groups will be liable for damage caused by installation and use of decorations.

Decorations cannot impede traffic flow nor obstruct entrances and exits.

Decorations, flammables and candles must meet fire code.

Use of florist putty or other types of putty is prohibited.

Trash must be placed into designated receptacles only. Additional bags may be provided by Queen Mary staff. Crew is expected to bag all trash before leaving the site. A Queen Mary representative will show you where to leave closed bags.

I. Commercial Filming

In addition to the contractual agreements, fee schedules and insurance requirements, the following should be considered for the protection of the valuable assets, art and artifacts:

RMS Queen Mary reserves the right to approve or deny any project based on content of the overall project or the specific scenes proposed for shooting.

We require the submission of a Project Request letter describing the project, proposed schedule, number of production units and total personnel, proposed ship locations and how many scenes will be shot.

Once you receive approval, any and all scene additions and changes must have prior approval.

Objects of any type cannot be touched or moved without prior permission and assistance from RMS Queen Mary staff or its designated contract labor. Film crew personnel are not authorized to touch or move artifacts on their own. The production company is financially liable for any damage to valuable assets, art or artifacts during scouting, set up, filming and clean-up.

Any movement or re-arrangement objects will be made and supervised by RMS Queen Mary staff or designated contract labor and must take place before a shoot begins.

The RMS Queen Mary provides security for all shoots. Depending on times, size and length of shoot, contract personnel may be required. The Queen Mary will arrange for coverage and include any fees in the total charges to the professional company.

No props or photographic apparatus including lighting fixtures, clamps, cabling, light screens, adhesive tapes or any other attachments can be placed on or around valuable assets, art or artifacts without prior approval and assistance from the Queen Mary staff or its designated contract labor.

Crew and cast are not authorized to lean, sit, climb or stand on any valuable assets or artifacts at any time.

Smoking is permitted in designated areas only.

All food and beverages must be kept away from valuable assets, art and artifacts at all times. Catering set-ups must be pre-approved.

Trash must be placed into designated receptacles only. Additional bags may be provided by Queen Mary staff. Crew is expected to bag all trash before leaving the site.

J. Special Events

The RMS Queen Mary is a nationally designated historic property and prohibits the use of the ship for any activity that the Queen Mary determines will diminish or negatively impact the ship's mission, image, or reputation.

The RMS Queen Mary is a smoke-free environment. Smoking is only permitted in designated outside areas.

Security for events must be planned to include protection of valuable assets, art and artifacts.

The RMS Queen Mary reserves the right to monitor and control all private events, including the right to inspect impact to valuable assets, art and artifacts.

K. Guidelines for Handling Art and Artifacts

- Treat every work of art or artifact as if it were the most important item on the ship.
- Handle art, artifacts and valuable assets as little as possible.
- Always wash your hands before handling art or artifacts.
- Avoid or reduce handling of organic art and artifacts with bare hands. This includes wood, metals, textiles, books, paper, photographs and paintings. Damp, dirty hands result in permanent damage.
- Wear clean cotton gloves when handling sensitive materials.
- Understand exactly where and how an object is to be moved before moving it. Be aware of any vulnerability of the object or materials involved. Examine the object carefully before handling or moving.
- Check whether an object has loose or moving parts before handling. If these parts are designed to be removed for transport, separate them. Otherwise, secure them so they will not be damaged during moving.

- Never be embarrassed to say an object is too large or too heavy. Unless one person can easily and without hesitation manage both the size and weight of an object, two people must handle it.
- Never walk backwards near art or valuable assets. Always be aware of your surroundings and proximity to art or artifacts and obstacles in pathways.
- Take your time. Move slowly when carrying objects or pushing carts carrying objects.
- Handle only one object at a time, no matter how small. Use both hands in carrying.
- Never drag or pull art, artifacts or furniture off shelves or across floors.
- Pad, pack or otherwise secure any object before moving or relocating.
- Never discard packing materials until having thoroughly searched them for small art or fragments that may have dropped off in transit.
- Never leave art or artifacts sitting directly on the floor.
- Avoid direct contact with mats on prints, drawings and watercolors.
- Never use any kind of self-adhesive tape near art-work.
- Use pencils around art and artifacts.
- Document all movement of art and artifacts using Art and Artifact Tracking Form and update Collection Information Management Database.

L. Housekeeping

As a general rule, antique furniture and fixtures should be handled as little as possible.

If furniture or artifacts must be moved, use two people, and never drag the object across the floor as parts can loosen or become detached.

Before lifting, examine the object carefully to determine if the whole piece is intact; shut any drawers and tie movable parts in place with cotton twill tape if necessary.

Never trust the handle on an object, even if the handle was originally designed for lifting.

The surface finish on furniture should only need a light dusting with a clean, dry duster to be kept clean and dust free. Dust should be collected and merely moved off into the environment.

Never use feather dusters, as they cannot be washed and the feathers break and scratch surfaces.

Take care when dusting furniture with missing veneer or molding, as the areas adjacent to the damage are often loose and can be further damaged.

Be careful to not scratch the legs and bases of the furniture when vacuuming. Pad the edge of the vacuum to create a soft bumper then inspect and replace the bumper as needed regularly.

Similarly, avoid the legs and bases of the furniture when mopping.

Wax polish should only be used once or twice a year, at most. Wax polish, if used, should be used sparingly, and rubbed thoroughly. Polish can build-up over time, so it should be applied sparingly and evenly with a

clean, soft cloth. Applied heavily, the solvent in the wax polish can evaporate causing the finish to streak and become dull. Accumulated layers of wax polish are difficult to reduce without causing damage. Never use spray waxes; repeated use can leave a milky appearance that cannot be removed

If windows or portholes are opened for ventilation, close them daily; this will protect against further dust, insects and light.

As wood ages, any adjacent metal ages simultaneously.

Never use a metal cleaner on the metal fittings adjacent to finished wood; the smears from the metal cleaner are difficult to remove from the wood without expensive professional help.

Never clean or condition leather on furniture.

Never attempt to reattach broken pieces back to the furniture. Carefully note where it came from: the piece of furniture and its inventory number, where it is located, where the damage is located, and the date the damage was discovered, and place in a bag for a professional furniture conservator to replace.

Gilded surfaces, such as "Battle of the Unicorns" should only be dusted with soft duster. Do not use with chemical cleaning products on these surfaces.

Decorative metal should be lightly dusted once or twice a year with a soft natural-bristle brush, taking care not to scratch any surfaces. Deeper cleaning should be unnecessary, except by a professional conservator.

Never touch a painting. If work above a painting must occur, protect the painting by draping a protective barrier layer over it without allowing the barrier material to touch the painting surface.

If a painting becomes damaged, either splashed with liquids (including paint), is soiled, torn or punctured, resist the urge to touch the surface. Call a paintings conservator.

Vacuum the walls and cornices once a year. Care should be taken that dust does not fall on paintings and art below. Inspect for nail holes in the wall veneers at that time, and consider filling them with small amounts of a sympathetic resin. Consult a wood conservator for appropriate repair methods.

Treat polished veneers on walls, floors and ceilings the same way as furniture veneers, above. Remember that many of the woods aboard the ship are extinct.

M. Integrated Pest Management

Integrated Pest Management is a strategy of controlling biological infestations by non-chemical means, by creating an unfriendly environment for pests. Chemical treatments are only used in situations threatening art and artifacts or when pests fail to succumb to more conservative methods.

All work areas, including kitchens, must be kept scrupulously clean. Some pests are attracted to human food waste. Others consume art and artifacts, such as wool and wood. Some insects may not create a danger to the ship, feeding on materials such as human dander, but these insects attract pests that feed on them and the valuable assets and artifacts. Eliminate sources of human food and standing water.

Pest entry routes must be eliminated. Close doors and windows. Vents, air ducts and portholes should be screened. Cracks and crevices should be repaired. Storage boxes, if recycled and non-archival, should be isolated and checked for infestation.

Many insects thrive in high humidity. As climate control throughout the ship is not feasible, it is important to monitor for the presence of insects with motel-type sticky traps throughout the ship. Routinely collect and replace the traps, and count the number, type of insects, their stage of growth, and when and where they were collected. In this manner, infestations can be detected early and damage to collections prevented, often without using chemicals and improving monitoring and housekeeping.

Bio-fouling should be removed as soon as found to discourage continued activity.

Continually review pest management practices with contracted vendor to learn of problem areas and provide necessary remedy to avoid ongoing infestation.

B. COLLECTIONS INFORMATION MANAGEMENT FOR THE RMS QUEEN MARY

1. Collection Information Management Recommendations

The goal of collections information management is to standardize, protect, and efficiently harness vital information relating to objects, people, transactions, procedures, and events related to the asset preservation and management activities of any cultural heritage institution or site. As such, the choice of which software to employ in the pursuit of this goal should be of great priority to all parties involved in the decision-making process.

In order to inform this decision, it is important to realize that a collections management system, usually in the form of a relational database, is much more than the individual data components that populate that system. Databases are structured to not just record the individual components of a representative object (such as item type, item number, materials, etc.), but are also tasked to model the object/asset-related management procedures of the parent institution, and to provide tools to make those procedures more efficient, secure, and standardized.

The RMS Queen Mary is positively positioned with the current and developing inventory that captures many of the critical object data elements that would become part of any future system, but it would be wise to consider the benefits of employing a system that would also enable the efficient management of those objects within the context of broader institutional activities.

Since the object-related business procedures of cultural heritage institutions tend to overlap, there are a number of commercial systems that are available that could be configured to the particulars of the RMS Queen Mary's organizational requirements.

Alternatively, a custom built option could also be investigated. Both of these options will be explored below after a more nuanced presentation of some of the more general benefits of employing a more robust business procedure-oriented database system.

Relational databases form the informational backbone for all types of institutions and corporations. They are powerful because they not only store information, but they also include tools that allow an organization to protect that information and to harness it for institutional use in an efficient and granularized manner.

Robust organizational databases, irrespective of the institutional context, should all offer a number of standard functionalities.

- Security in the form of roles definition and password protection. Not all individuals employed by an organization should have access to all levels of information in the database. An individual's permissions within the database should only reflect the job functions of that individual. This is especially important when dealing with valuable objects which should only be accessible to particular people, and when it is necessary to keep robust records of object movement (e.g., who moved it, where was it moved to, where was it moved from, date of movement, etc.).
- Backup utilities that protect data in case of system failure. This should include the flexibility to backup to a variety of media, as well as built-in reminders.
- System utilities that allow for global updates, importing, exporting options that include a variety of metadata and software formats, backup restorations, re-indexing of data, and system upgrades.
- Reporting tools that allow you to translate data into customizable designed documents that are human-readable.

Beyond these standard functions, the collections management system of a cultural heritage institution should offer a host of functions and tools that are specifically designed to reflect that institution's activities. Relatively inexpensive software is available that offer a number of very valuable tools:

- The option to robustly catalog in standardized and genre specific data fields a wide variety of objects, be they two-dimensional or three-dimensional, photos, archival materials, books, etc.
- Controlled vocabularies and nomenclatures that conform to field-wide standards for indexing and classification.
- Accessioning, de-accessioning, and temporary custody utilities.
- Exhibit information.
- Research utilities that facilitate system-use by third party scholars, historians, etc.
- Fundraising campaign and pledge information utilities.
- Virtual exhibit utilities that allow for the publishing of object information, images, and associated content on publicly accessible websites.
- Barcode or RFID integration.

While it is technically possible to recreate the above functionalities in a program like Microsoft Access or Filemaker Pro, it is technically challenging and most likely financially prohibitive. Such an attempt would require many hours of highly paid programming consultant work, and in the end the institution would be left with a largely untested and possibly unreliable system. Given the previously demonstrated importance of such a system, this route is of questionable value. As mentioned, there do exist a number of widely-implemented systems worth exploring, including PastPerfect 5.0 and Willo's MimsyXG, to name only two. These types of systems are tested and technically supported. A number of institutions in the Greater Los Angeles area employ these systems, and it would be worthwhile to visit these institutions in order to view firsthand their use and functions. This route would require an initial, investment in a consultant to set up and populate the system and to establish procedures for its future use.

2. Tracking Artifact Movement Policy and Form

Currently there is no established policy or practice in place for tracking and documenting the movement of artifacts from one location another on board the ship.

Artifacts in storage and in hotel rooms are moved and rotated in and out of use as they are damaged or deteriorated. These movements and the reasons for the movements need to be tracked and documented.

If the problems of inadequate primary housing and dangerous overcrowding in artifact storage areas are to be relieved it will be necessary to document the movement and new locations.

The collection information management database will provide a central location for the documentation to be permanently stored. However, it is likely that artifacts will continue to be moved and relocated before this database can be implemented.

There needs to be a system which can be readily implemented now. The simplest form of tracking is to design a form and have this form printed in triplicate format. One copy is of the form is placed where the artifact(s) were located (small file box to be kept in storage areas); one copy to be placed in files in archive storage (small box for original copy) and the third copy to City. Artifact movement needs to be entered into the collection information management database or temporary log book until system is implemented.

The following form may be reproduced for immediate implementation of tracking and documentation:

Artifact Movement Tracking Record on the RMS Queen Mary

Inventory number of object if there is one already assigned:
Description of artifact(s) by type and materials:
Location artifact(s) is being moved from:
Location artifact(s) is being moved to:
Who moved the artifact(s):
Date movement:
Purpose of the movement:
Describe any damages or conditions briefly:
Photograph taken no yes

3. Process for Labeling and Marking Artifacts with Unique Identification Numbers

Each individual art or artifact must be assigned a unique number referred to as the Accession Number. The number needs to be physically associated with the objects. There are several different methods for marking and labeling objects and artifacts.

Until the collection information management database is established and functional, unique accession numbers cannot be comprehensively established. Therefore labeling and marking objects and artifacts must be part of a larger collection surveys and registration projects which fundraising from grants or donations to accomplish.

In the mean time is it important to leave all existing labels and descriptions in place. The existing white paper labels have adhesive on the reverse which is subject to failure and may easily become disassociated from the artifact. Care should be taken to prevent this from occurring.

Individual numbers are currently associated with fine and decorative art and artifacts in the Access Inventory database. Until a formal registration system can be developed, it is important to reference the inventory numbers with any art or artifact that are relocated or re-housed using an Art or Artifact Movement and Tracking triplicate form.

4. Art and Artifact Condition Documentation Form

ART or ARTIFACT OBJECT CONDITION DOCUMENTATION	
Date:	*Object:*
Examined by:	*Inventory or accession #*
Materials of manufacture:	
Storage location:	*Storage description:*
Purpose for handling or movement:	

CURRENT METHOD OF STORAGE:

- ❑ *Flat*
- ❑ *Upright*
- ❑ *On Side*
- ❑ *On rigid support (type)*
- ❑ *Boxed*
- ❑ *Rolled*
- ❑ *Folded*
- ❑ *Framed*
- ❑ *Bagged in plastic*
- ❑ *Stacked*
- ❑ *Hanging_____*
- ❑ *In contact with acidic paper/board*
- ❑ *Bagged in paper*
- ❑ *Other:*

NOTES:

STRUCTURAL CONDITION: ❑ *Intact overall, stable* ❑ *Weak/insecure (__minor __major)* ❑ *Unstable for handling/moving* ❑ *Insect damage* ❑ *Breaks/tears* ❑ *Losses/holes*	❑ *Splitting/cracking* ❑ *Separating/detached elements* ❑ *Missing elements/parts* ❑ *Unstable repairs* ❑ *Desiccated / brittle* ❑ *Compression/stress/abrasion of materials due to storage*
SURFACE CONDITION: ❑ *Fungal growth* ❑ *Corrosion/tarnish or rust* ❑ *Insect damage* ❑ *Accumulated dirt/dust* ❑ *Discolored/yellowed* ❑ *Soiled/stained*	❑ *Faded* ❑ *Dented* ❑ *Warped/distorted* ❑ *Creased/wrinkled* ❑ *Abraded* ❑ *Scratched* *Other:*

PREVIOUS REPAIRS:

- ❑ Sewn
- ❑ Glued
- ❑ Backing
- ❑ Additions
- ❑ Other

MISSING PARTS:

CONSERVATION PRIORITY: [ ] **1** Critical condition [ ] **2** Poor condition [ ] **3** Fair condition [ ] **4** Good condition

RECOMMENDED STORAGE IMPROVEMENT/TREATMENT

- ❑ *No attention or treatment required*
- ❑ *More extensive examination needed*
- ❑ *Immediate attention needed*
- ❑ *Needs storage mount/support*
  Type:

- ❑ *Improve storage materials/support*
- ❑ *Rigid support board*
- ❑ *Cushioning or padding materials*
- ❑ *Dust protector*
- ❑ *Store: [ ] flat [ ] rolled [ ] padded*
  [ ] boxed [ ] other:
- ❑ *Requires regular inspection*

SPECIAL HANDLING INSTRUCTIONS:

[ ] Recorded in collection information management database ***Date:***

C. RISK MANAGEMENT

1. Ten Agents of Deterioration Which Directly Impact the Ship, Art and Artifacts

Maritime and museum conservators have identified ten universal agents that cause maritime vessels, art and artifacts to deteriorate. Identifying and analyzing exposure to and impact from any of the agents help to understand why deterioration occurs and suggest how to eliminate or mitigate risks to maritime vessels, art and artifacts.

A. Custodial Neglect:

Custodial neglect occurs when there is inadequate collection management including thorough housekeeping and routine inspections for pests, mold, and accumulation of contaminants. Most custodial neglect is benign or inadvertent until identified as a threat. The causes of custodial neglect stem from insufficient staffing combined with lack of knowledge or experience with preservation and conservation practices and standards. This risk is amplified by lack of funds for hiring additional qualified staff and educating current and new staff.

Custodial neglect includes lack of system and practices for collection and information management, loss of data and historical information, misplacement of objects, disassembling artifacts for storage or replacement parts.

B. Direct Physical Force:

Any property or object can be damaged or destroyed by forces such as scraping, abrading, dropping, tearing or wearing down from repeated exposure or impact. It is not possible to completely avoid all direct physical force uniformly. It is important to minimize the impact of unavoidable direct physical force, prevent avoidable impact and mitigate the effects as possible.

C. Light and UV radiation:

Light is everywhere and is necessary for us to see, but bright intense light is not necessary. Visible light and ultraviolet radiation (UV) affect most materials and causes damage that ranges from fading and discoloration, to embrittlement and disintegration. Light damage is cumulative; repeated exposure to strong light, sunlight, flashbulbs, spot lights, has an additive effect, causing as much damage to an artifact as extended exposure. Light damage is irreversible.

D. Water:

The ocean is a hostile environment for a metal ship which is highly electrified and susceptible to corrosion. Any seaside property is vulnerable to natural disaster. Ships, like buildings, develop leaks due to structural deficiencies or conditions. Plumbing systems periodically fail. The effects of water exposure can be irreversible and are very costly to remedy or reverse.

E. Temperature:

High temperatures promote and accelerate unwanted chemical reactions resulting in deterioration or loss. For every 18 degrees Fahrenheit temperature is elevated, the rate of chemical reaction doubles. Cold temperatures can also damage materials such as leather and plastics.

F. Humidity:

Incorrect and fluctuating relative humidity levels will adversely affect all materials. If too damp, substrates can soften, wood can delaminate, and iron can corrode. Mold and fungi growth can occur. If humidity is too low, organic materials such as leather, wood and textiles can become embrittled and crack or rupture. Repetitive fluctuations of humidity will cause different materials to expand and contract at different rates, resulting accelerated deterioration or loss.

G. Pests:

Infestation and resulting damage from insects, birds, rodents, mammals, mold or fungi happens when there is inadequate collection management including thorough housekeeping and routine inspections for pests, mold, and accumulation of contaminants.

H. Contaminants:

Gaseous pollutants such as sulphur dioxide, nitrogen dioxide, peroxide, carbon monoxide, formaldehyde, and ozone combine with moisture in the air to form acids that catalyze harmful chemical reactions in all types of materials. Particulate pollutants such as soot, dirt and dust, abrade, soil, and disfigure materials. Dust and dirt also contain gases absorbed from the atmosphere. Particulates can also support mold growth.

I. Theft or Vandalism:

Incidents of vandalism such as graffiti, isolated theft or robbery are more likely to occur and go unnoticed when environs do not appear well-maintained or if security measures are not evident.

J. Fire:

Fire is a chemical change, causing one material to metamorphose into another. Unlike all the other agents of deterioration, fire can completely destroy property and valuable assets, often in minutes. Associated with fire incidents are increased damage from smoke, soot and emergency response in the form of physical impact and exposure to fire retardants.

2. How the Ten Agents of Deterioration Affect the RMS Queen Mary, Her Valuable Assets, Decorative and Fine Art and Artifacts

Frequency of Exposure	Agent of Deterioration	Examples	Ultimate Consequences
Most Frequent ▲	1. Custodial Neglect	Collection abandonment, failure to ensure stewardship, access	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	2. Direct Physical Force	Poor handling, dropping, abrasion	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	3. Light	Fading colors, structural damage	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	4. Water	Hostile ocean environment; Roof leaks, plumbing leaks, flood	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	5. Temperature	Fragility, chemical reactions	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	6. Relative Humidity	Damp, mold, corrosion	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	7. Pests	Insects, rodents, birds	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	8. Contaminants	Dust, soot, smog, lead paint flakes	Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
	9.Thieves/Vandals	Isolated petty theft, tagging	Loss; Loss of Value, Historic Character, Appearance and Escalating Cost of Preservation
▼ Least Frequent	10. Fire	Fire, associated smoke/water damage	Loss of Value, Historic Character, Appearance and Cost of Preservation

3. Objectives of Risk Management:

- Identify all risks and assess of the potential severity of all risks
- Identify strategies to eliminate or mitigate risk factors including costs and benefits of each strategy

- Prioritize strategies to develop a comprehensive risk management plan
- Periodically evaluate, revise and modify strategies
- Determine the percentage of assets susceptible to specific risks
- Estimate potential loss in use and value from potential threats
- Maintain up-to-date, accurate inventory of valuable assets
- Appraise and adequately insure valuable assets.

4. Principle Strategies for Mitigating Risks

Strategies for mitigating risks to the vessel, art and artifacts:

- Avoid the cause of exposure
- Block exposure to the agent
- Detect/monitor the effects of the agent
- Respond to and mitigate damage from the agent
- Recover from the problem or treat the result of the problem.

5. Rankings of Frequency and Severity of Risks

	Rare	Sporadic	Occasional	Constant
Catastrophic	1			
Severe		2		
Moderate			3	
Gradual				4

6. Ranking of Risks to Ship and Her Assets

Agents of Deterioration	Risk Factors	To Ship	To Built-ins	To Artifacts
Custodial Neglect	Lack of guidelines and training for handling and housekeeping	4	4	4
	Lack of Preservation Management Plan or Policies	4	4	4
Direct Physical Force	Collapse of part/whole of ship, earthquake, tsunami	1	1	1
	Poor handling, dropping, abrasion, vibration	4	3	3
Light/UV Radiation	Fading colors, structural damage	4	4	4
Water	Combination of metals, electricity and seawater	1	1	1
	Roof leaks	3	3	3
	Plumbing leaks	3	3	3
Temperature	Fluctuations of temperatures result in chemical reactions	1	1	1
	Biological activity	4	4	
Humidity	Elevated levels result in corrosion	4	4	4
	Biological activity	4	4	4
Pests	Insects, rodents, birds	2	2	2
	Bacteria, mold	2	2	2
Contaminants	Dust, smog, lead paint flakes	4	4	4
Theft and Vandalism	Professional theft / inside theft	n/a	1	2
	Vandalism/Isolated theft	3	2	2
Fire	Soot, smoke or total loss	1	1	1

7. Brief Summary of Steps to Mitigate Risks to RMS Queen Mary by Category of Risk

A. Custodial Neglect

It is understood that the RMS Queen Mary is a for profit business; however, as the ship is a nationally designated historic property, certain standards for care must be observed. Evidence of these standards of care enhances the visitor experience, as well as ensures the longevity of the ship and her assets.

Continually educate staff and management regarding the importance and rarity of the materials aboard ship is very important.

Materials can be protected by learning about the proper ways to clean and repair them, and how to balance use of these items with the desire to preserve them for the future.

Art and artifacts in storage, they should not be neglected, but inspected routinely for signs of mold, mildew, pests, and other possible damage.

Upgrade storage conditions and housing of art and artifacts as preventative measure.

Recover from severe damage to lifeboats through rehabilitation, restoration or replacement.

Linoleum becomes pitted and abraded from exposure to alkalis found in cleaning agents (such as ammonia) which softens the linseed oil, and destroys the cork compound. Linoleum should be damp mopped with a very small amount of neutral pH soap. Avoid abrasive and high-alkali cleaners such as bleach and scouring powders, because they will damage the surface of the flooring. After damp mopping, dry mop the flooring to remove excess water.

B. Direct Physical Forces

The RMS Queen Mary's art and artifacts are vulnerable to ongoing, cumulative damage from direct forces actions.

Direct force damages result from bumping, gouging, scraping, dragging, stacking during routine housekeeping, movement of artifacts, movement of event furniture, large event attendance, guided tours and the shipwalk tours.

Create protective barriers for built-in's during special events.

Handle and move objects and artifacts as little as possible.

Remedy trip hazards such as lifting linoleum.

Communicate to guests and visitors the necessity of gentle use in the special environment of the ship.

Adopt housekeeping policies and widely publish expectations.

Train housekeeping staff to avoid damages during cleaning such as impact from vacuum attachments and abrasive cleaners.

C. Light and UV Radiation

Light damage is cumulative and irreversible. The Queen Mary by design has many sources of light both natural and artificial.

Light is most damaging to textiles and paper. Exhibit them in low light levels and/or limited period of time, rotating them with similar objects. With documents, consider creating reproductions with color copies, which can be left indefinitely.

Reduce artifacts' exposure time to light by turning off lights when the institution is closed, or using motion detectors in exhibit areas.

To protect built-in assets, portholes and skylights should be covered with UV reducing film and doors should be closed or screened.

Objects should be moved further away from strong sources of light. If sources of light cannot be moved, consider pointing them away from artifacts to light them indirectly.

Avoid 'case burn' when one side of an artifact is faded, while the other side is fresh and new. Change out artifacts in cases one every six months, or rotate them so that they age evenly and less perceptibly.

If fluorescent tubes are used in an area, UV reducing sleeves should can be purchased, installed and replaced when exhausted.

D. Water

The RMS Queen Mary should not leak. A steel ship requires constant maintenance to combat leaks. The number of man-hours required to combat the visitor inconvenience and associated damage is perhaps equal to and possibly even greater than the cost of hiring a maritime inspector to explore appropriate options for water leak repairs and mitigation.

Secretary of Interior guidelines for water intrusion recommend "rigging temporary or seasonal canopies, covers, etc, over vessel to prevent incursion of rainwater if decks cannot be made watertight";

Engage a maritime surveyor to determine the primary sources of top side water intrusion and internal plumbing system

Documenting leaks and water damage will reveal patterns and be informative for the marine surveyor's future inspection

Protect artifacts in storage by elevating boxes, boxed artifacts and over-sized artifacts at least 4" to 6" off the floor on inexpensive wooden or plastic pallets

Temporarily protect bulky objects with strategically draped plastic sheeting as an inexpensive short term protective measure against rain or during plumbing emergencies.

As leaks and floods are a constant threat aboard ship, valuable assets should be stored on pallets and covered with plastic whenever possible, checking constantly for mold formation.

E. Temperature

While the Queen Mary is berthed in a hostile ocean environment, the proximity to a large body of water regulates and buffers prevailing temperatures against extremes of heat and cold. Temperatures may climb and dip, but they do so slowly, which is fortunate for the artifacts.

Keep artifacts well boxed; the extra packaging mitigates large fluctuations in temperature as well as relative humidity

Prioritize protection of paper, textiles, leather and unpainted wood as they are the most sensitive to temperature fluctuations

If temperature control is installed, adjust temperatures gradually so that artifacts can acclimatize to a new cooler, drier atmosphere.

F. Relative Humidity

A high RH level is difficult to avoid, as the ship is berthed at the edge of a working harbor. However, RH-related damage can be prevented by: -

Provide for air circulation within static exhibits and artifact storage deck spaces.

Decrease relative humidity in closed, static exhibits with use of desiccant materials available at Home Depot such as Damp Rid or Damp Away; follow the manufacturer's instructions and keep these replenished.

Establish routine inspections of built-ins, objects on exhibit and objects in storage to monitor for evidence of changes appearance and mold growth.

Use hydroscopic wrapping, padding, and packing materials such as acid-free tissue to buffer against fluctuations in humidity in artifact storage.

G. Pests

Adopt an Integrated Pest Management policy (sample included in report)

If an infestation is discovered, contact the contracted pest management firm and a museum professional to determine your best course of action depending on how seriously the valuable artifacts are affected.

H. Contaminants

Accumulation of contaminants, dust and air pollutants, is hard to avoid on the Queen Mary due to the environment of the ship and where she is berthed.

Establish routine housekeeping practices for all parts of the ship.

Education of staff as to what are appropriate products to use and follow up with reminders and reviews.

Train housekeeping staff to use appropriate techniques for dusting, polishing, mopping, vacuuming, and window cleaning.

Purchase backpack-style HEPA vacuum cleaners with micro attachments for use when cleaning hotel rooms, valuable assets, art and artifacts; these vacuums allow for cleaning in tight spaces with less impact on furniture and fixtures, extend the overall range of vacuum cleaning, and allow the safe cleaning of delicate, detailed and fragile decorative surfaces.

Store objects in museum quality storage materials, such as sleeves, containers, acid-free and lignin-free paper products and chemically inert plastics, to protect and buffer against contaminants.

I. Theft and Vandalism

A well maintained appearance, as well as visible security promotes a sense of propriety and upkeep. Vandalism and theft are still often unavoidable, but the response time is key; prompt prosecution and clean-up discourages other like-minded visitors.

Properly and completely documenting and insuring valuable assets, art and artifacts is equally as important as knowing the collection intimately. Being able to pass along that documentation to law enforcement agents can help in the recovery of stolen materials.

Securely lock exhibits and use museum wax and fisherman's line to secure objects in exhibits and museum cases to deter theft and tampering.

Prevent damage in seemingly insignificant spaces, such as interiors of drawers and chests that are accessible to the public, by locking and securing openings with reversible adhesives such as hot melt glue to avoid adding hardware.

Devise more protective barriers for areas where original objects can be reached by visitors.

Avoid allowing dust and particulate to accumulate as this is an invitation for graffiti.

Limit access to artifact storage areas using designated staff and key control policies.

Inspect bags and carry-on of vendors working in areas where valuable artifacts are accessible.

Establish continual and routine inspection of all areas, at least once a day, it is important to notice and document losses or changes in exhibits and public areas and take corrective action if necessary.

Respond in a timely manner to incidents as vandalism to avoid creating an atmosphere of neglect that invites further damage.

J. Fire

Fire control aboard the RMS Queen Mary has been recently updated and is constantly maintained.

8. Security Standards

1. Ask police to keep the City and Ship's Operator informed of known threats in the area.

2. Train staff to deal with civil disturbance emergencies. Disturbances include threatening persons, protests, riots, and acts of terrorism.
    a. Have staff receive civil disturbance training from police.
    b. Establish evacuation plans and participate in evacuation drills.
    c. Designate a security person to deal with threatening persons and determine appropriate responses.
    d. Post emergency numbers by all telephones.

3. Monitor guests and visitors at special events.
    a. Inspect coats, purses and packages. Place a sign near the entrance informing visitors of the ship's right to search.
    b. Monitor all visitors and guests. As quietly as possible, ask suspicious persons to leave, if necessary. Post a policy as to this right.
    c. Monitor unauthorized areas and prohibit visitor access with locks and signs.
    d. Request and verify proper identification from service workers.
        i. Keep a check in/check out log.
        ii. Have staff escort workers at all times.
    e. Place alarms on emergency exits to indicate unauthorized access and egress. Make sure all staff know alarm sounds and ensuing procedures.

4. Protect objects on exhibit from theft or vandalism during large events.
    a. Place objects in locked cases or behind protective glass, Plexiglas panels, or other physical barriers.
    b. Keep photographic records of objects on file and back-ups off site.
    c. Store duplicate copies of object documentation off-site.
    d. Use exhibit guards and/or surveillance cameras to monitor exhibit areas. Keep tapes on file.
    e. Establish when and which objects are evacuated based on the level of severity of any disturbance.
    f. Discontinue alcohol service to visibly inebriated visitors and guests.
5. Protect ship and surrounding property.
    a. Keep all exterior utilities locked.
    b. Eliminate or conceal exterior security and phone wires.
    c. Close portholes, and post guards at night to protect ship. Balance the need for security with the need for an emergency escape route.
    d. Keep materials on hand for covering doors and windows, such as plywood and plastic.
    e. Encourage staff to perform a once-daily walk-through of all public spaces and look for vandalism and changes in exhibits.

Theft/Vandalism Standard Procedures

During:

1. Remain calm. Observe if the perpetrator is armed.
2. Do not attempt to apprehend the perpetrator. Call the security guard, the security staff member, or police.
3. Write down all pertinent information immediately. Note the perpetrator's appearance, the vehicle type and license plate number, whether there were accomplices, etc.

Immediately After:

1. Take action
    a. Seal Exits
    b. Call police immediately
    c. Notify the director and collections manager if objects were involved.
    d. Do not disturb the area where the incident occurred. Secure the area from visitors.
2. Begin recovery efforts

a. Assess the damage, determine the recovery process, and consult the conservator, if necessary, following vandalism, whether reported or unreported. Minor vandalism may not be reported, but should be documented.

b. Contact recovery organizations (E.G., insurance company, Interpol, FBI) immediately, if necessary and appropriate.

c. Provide photographs or a written description of stolen objects, including dimensions and markings, to police or agency handling the investigation, the insurance company, and museums that may be offered objects

d. File an insurance claim. Complete a criminal incident report.

3. Recovery - Review the situation.

a. Determine specific recovery priorities identified in disaster response plan

b. Contact nearby museums for staff assistance and alternate storage locations if necessary.

c. Organize recovery and clean-up teams.

4. Contact a conservator promptly to allow for maximum preservation success.

5. If a conservator is not available, begin object stabilization and document stabilization procedures with photographs, videotape and written records.

6. Determine how the security system failed. Upgrade the system, if necessary.

7. Prosecute the perpetrator, if appropriate.

9. Emergency Preparedness Standards

A. General Guidelines

1. Appoint a staff member to serve as the ship's emergency coordinator.

a. The coordinator is responsible for initiating emergency responses, assessing damage, coordinating the activities of all personnel, and organizing practice drills.

b. Determine if this role should be assigned on a permanent basis, or if it should rotate among staff. By rotating the position, everyone learns the procedures.

c. Assign a backup coordinator should the emergency coordinator be unavailable.

2. Plan for Disasters

a. Plan for disasters for which the ship is most vulnerable.

i. Allocate the most training, resources, etc., for these disasters.

ii. Provide for these disasters first, before providing for lesser disasters.

b. Establish a contingency plan for closing the ship for a period of time, if necessary.

c. Establish a contingency plan for financing recovery operations and for paying staff.

d. Apply for grant funding for pre-disaster studies if the ship has a high potential for major damage from disasters.

e. Keep in mind that a single disaster may be accompanied by, may cause, or may be followed by other disasters. (e.g., hurricanes may spawn tornadoes; earthquakes may be accompanied by power loss) Be prepared to respond to several types of emergencies at a time.

f. Determine if the ship's insurance adequately covers the types of emergencies the ship is likely to expect. Consult with the insurance agent to update or amend the policy if necessary.

g. Keep a television, radio and/or a NOAA tone alert weather radio to monitor potential storms (National Weather Service is 162.475 MHz-FM).

h. Establish a consultant's database for ships, historical buildings and area museums contact information.

i. Establish an emergency phone line in another city. The phone line may be an answering service, a line at another associated City property.

j. Establish caches for tools and supplies.

k. Know the elevation of the ship relative to area roads.

3. Establish contact with local emergency authorities

   a. Involve the ship in the community's emergency preparedness plan.

   b. Discuss the coordination of activities and make sure that service providers (fire, police, insurance agents) have an understanding of the ship's emergency preparedness plan and a list of the contact names and phone numbers.

   c. Make sure road access is adequate for emergency vehicles (e.g., spacious corners, adequate width streets, low grade, unobstructed by private vehicles). Determine if emergency personnel should have keys to any gates.

   d. Provide all staff with identification cards which can be shown to service providers in an emergency.

   e. Find out which state, county and city officials to contact after a disaster. Learn when and where the person responsible for heading the local disaster response team will meet to coordinate emergency response with officials.

4. Establish contact with area historic sites, museums and cultural institutions

   a. Share emergency information and resources.

   b. Arrange with other institutions to conduct drills, arrange special tours, exchange phone trees and resource lists, etc., at least annually.

   c. Arrange to utilize their space and staff for emergency evacuation of collections.

5. Maintain good documentation on ship and grounds, collections, and personnel (e.g., blue prints, inventory lists, hazardous material lists, financial records)

a. Keep additional copies offsite.

b. Balance the need for duplicate documentation with security concerns.

c. Update paper based files and computer files regularly. Ask staff to routinely evaluate their files.

6. Update emergency information on a regular basis, at least semi-annually, including the phone tree, location guides, collections priorities lists, and emergency resource lists.

   a. Document ship interiors and exteriors and associated surrounding area with photographs, videotape and written records. Update as needed and store copies at the ship, the insurance company, and City Hall.

   b. Place permanent markers (if surveyor's pins are not already in place) to identify boundaries. Map and keep copies at the ship and at other safe locations.

   c. Identify acceptable traffic routes for heavy equipment.

7. Check emergency supplies on a regular basis, at least semi-annually. Be sure to replace medical supplies and worn, outdated or nonfunctional supplies.

8. Appoint one staff member to act as the media liaison.

9. Conduct emergency drills.

   a. Conduct drills on a regular basis, at least semi-annually.

   b. Review the emergency plan and procedures on a regular basis, at least semi-annually.

   c. Train staff as part of their orientation.

      i. Train staff in the use of fire extinguishers.

      ii. Have staff learn appropriate medical procedures (e.g., first aid, CPR).

      iii. Have staff learn shutdown procedures and how to switch off utilities.

      iv. Practice evacuation procedures.

      v. Instruct staff in how to protect objects and how to remove them.

D. HIGHEST PRIORITIES FOR CONSERVATION INTERVENTION AND TREATMENT

Whole Vessel	Built-Ins	Artifacts
Hull needs inspection, cleaning and painting	First Class Pool requires a structural integrity check, repairs to tiles, re-pointing and removal of rust stains	Children's Nursery wall paper is in significant distress and in need of stabilization
Decks need inspection and repair or replacement; topside decks should never leak	Paintings in Royal Salon require condition assessment, cleaning, in-painting, and barrier	Carpet in Crew Captain's Quarters is in need of cleaning and stabilization
Lifeboats need inspection, maintenance, and stabilization or replacement	Paintings on leather in Britannia Salon require assessment, cleaning, in-painting and barrier	Oversize chandelier components in storage require cleaning, support, wrapping and securing
	Battle of the Unicorns in Queen's Salon requires examination, stabilization and loss compensation	Repair and replace linoleum with similar battleship linoleum
	Avian paintings in Grand Salon require condition assessment, cleaning, in-painting, and barrier	Judaica on indefinite loan should be inventoried and loan agreement executed
	Parquet murals require new varnish, re-glazing, particularly in Mauretania Salon	
	Clockworks in Grand Salon require assessment, cleaning, vanishing	

E. SHORT AND LONG TERM PRESERVATION RECOMMENDATIONS

Introduction: Routine and cyclical maintenance is required at a higher level to ensure the longest possible useful life for the RMS Queen Mary and protect the capital investment in the asset. Conservation Management Plan (CMP) actions should not be considered as add-ons but rather as an integral component of day-to-day operations and responsibilities.

- Short Term recommendations indicate problems requiring immediate action and which can be accomplished with the existing resources. For some of the short term recommendations, not all, modifying and expanding upon existing Base Maintenance Plan actions will fulfill some recommendations of the CMP.
- Medium term recommendations annual budget surplus, complex preservation and strategic planning and assume completion within a year. In the context of the scope of preservation and conservation challenges, current budgetary constraints and economic climate, and current management capacities no medium term recommendations were identified.
- Long Term recommendations require strategic planning and major fundraising efforts to accomplish. However, these recommendations represent very critical activities and should often be carried out

with the input and advice of maritime and conservation specialists. The expertise of a shipwright is required for many of the recommended actions.

- It is strongly recommended that a marine surveyor and a shipwright review this assessment and plan. We consider a critical next step to be a full survey of the RMS Queen Mary by a marine surveyor. All previous assessment reports should be reviewed by the marine surveyor.
- All Long Term recommendations should be reviewed by the Preservation Management Team to determine where operational and conservation priorities intersect. Once the Long Term recommendations have been organized, it is strongly recommended that a capital development expert be contracted to develop and execute a strategic fundraising campaign to support preservation goals and the long term recommendations.
- All Recommendations worded according to Secretary of Interior's Standards for Historic Vessel Preservation Projects with Guidelines for Applying the Standards; U.S. Department of the Interior, National Park Service, National Maritime Initiative, Washington D.C., May 1990

Project Planning Process: Strategic planning is critical to meeting the CMP goals and recommendations. When operational and conservation priorities have been determined, the planning process for each recommendation should include:

Objectives	Describe the condition problem and desired results of the recommendation
Plan of Work	Define tasks and subtasks; what resources and equipment are available and what supplies and equipment are needed; schedules for deliverables Identify required skills, prior experience and qualifications for consultants Issue Request For Proposal (RFP) and undertake review process to select consultant
Funding	Estimate costs for the activities listed in the plan of work; document all costs and expenditures
Documentation	Upon completion of the project all actions, participating personnel, costs and outcomes should be fully documented for purpose of future conservation planning and fundraising efforts
Sustainability	The completed action may result in the need for additional ongoing monitoring or maintenance so the CMP will need to be revised and updated to incorporate the changes

Whole Vessel

Short term recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	**BMP Task**
Quarterly	Regularly inspect, and repair or replace when necessary, moldings, waterways, margins, covering boards, rail caps, etc.; filling cracks, checks, open joints or seams with appropriate fillers; painting or finishing, if appropriate, with coatings of the same color, texture, and appearance as the original before problems grow larger	yes
Monthly until problem is globally corrected then quarterly	Remove loose paint, scale, or corrosion from wood or metal surfaces of problem areas , using the least abrasive method effective for the task	yes
Monthly until problem is globally corrected then quarterly	Treat severely corroded metals of problem areas with chemical metal stabilization or consolidation products	yes

Whole Vessel Short term recommendations:

Monthly	Remove colored paint from exterior wooden surfaces; varnish wood with high quality marine varnish; recommended brands of varnish are: • Epifanes Clear High-Gloss Varnish • Pettit Exterior Varnishes • McCloskey Man O'War Spar Marine Varnish	yes
Monthly	Treat severely corroded metals with chemical metal stabilization or consolidation products such as Eureka Fluid (a solvent free, lanolin based rust/corrosion preventive and lubricant that provides long term protection and lubrication for all metal)	yes
Monthly	Treat areas or pockets of active rot, biological growth or pest infestation in wood with appropriate chemical fungicides, insecticides, preservatives as appropriate	yes
Weekly	Regularly inspect for standing water; remedy causes so that water cannot accumulate inside any interior and exterior spaces; empty temporary collection buckets immediately after weather or leak event	no
Quarterly	Clean, and apply penetrating wire preservative sound standing wire rigging and associated equipment using historically appropriate protective coatings; if standing wire rigging is unsound engage a shipwright	yes
Semi-annually	Thoroughly clean ventilation ducts, air passages, and blowers of fan housings to remove accumulated dirt to prevent recirculation of unclean air throughout the ship	yes

Whole Vessel Long term recommendations:

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
Annually	Coat hard-to-reach areas of the inside of hulls with penetrating coatings, such as Eureka Fluid, extending under frames and structure to prevent rust	no
One time project	Install new drains or scuppers in topside areas that hold standing water because of damage or decay prevent drainage; design of new drains should be historically appropriate in appearance and construction, and require minimal displacement of historic fabric for installation	no
Once then maintain as needed	Engage experienced shipwright to re-caulk the seams in wooden decks as required using historically appropriate, visually compatible materials and methods Dave Mathieson, Maritime Conservator, recommends the following process regarding the caulking process adapted from wwwoodenboat.com/forum: Modern seam compounds look nice for a few years, they eventually begin to separate from the wood they are attached to. Traditional oil-based seam compounds on the other hand offer the advantage of lasting twenty five years or more. There are many modern synthetics on the market, but none of them come close to doing the job like the traditional tar based compounds like **Jeffery's Marine Glue No. 2 Black**. This traditional marine glue product has been the premiere choice for decades. Its fine pouring qualities allow it to be used for the smallest seams and once cured, it adheres tenaciously to the seam, will not crack and remains flexible for many years. A repair of a planked wooden deck that is caulked with cotton begins with priming the seams with a mixture of bee's wax and turpentine. This will seal the cotton against moisture absorption and make the wood itself bond more effectively with the seam compound. **Jeffery's Marine Glue** is the only traditional seam compound still available for	no

Whole Vessel	Long term recommendations:	
	traditional wooden decks. The term glue is a misnomer as it is not glue but rather an elastic compound. Sold in solid bulk packaging it must be melted in a metal container until liquid and then ladled into the seams and allowed to cool and harden. Taping off the seams prevents a messy job becoming even messier. The advantage of this product is that it rarely will pull away from the wood or crack if the job is properly done. If a seam should crack, repairs are easily made by running a hot paying iron down the damaged area which will cause the compound to melt and run back together.	

Teak Decks	Short term recommendations:	
Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
Seasonally as needed, though prompt response required	Identify locations and causes of standing water on decks and exposed areas; remedy causes so that water cannot enter or accumulate on exterior or inside any interior spaces	yes
One time custom purchase; obtain three estimates	Provide adequate covers or hoods at ventilators, air intake grilles, and openings to prevent entry of rainwater	no
One time project	Remove desiccated and peeling remnants of varnish and other coatings from deck; (teak decks are meant to be unvarnished to swell in foul weather and remain tight)	no

Teak Decks	Long term recommendations:	
Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
Obtain three estimates as soon as possible; plan and fund	Collaborate with marine surveyor and shipwright to determine most expeditious and effective methods to prevent water intrusion through the decks; properly maintained ships do not develop topside leaks	no
Obtain three estimates as soon as possible; plan and fund	Engage shipwright and/or naval architect to design and supervise the repair or replace deteriorated or missing deck planks with new material of the same exact specifications as the original decks (composition, size, scale, and method of fastening as the original)	no

Lifeboats	Short term recommendations:	
Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
Seasonally as needed	Keep drains in lifeboats clear to prevent standing water and bio-fouling	no

Lifeboats Short term recommendations:

One time project; obtain three estimates	Provide ventilated, weatherproof covers for open lifeboats stored outside on davits	no

Lifeboats Long term recommendations:

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
One time project consulting with marine architect and/or marine conservator	Determine whether the lifeboats will be preserved, rehabilitated or replaced; Document decision making process and outcome	no
Project to be directed by marine architect and/or marine conservator; Plan and seek funding	Life boats and davits are essential to establishing the historic character or use of a vessel, consider the following if the determination is to replace them: (1) boats of the same type, style, size, age, and appearance as the original (2) accurate replicas, based on the originals (3) replicas that have the general form and appearance of the original	no
Ongoing project requiring funding	If there is a management decision and the lifeboats are to be rehabilitated, a shipwright should design a phased project, supervise skilled labor, create budget, and oversee completion	yes

First Class Pool Short term recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
One time project	Cordon off original furniture as the legs of both chairs and the table have noticeable losses of paint and wood from direct forces and these are rare surviving examples	no
One time project	Remove duct tape and plastic from pool slide; use wooden insert or other means of attachment to support color gel for light show	no
Daily monitoring; Weekly maintaining	Clean pool; water should not be allowed to stand in pool bottom	no
Communicate recommendation	Adding more hardware to support light show equipment is not recommended	no

:

First Class Pool Long term recommendations

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**

First Class Pool Long term recommendations

Obtain three estimates as soon as possible; plan and fund	Marine surveyor or architect is needed to determine if the pool is structurally supported as a result of alternations to spaces on lower decks; if the there is structural instability, determine what remedy is recommended to stabilize Marine surveyor to fully examine ceiling for possible condition problems ***Stand alone project or to be included in overall ship assessment by marine surveyor	no
Weekly	Monitor condition of tiled walls and pool area daily; document changes and consult shipwright and/or conservator in case of noticeable changes of condition	no
Obtain three estimates; plan and fund	Repair tiled surrounding walls after source of corrosion is eliminated with new grout and repaired, existing or sympathetic new tiles; work to be done in association a shipwright and a conservator	no
One time project with contracted expertise, and monitor	Identify the sources of the leaks and causes of corrosion of armature in tiled walls surrounding the pool which is expanding and causing grout and tile to detach	no
One time project	Determine if misting system is contributing to rust stains in pool	no

Architectural, Decorative and Fine Art Short term recommendations

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
One time purchase and installation	Install oscillating fans controlled by a humidistat in storage and static exhibitions to discourage biological growth during periods of high humidity	no
Monthly routine monitoring and/or replenishment required	Install desiccants such as Damp Rid, Damp Away or Damp Check in small, tight spaces such as Officer's Quarters exhibitions Carefully follow the manufacturer's instructions for use and replenishment of product	no
As needed in association with scheduled activities	Protect interior features and finishes against unintended damage during work projects and special events against vandalism by installing protective barriers	no
Daily	Close portholes in rooms, salons and public spaces at the end of every day	no
One time purchase and training	Method of vacuuming is causing damage to woods and veneers; buy museum quality HEPA vacuum with padded attachments to prevent further damage while not sacrificing thoroughness of cleaning	no
One time survey and installation	Protect corners of wood and veneers with Lucite corners in high traffic areas such as hotel rooms, public spaces such as the Piccadilly Circus and salons as well as the hallways and stairways	no
One time survey and project	Devise reversible methods for closing cabinets and drawers in public rooms such as the Royal Salon to thwart handling and further damage	no
One time survey and project **	Determine the cause of the leak in the ceiling of the **Royal Salon** and remedy the cause to prevent further damage **unless survey reveals serious structural cause then task to long term recommendations and engage a shipwright	no

Architectural, Decorative and Fine Art Short term recommendations

One time and then monitor for recurrence of pests and leaks	Clean service entrance and pantry area adjacent to the **Royal Salon** to remove accumulated grime and soil from floors and walls as pests were observed in the area; Determine the cause of the leakage which has buckled the parquet flooring in both the service area and the Royal Salon	no
One time project	Remove garden mulch from beneath bench seat below wood parquet mural in **Mauritania Room;** survey all other plant containers for organic material and remove	no
One time project	Remove non-original linoleum; lay down lifting and buckling linoleum; fill losses of linoleum with new true linoleum (commercially available)	no
Annually; see Housekeeping Policies	Maintain interior surface coatings on a cyclical basis so that a loss or deterioration of interior features does not result; e.g., light coats of wax on woodwork annually, UV reducing film on portholes, polish residue removed from hard to reach areas and low spots in décor	no

Architectural, Decorative and Fine Art Long term recommendations:

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
Monthly until problem is globally corrected then quarterly	Protect and maintain interior surfaces and finishes using appropriate treatments such as cleaning, rust removal, and reapplication of protective coating systems; (This may require training and review of current methods and products)	no
Once, plan and budget	Repair buckling parquet floor in **Royal Salon** (it is assumed there is a surplus of parquet pieces as other parquet floors have been dismantled)	no
Once, plan and budget	Include in marine survey the inspect the condition of the mechanical parts of the map in the First Class dining room which tracked the ship's progress in transit to document current conditions	no
Once, plan and budget	Engage conservator to stabilize and/or repair cracked original, plastic cover on door handle on door from the **Mauritania Room** to the outside deck	no
Obtain at least three estimates	Engage a paintings conservator to inspect condition of substrate and color medium on all paintings on canvas, leather or wood for cost and time estimates for conservation treatment for the following: - clean paintings as determined by paintings conservator; attach protective glazing to prevent future damage and to reduce effects of light exposure including: - document condition of painting above bar in **Observation Bar** and surface clean and remove paint flecks and drops - leather paintings in **Britannia Room**: inspect and document substrate, paint adhesion, clean and protect - perform treatment to stabilize holes cut in one leather painting in **Britannia Room**	no
One training; repeat at three year intervals	Engage a furniture or wood conservator to train staff in use of best materials and best methods for stabilizing and/or filling losses of wood in veneers and parquet murals throughout the ship	no

Artifacts Stored in "C", "D" and "F" Decks Short term recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
Management meetings and staff training sessions	Review provided examples of policies for collection management; tailor policies while keeping the purpose of the policy intact; implement policies	no
Management meeting	Determine when and why portholes in these storage areas will be opened; establish routine for closing portholes nightly	no
Management meeting and staff action	Post signage disallowing food and beverage in these areas	no
Management meeting and staff action	Control access to artifact storage through key management and access logs for designated staff	no
Management meeting and staff action	Phase out use of mouse and rat traps, which if not monitored daily and promptly discarded will attract other pests increasing the problem	no
Staff action and follow up monitoring	Clear aisles and areas surrounding fire hoses to ensure unencumbered access during emergency	no
Staff action and follow up monitoring	Remove non-collection items from all areas of storage	no
Staff action and follow up maintenance	Screen portholes to prevent dust, particulate and pests from entering	no
Staff action and follow up maintenance	Replace missing window glazing on the porthole on "D" deck which is covered by plastic sheeting affixed with tape which is failing; apply UV filtering film	no
Staff action and follow up maintenance	Clean dust off exteriors of pipes and isolate pipes carrying water and waste to prevent leakage onto artifacts and storage furniture	no
Staff action and follow up maintenance	Isolate peeling paint on ceiling with heavy plastic working around plumbing, electrical, fire alarm and suppression equipment to prevent lead paint flakes from accumulating on the artifacts, storage furniture and walkways	no
One baseline cleaning; then quarterly	Clean and dust floors, walls, shelving and boxes using HEPA vacuum	no

Artifacts Stored in "C", "D" and "F" Decks Long term recommendations:

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**

Artifacts Stored in "C", "D" and "F" Decks Long term recommendations:

Series of management meetings; Course of action is chosen	Seriously consider relocating all or parts of the artifacts off site location Removing the artifacts would allow a complete inventory to be compiled, removal of harmful contaminants, upgrade primary housing by wrapping and packing artifacts in protective archival materials; provide stable environment, remove protection of artifacts from BMP; creating additional work spaces for engineering staff, open more space for attraction development and save the artifacts	no
Contract capital development consultant to direct funding campaign	If management decides to relocate all artifacts the new location must be designated Relocating the artifacts would be a complex project requiring qualified people (registrar, conservator conservation technicians, compliance with NPS and CEQA standards and successful, major fundraising	no
Contract capital development consultant to direct funding campaign	If management decides all artifacts will remain on board: – Artifacts will need to be cleaned, primary housing upgraded, storage furniture upgraded, over-sized artifacts secured, amount of spaced needed for storage will increase and Queen Mary staff will need to continue to monitor storage spaces for leaks, biological growth, pest activity, contaminants and effects of uncontrolled environment – Paper-based artifacts and textiles will continue to be at high risk of complete destruction – Reduce the impact of elevated levels of relative humidity on each deck by devising method of air circulation which will discourage biological growth and insect activity	no
Long Term Project	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
	The following are to be implemented whether the artifacts are relocated or remain aboard:	
Contract registrar, collections manager, conservator and conservation technicians to implement project	Install oscillating fans controlled by a humidistat to discourage biological growth and insect activity during periods of high humidity Install desiccants such as Damp Rid, Damp Away or Damp Check throughout storage based on manufacturers recommendation for square footage of storage; carefully follow the manufacturer's instructions for use and replenishment of product. Support, wrap and secure oversized objects such as the very large light fixture leaning against the wall. Clean artifacts and upgrade primary housing appropriate for each type of artifact using archival materials. Place barrier layers between glass and fragile artifacts to prevent breakage within archival primary housing. Place artifacts stored on the floors on pallets to less the chance of damage from flood or leakages. Remove surface debris and dust from carpets and over-sized textiles roll textiles on archival rolling tubes. Remove plastic wrappers from textiles stored on hangers; remove textiles from hangers; wrap textiles in archival tissue and store in archival boxes. ****Re-housing and/or relocating a collection of this size and variety will present many challenges requiring a high level of decision making at the object level and regarding the entire process, therefore it is imperative the project be designed, managed and*	No

Artifacts Stored in "C", "D" and "F" Decks Long term recommendations:

	implemented by an experienced professional team.	
Contract registrar for project	Number individual artifacts, track artifacts movement; enter condition rankings and location changes in collection information management system.	No

Archive Short term recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
One time project; weekly monitoring	Determine why there are leakage stains associated with the plumbing pipes against the wall; leakage in the Archive should be avoided at all costs as there are pervasive odors of mildew and deteriorating paper in the space; if a history of repairs exists, it should be studied to determine accurate level of risk from leakage;	no
One time project	Purchase digital temperature and relative humidity monitor and place in central area; install fans with humidistats to provide air circulation; after determining average relative humidity levels consider using commercial non-electric, high capacity moisture absorbents to lower high humidity levels	no
Once thoroughly then monthly	Dust and vacuum entire space, all floors, shelves, boxes, walls, anything that can safely be reached	no
One time project	Wrap and secure the etched glass panel that is leaning in the space	no
One time project	Remove spray cleaners and paints from archive space	no
One time project	Replace acidic cardboard dividers between bound volumes on shelves	no

Archive Long term recommendations:

Long Term Projects	Actions required by the NPS Historic Vessel Preservation Guidelines Requires successful fundraising and additional expertise	Part Of **BMP**
Contract capital development consultant to direct funding campaign	Inventory and re-house all of archive in non-acidic primary housing with the assistance of an archivist, paper conservator, and paper conservation technicians; collection information management database to be operable prior to beginning of the project	no
Contract capital development consultant to direct funding campaign	Remove inventoried, re-housed archive from ship to secure, climate controlled location after appraisal of value is added to insurance	no

Exhibits Short term recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
Ongoing as exhibits are developed and rotated	Create a schedule for rotating artifacts in static displays and exhibits; document all movement of artifacts; dates of installation and condition notes recording damage and deterioration in collection information management database	no

Exhibits	Short term recommendations:	
Once thoroughly; then weekly for open exhibits and quarterly for closed exhibits	Dust and vacuum in static exhibit spaces (part of Infirmary will require opening the walls to access) cleaning floors, walls, ceiling, carpets, furniture, artifacts	no
Ongoing project as exhibits are developed and rotated	Original textiles on board are rare and not suitable for long term display; for the sake of display and attraction development it is recommended that reproductions from be ordered from a design service such as Spoonflower which custom prints fabrics from digital images	no
Ongoing project as exhibits are developed and rotated	Continue to create facsimiles of paper-based and textile artifacts on exhibit; textiles, like paper-based artifacts, are vulnerable to deterioration	no
	Piccadilly Circus	
Ongoing project as exhibits are developed and rotated	Rotate bathroom fittings and fixtures in **Piccadilly Circus** exhibits; upgrade exhibition supports and fabric; reduce light levels in exhibit cases	no
One time project	Replace existing acrylic glazing with UV filtering acrylic over the John Wright and Sons advertising panel displaying all the woods used on the Queen Mary in **Piccadilly Circus**	no
	Propeller Box	
When water is changed	During next water change, the propeller and the environs should be condition reported to create a baseline condition reference, preferably by a marine surveyor; If a marine surveyor is not present, the condition should be extensively photo-documented and recorded in permanent or temporary collection management format until a marine surveyor can review existing conditions	no
Engage marine surveyor to review condition	During future water changes, the conditions need to be compared to previous condition assessments and all changes noted in collection management records	no
	Crew Captain's Quarters Exhibit	
One time project	Investigate cause of mold in Crew Captain's Quarters	yes
One time project	Textile conservator to clean textiles and stabilize warp and weft of original carpet in Crew Captain's Quarters	no
One time project	Textile conservator to remove deteriorated fabrics from Crew Captains' quarters, clean and store in archival materials	no
One time project	If plumbing is active in Crew Captain's Quarters isolate pipes determine if there is a history of leaks; repair the source of the leak and provide for air circulation	no
	Queen Mary Historical Exhibit	
One time project	The leak above Queen Mary Historical Exhibit should be repaired, rather continued reliance upon the installation of plastic sheeting and tubing above the room; it seems the ship's laundry is on the deck above this area and may be the source of the leak;	no
One time project	Examine exhibit cases for stability and security; if silver is tarnished, contact an object conservator for advice on appropriate procedures	no
One time project	Replace original textiles including beaded dress on display with facsimiles	no
	Engine Room and Steering Rooms Exhibits	
One time project; weekly monitoring	Remove standing water and determine source and repair to prevent water intrusion	no
One time project	Remove over-sprayed paint from equipment; in future mask and protect equipment when painting	no

Exhibits	Short term recommendations:	
One time project	Close hatch (the hatch with the blue hose leading to bilge) OR prevent visitor traffic access for safety and liability reasons	no
One time project; routine monitoring	Create visitor friendly signage including hands off	no
Once thoroughly then monthly	Remove heavy accumulation of particulate from ventilation grates	yes
One time project	Document existing condition of all artifacts on display in Fire Station noting damages and vulnerabilities signifying possible need for artifact rotation	no
	Fire Station Exhibit	
One time project	The wood veneer wall adjacent to a door with a porthole, cannot withstand continuous, ongoing light exposure; apply 3M Scotch Shield or Scotch Solar Control film on porthole will reduce UV light; adapting the door to allow it to swing shut will also reduce UV light exposure	no
One time project; monthly monitoring	Vacuum leaking fire extinguisher contents; remove existing fire extinguisher and replace with stable fire extinguisher if there are more than 10 remaining in good condition; document movement, new location and condition of both fire extinguishers	no
Ongoing project as exhibits are developed and rotated	Duplicate any original paper-based documents on display (framed paper diagram on wall) and return original paper-based documents to archive documenting movement, new location and condition of original and frame	no
Ongoing as needed	Treat peeling paint occurrences over the exhibit on ventilation trunk	no
One time project	The current barrier to the static display elevated on the wooden platform is insufficient to discourage unwanted exploration, touching and vandalism; add visitor friendly signage and create a more imposing barrier to the exhibit	no

RMS Queen Mary Judaic art and artifacts on loan to local synagogue

Recommendations:

Action Items	Actions required by the NPS Historic Vessel Preservation Guidelines Can be implemented with existing resources	Part Of **BMP**
<u>High priority action</u> One time project	There are Judaic objects from the ship on "loan" to a local Jewish organization. A list of these objects should be compiled for the purpose of confirming their location. All correspondence regarding the original transfer of the objects should be located. If the objects are to continue to be on loan to the organization, a formal loan agreement confirming ownership by the City and terms of loan needs to be created and signed by representatives of both organizations. The loan agreement should include: - Name, address, and contact information of the owner of the objects - Purpose and terms of the loan - Date the objects were lent - Description of all objects lent including origin; maker if known; description including materials; dimensions; current condition notes - Insurance values and indication of who is insuring - Dates and signatures of lender and borrower	no

F. CONSERVATION AND THE PROFESSIONAL CONSERVATOR

1. Definitions of Conservation Terminology

The legacy of our collective cultural heritage enriches our lives. Each generation has a responsibility to maintain and to protect this heritage for the benefit of succeeding generations. Those who care for cultural property - the material aspects of that heritage - use special terminology currently defined by AIC as follows:

Conservation: The profession devoted to the preservation of cultural property for the future. Conservation activities include examination, documentation, treatment, and preventive care, supported by research and education.

Examination: The investigation of the structure, materials, and condition of cultural property including the identification of the extent and causes of alteration and deterioration.

Documentation: The recording in a permanent format of information derived from conservation activities.

Treatment: The deliberate alteration of the chemical and/or physical aspects of cultural property, aimed primarily at prolonging its existence. Treatment may consist of stabilization and/or restoration.

Stabilization: Treatment procedures intended to maintain the integrity of cultural property and to minimize deterioration.

Restoration: Treatment procedures intended to return cultural property to a known or assumed state, often through the addition of non-original material.

Preventive Care (also referred to as preventive conservation): The mitigation of deterioration and damage to cultural property through the formulation and implementation of policies and procedures for the following: appropriate environmental conditions; handling and maintenance procedures for storage, exhibition, packing, transport, and use; integrated pest management; emergency preparedness and response; and reformatting/duplication.

Cultural Property: Objects, collections, specimens, structures, or sites identified as having artistic, historic, scientific, religious, or social significance.

Preservation: The protection of cultural property through activities that minimize chemical and physical deterioration and damage and that prevent loss of informational content. The primary goal of preservation is to prolong the existence of cultural property.

Conservator: A professional, whose primary occupation is the practice of conservation and who, through specialized education, knowledge, training, and experience, formulates and implements all the activities of conservation in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.

Conservation Administrator: A professional with substantial knowledge of conservation who is responsible for the administrative aspects and implementation of conservation activities in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.

Conservation Educator: A professional with substantial knowledge and experience in the theory and techniques of conservation whose primary occupation is to teach the principles, methodology, and/or

technical aspects of the profession in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.

Conservation Scientist: A professional scientist whose primary focus is the application of specialized knowledge and skills to support the activities of conservation in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.

Conservation Technician: An individual who is trained and experienced in specific conservation treatment activities and who works in conjunction with or under the supervision of a conservator. A conservation technician may also be trained and experienced in specific preventive care activities.

Collections Care Specialist: An individual who is trained and experienced in specific preventive care activities and who works in conjunction with or under the supervision of a conservator.

2. Conservation Treatment Defined:

A conservation treatment involves the use of techniques and materials to chemically stabilize and/or physically strengthen objects which are unstable and susceptible to partial or total loss of value, structure, appearance or historical significance.

The aim of treatment for materials with cultural, aesthetic and monetary value is to assure the object's longevity and continued availability for use and enjoyment, while altering its physical characteristics as little as possible.

Conservation also includes making decisions about which objects need treatment and determining appropriate treatments which are preformed according to the highest standards of practice defined by the American Institute for Conservation of Historic and Artistic Works in the Code of Ethics and Guidelines for Practice.

Conservators specialize in treatment of certain object types such as works on paper, photographs, textiles or paintings and are typically experienced in collection management, conservation surveying and preservation planning.

Conservation treatment of historic and artistic objects requires the judgment of a conservator with experience and expertise in the appropriate type of objects.

A professional conservator is highly trained and experienced in broad theoretical and practical knowledge in the following areas:

- history, science, and aesthetics of the materials and techniques of creation or manufacture of art and artifacts
- causes of deterioration or damage to the art or artifacts
- range of methods and materials that can and should used in conservation treatment
- implications and outcomes of any proposed treatments.

3. What the Conservator Will Ask You

Before conservation treatment begins the conservator will work with the Preservation Management Team to clarify the priority and objectives of treatment as well as expectations for end result. A site visit for initial examination of the object(s) and informational interview will be scheduled.

The conservator will need to collect the following information:

- the nature of the item (e.g., light fixture, furniture, textile, map, photograph)
- the component materials (e.g., wood, glass, plastic, paper, leather)
- the media (e.g., paint, print, ink)
- the date and place of creation
- the nature of the problem(s) (e.g., losses, biological activity, a combination of factors)
- the type and extent of anticipated use (e.g., extensive or limited use, functional, exhibition)
- environmental conditions (e.g., on uncontrolled climate, air conditioned, heated, air filtered)
- housing systems (e.g., built-in, upright or flat shelving, boxes or other protective enclosures)
- the desired outcome of treatment (e.g., basic stabilization or protection, returned to functionality, improved appearance, prevention of loss of value).

This information is critical for the conservator to develop a treatment proposal and budget that adequately addresses both the condition of the object(s) and all applicable historical preservation requirements associated with the project.

4. Course of Treatment: Condition Report, Treatment Proposal, Contract and Estimated Cost:

A. Condition Report, Treatment Proposal, Cost Estimate and Contract

Using the information already gathered along the results and observations from closer, technical examination, a condition report which describes the object(s) and documents existing conditions including the following will be prepared:

- materials, structure, and method of fabrication of the item
- location and extent of physical damage, chemical deterioration, or previous repairs
- description of the condition(s) the treatment intends to stabilize or remedy.

Along with the condition report, the conservator will prepare a treatment proposal containing these elements:

- outline of the procedures and materials to be used in the treatment
- an estimate of the time required to complete the treatment
- an estimate of the cost.

The treatment proposal should clearly reflect the conservator's intention to retain the original character and historical significance of the object(s) to the greatest extent possible. All proposed procedures should be designed to allow, insofar as possible, subsequent reversal or removal of materials added during treatment. If more than one treatment option is included in the proposal, the conservator should explain the benefits and implications of each. Remember that the nature and severity of damage or deterioration will influence the degree to which the item can be stabilized, strengthened, and aesthetically improved through treatment.

Once you agree to a specific proposed treatment, the conservator will ask you to sign the proposal and return it before any treatment begins.

B. Treatment Report and Recommendations for Future Care, Handling or Storage

After the treatment is complete, the conservator will prepare and submit a final report to you. Treatment reports vary in format and length, but all reports should include descriptions of the following:

- techniques used during the course of treatment
- exact materials used in correcting conservation problems
- photo-documentation of condition before and after treatment
- any recommendations for future handling, storage requirements, utility or display which are essential for continued preservation.

All information and communication associated with any conservation treatment shall be permanently maintained in the collection management database. The documentation should be easily accessible for the historical record or in the event treatment is needed again in the future.

G. RECOMMENDATIONS FOR IMPLEMENTING COLLECTION INFORMATION MANAGEMENT AND COLLECTIONS MANAGEMENT POLICIES

Recruit a Collection Management consultant to establish the Collection Information Management database and Collections Management Policies. The successful consultant in collaboration with the Preservation Management Team will accomplish the following:

- Review existing inventory in Access
- Establish protocols for assigning unique numbers to art and artifacts
- Set-up collection information management database
- Migrate data from inventory to management database
- Review, revise and adopt Collections Management Policies
- Train professional staff in use of database, artifact handling, movement, labeling and condition reporting and all collections management policies.

H. RECOMMENDATIONS FOR FUTURE CONDITION SURVEY PROJECTS

Ideally, these projects would be implemented and overseen by the City Preservation Management Team and incorporated into a comprehensive strategic plan for the preservation and conservation of the RMS Queen

Mary. This would ensure efficiency, cost effectiveness, consistency, and appropriate oversight, as well as allow for necessary improvements for the continued use of the ship.

1. Maritime Survey

Completion of a Maritime Survey by a qualified maritime consultant with substantial experience in historic vessels preservation and steel hulled ships is a high priority for the RMS Queen Mary. To date, there is no evidence a maritime survey has been undertaken from the time the ship entered Long Beach harbor.

2. Historic Structure Report

A Historic Structure Report is a high priority for the RMS Queen Mary, and should ideally be conducted in conjunction with the maritime survey. A historic structure report provides documentary, graphic, and physical information about a property's history and existing condition. Broadly recognized as an effective part of preservation planning, a historic structure report also addresses management or owner goals for the use or re-use of the property. It provides a thoughtfully considered argument for selecting the most appropriate approach to treatment, prior to the commencement of work, and outlines a scope of recommended work. The report serves as an important guide for all changes made to a historic property during a project-repair, rehabilitation, or restoration-and can also provide information for maintenance procedures. Finally, it records the findings of research and investigation, as well as the processes of physical work, for future researchers.

3. Historic American Buildings Survey (HABS)

HABS documentation provides a baseline record of existing conditions. A National Park Service HABS survey consists of measured drawings, large format photographs, and written histories of historic properties to comprehensively document existing features and conditions for historic records and preservation accuracy which is then incorporated into the Library of Congress Prints and Photographs Division. Under the provisions of Sections 106 and 110b of the amended National Historic Preservation Act of 1966, federal agencies must produce documentation to Heritage Documentation Programs (HDP) standards for buildings that are listed, or are eligible for listing, in the National Register of Historic Places, to mitigate the adverse effects of federal actions such as demolition or substantial alteration. National Park Service regional offices oversee this aspect of HDP documentation, which is submitted to the Washington, D.C., office for final review and inclusion in the collections. If federal funds or permits are required for the RMS Queen Mary, it is likely HABS recordation will be necessary.

4. Environmental Survey

An environmental survey is an assessment of the overall environmental conditions, including temperature, relative humidity, light and air quality. The environmental survey will identify specific environmental problems, set priorities for making environmental improvements, recommend specific solutions for correcting environmental problems and develop a long term monitoring program to better determine existing environmental conditions.

An environmental survey must be conducted by preservation or conservation professionals and other types of consultants should be included as needed for a maritime asset.

5. Detailed Conservation Surveys

It is recommended that funding be sought for a series of detailed conservation surveys as part of the implementation of the CMP.

A general conservation survey of the RMS Queen Mary and her historic assets has been undertaken as part of the development of this Conservation Management Plan which documents existing conditions including identification of damages and causes of deterioration, identifies conservation priorities and outlines recommendations for future preservation and conservation actions.

A detailed conservation survey is a systematic, item-by-item examination of all or part of collections and assets resulting in a set of detailed condition reports that fully documents the condition of each object or artifact, ranks treatment priority in context of overall assets, and outlines proposed methods of treatment. Detailed Condition Surveys may be funded as distinct projects and will commonly include the following types of information:

- Description of the object location on the vessel
- Photographic documentation of location and condition
- Description of the object/item(s) to be conserved, including for example:
  - dimensions
  - original materials and techniques
  - description of present condition
  - how and why deterioration has occurred/is occurring
  - any past conservation/restoration
- Recommendations for treatment:
  - remedial work
  - emergency treatment
  - analysis work or further investigation required
  - further monitoring necessary to inform treatment proposal
  - removal and handling procedures
  - stabilization and preservation procedures
- Description of the treatment proposed:
  - methods, materials and personnel
  - health and safety requirements
  - nature of post-conservation record to be provided
- Description of future conservation requirements:
  - steps necessary for the continuing well being of the object/item including future monitoring as required.

These surveys can be undertaken as a series of small projects or one comprehensive project. Both approaches have unique challenges. Planning and implementing one comprehensive survey requires one time detailed planning for a complex, multi-faceted, multi-year project. Project design and fundraising for a series of smaller surveys requires an on-going of planning and fundraising.

Categories of surveys devised as they relate to different specializations of conservation:

- Wood marquetry murals, carvings, veneers, floors, furniture
- Paintings on canvas, leather and wood
- Glass including art glass, architectural glass, glassware, decorative built-ins and light
- fixtures in situ and storage
- Original plastics in situ and storage
- Art and artifacts in storage decks "C", "D" and "F"
- Metals including decorative metalwork, German silver fixtures and ships equipment
- RMS Queen Mary Archive which includes ships logs, books, paper, photographs, maps, silver, ceramics, textiles, souvenirs
- Textiles such as rugs, stateroom soft goods, signal flags, any existing original to the significant historical period of 1936 – 1939.

6. Local Landmark Nomination

The RMS Queen Mary is currently a designated National Register property. However, it is also eligible for local landmark status, which would provide an additional level of protection and oversight. Preparation of a Landmark Nomination should incorporate previous surveys and include an additional character-defining features survey to identify the structural elements, maritime fittings, architectural design and components, machinery, spaces, features, materials and finishes that contribute to the significance of the ship as a historic resource.

7. Amend National Register Nomination

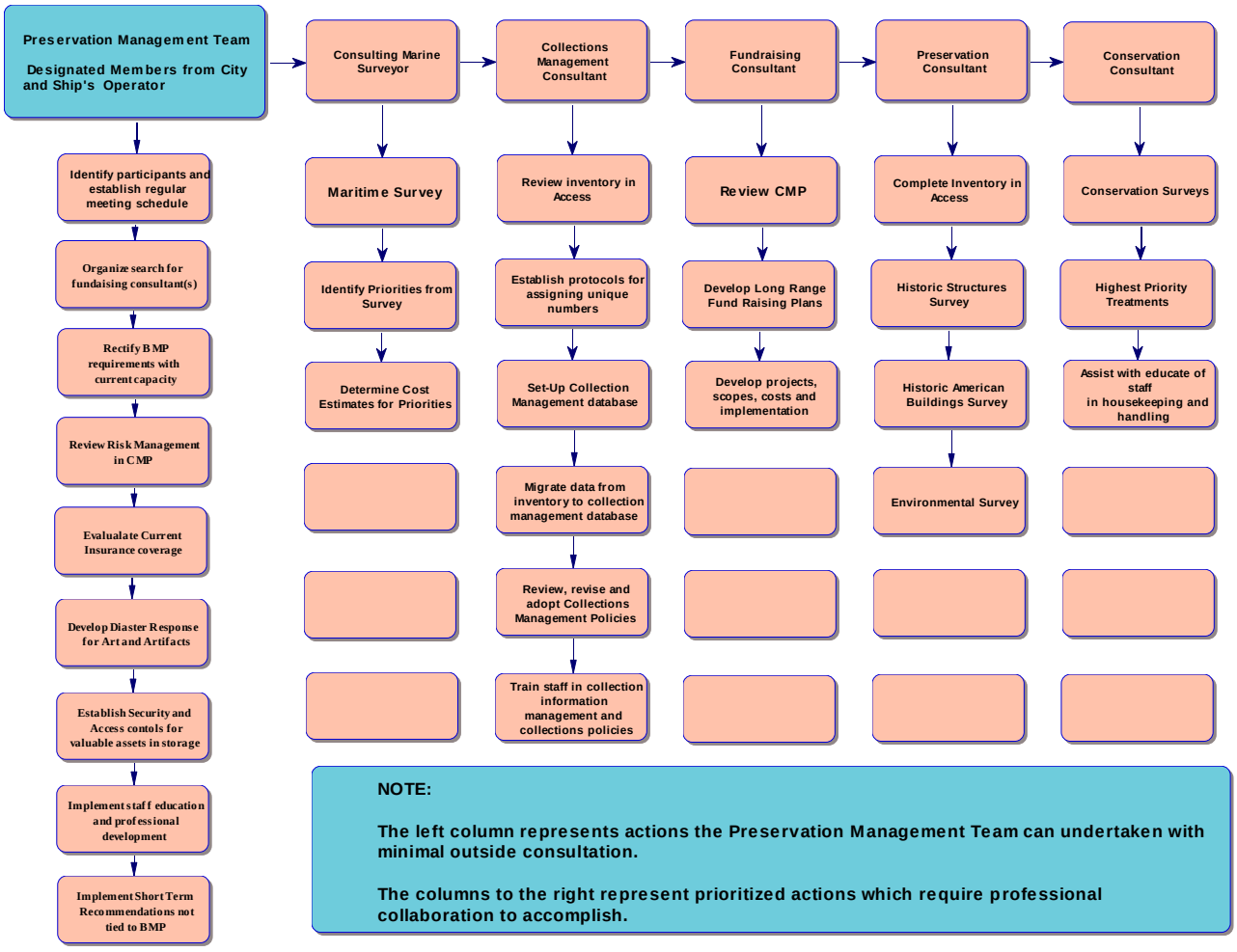
The existing national register nomination for the RMS Queen Mary is old and outdated. Other than basically establishing the ship's regulatory status as a historic property, the nomination does not adequately serve its purpose. The nomination should be amended, following National Park Service guidance in National Register Bulletin 20: *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places,* to fully describe the ship and detail its significance, and the nomination should be forwarded to the SHPO and Keeper of the National Register for approval. It is recommended that the local landmark nomination be completed first, and then the resulting information incorporated into the National Register nomination for efficiency and consistency.

I. RMS QUEEN MARY METEOROLOGICAL CONDITIONS MONITORING PLAN

See Appendix B.

J. IMPLEMENTATION OF CONSERVATION MANAGEMENT PLAN

Preserving the RMS Queen Mary including her fine art, decorative art and historic artifacts will be a complex and challenging undertaking for the City of Long Beach and the Ship's Operators. Projects of this scale require a variety of public and private funding sources and are most successful when undertaken as a preservation and rehabilitation master plan. Ideally this CMP and all of the above recommended surveys and reports would be incorporated into a comprehensive master plan for the rehabilitation, preservation and conservation of the ship and her valuable assets and artifacts. This coordinated, planned approach would ensure efficiency, cost effectiveness, consistency and appropriate oversight, as well as allow for improvements necessary for the continued use of the ship.



K. FUNDRAISING STRATEGIES

See Appendix C.

L. RESOURCES

1. Partial List of Historical Museum Ships and Maritime Associations

Ships

Baltimore, a steam tug of similar age in Baltimore, Maryland www.steamtug.org

The Delta King, a historic river boat of similar age to the Queen Mary moored in the Sacramento delta and used for similar purposes www.deltaking.com

The Kalakala, a ferry of similar age to the Queen Mary, designed in the Art Deco style www.kalakala.org

The Magna Carta, a hotel barge that cruises the river Thames www.magna-carta.co.uk

Maritime Museum of San Diego preserves ships similar to and older than the Queen Mary www.sdmaritime.org

Monterey History and Maritime Museum www.montereyhistory.org

Philadelphia Seaport, home of the cruiser Olympia and the submarine Becuna www.phillyseaport.org

San Francisco Maritime National Historic Park, home to Hercules, a steam tug vessel of similar age to the Queen Mary and many more vessels www.nps.gov/safr

The United States, a retired ocean liner of similar age (once took away the Blue Riband from the Queen Mary) currently in Philadelphia www.ssunitedstates.org

Maritime Associations:

Historic Naval Ships Association www.hnsa.org

Association for Maritime Preservation www.maritimepreservation.org

2. Marine Surveyors

Recommended, and Experienced in Historic Ships (from Dave Mathieson, Maritime Conservator)

Hull & Cargo Surveyors, Inc.
1891 N. Gaffey Street. Ste 244
San Pedro, CA 90731
(310) 548-8552 (310) 831-3087

Ocean Technical Services
Joseph Lombardi, AMS, BW, Marine Surveyor and Consultant
10 Dalton Avenue, Gloucestor, MA 01930
(978) 526-1894 fax:(866) 381-2687
oceantechserv.com
joe@oceantechserv.com

Charles C. Deroko, Inc.
Marine Surveyor, Consultant and Licensed Captain
215 Adams Street, 4B

Brooklyn, NY 11201-2863
(718) 403-0460
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Local Surveyors

Admiralty Marine Surveyors, Inc.
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Wilmington, CA 90744
(310) 835-7139 fax: (310) 835-9161

Brandmeyer International
2447 Sparta Drive
Rancho Palos Verdes, CA 90275
(310) 519-1979 fax: (310) 519-9551

Brighton Marine Consulting and Auditing
820 South Webster Ave., Suite 6
Anaheim, CA 92804
(714) 828-9984 fax: (310) 828-9984

Cullen Maritime Services, Inc.
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E. Conservators in the Los Angeles Area by Specialization Objects

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M. CONSERVATION ETHICS AND GUIDELINES

1. Code of Ethics American Institute for Conservation of Historic and Artistic Works

Preamble

The primary goal of conservation professionals, individuals with extensive training and special expertise, is the preservation of cultural property. Cultural property consists of individual objects, structures, or aggregate collections. It is material which has significance that may be artistic, historical, scientific, religious, or social, and it is an invaluable and irreplaceable legacy that must be preserved for future generations. In striving to achieve this goal, conservation professionals assume certain obligations to the cultural property, to its owners and custodians, to the conservation profession, and to society as a whole. This document, the Code of Ethics and Guidelines for Practice of the American Institute for Conservation of Historic and Artistic Works (AIC), sets forth the principles that guide conservation professionals and others who are involved in the care of cultural property.

I. The conservation professional shall strive to attain the highest possible standards in all aspects of conservation, including, but not limited to, preventive conservation, examination, documentation, treatment, research, and education.

II. All actions of the conservation professional must be governed by an informed respect for the cultural property, its unique character and significance, and the people or person who created it.

III. While recognizing the right of society to make appropriate and respectful use of cultural property, the conservation professional shall serve as an advocate for the preservation of cultural property.

IV. The conservation professional shall practice within the limits of personal competence and education as well as within the limits of the available facilities.

V. While circumstances may limit the resources allocated to a particular situation, the quality of work that the conservation professional performs shall not be compromised.

VI. The conservation professional must strive to select methods and materials that, to the best of current knowledge, do not adversely affect cultural property or its future examination, scientific investigation, treatment, or function.

VII. The conservation professional shall document examination, scientific investigation, and treatment by creating permanent records and reports.

VIII. The conservation professional shall recognize a responsibility for preventive conservation by endeavoring to limit damage or deterioration to cultural property, providing guidelines for continuing use and care, recommending appropriate environmental conditions for storage and exhibition, and encouraging proper procedures for handling, packing, and transport.

IX. The conservation professional shall act with honesty and respect in all professional relationships, seek to ensure the rights and opportunities of all individuals in the profession, and recognize the specialized knowledge of others.

X. The conservation professional shall contribute to the evolution and growth of the profession, a field of study that encompasses the liberal arts and the natural sciences. This contribution may be made by such means as continuing development of personal skills and knowledge, sharing of information and experience with colleagues, adding to the profession's written body of knowledge, and providing and promoting educational opportunities in the field.

XI. The conservation professional shall promote an awareness and understanding of conservation through open communication with allied professionals and the public.

XII. The conservation professional shall practice in a manner that minimizes personal risks and hazards to co-workers, the public, and the environment.

XIII. Each conservation professional has an obligation to promote understanding of and adherence to this Code of Ethics.

2. Guidelines for Practice American Institute for Conservation of Historic and Artistic Works

The conservation professional should use the following guidelines and supplemental commentaries together with the AIC Code of Ethics in the pursuit of ethical practice. The commentaries are separate documents, created by the AIC membership, that are intended to amplify this document and to accommodate growth and change in the field.

PROFESSIONAL CONDUCT

1. Conduct: Adherence to the Code of Ethics and Guidelines for Practice is a matter of personal responsibility. The conservation professional should always be guided by the intent of this document, recognizing that specific circumstances may legitimately affect professional decisions.

2. Disclosure: In professional relationships, the conservation professional should share complete and accurate information relating to the efficacy and value of materials and procedures. In seeking and disclosing such information, and that relating to analysis and research, the conservation professional should recognize the importance of published information that has undergone formal peer review.

3. Laws and Regulations: The conservation professional should be cognizant of laws and regulations that may have a bearing on professional activity. Among these laws and regulations are those concerning the rights of artists and their estates, occupational health and safety, sacred and religious material, excavated objects, endangered species, human remains, and stolen property.

4. Practice: Regardless of the nature of employment, the conservation professional should follow appropriate standards for safety, security, contracts, fees, and advertising.

4a. Health and Safety: The conservation professional should be aware of issues concerning the safety of materials and procedures and should make this information available to others, as appropriate.

4b. Security: The conservation professional should provide working and storage conditions designed to protect cultural property.

4c. Contracts: The conservation professional may enter into contractual agreements with individuals, institutions, businesses, or government agencies provided that such agreements do not conflict with principles of the Code of Ethics and Guidelines for Practice.

4d. Fees: Fees charged by the conservation professional should be commensurate with services rendered. The division of a fee is acceptable only when based on the division of service or responsibility.

4e. Advertising: Advertising and other representations by the conservation professional should present an accurate description of credentials and services. Limitations concerning the use of the AIC name or membership status should be followed as stated in the AIC Bylaws, section II, 13.

5. Communication: Communication between the conservation professional and the owner, custodian, or authorized agent of the cultural property is essential to ensure an agreement that reflects shared decisions and realistic expectations.

6. Consent: The conservation professional should act only with the consent of the owner, custodian, or authorized agent. The owner, custodian, or agent should be informed of any circumstances that necessitate significant deviations from the agreement. When possible, notification should be made before such changes are made.

7. Confidentiality: Except as provided in the Code of Ethics and Guidelines for Practice, the conservation professional should consider relationships with an owner, custodian, or authorized agent as confidential. Information derived from examination, scientific investigation, or treatment of the cultural property should not be published or otherwise made public without written permission.

8. Supervision: The conservation professional is responsible for work delegated to other professionals, students, interns, volunteers, subordinates, or agents and assignees. Work should not be delegated or subcontracted unless the conservation professional can supervise the work directly, can ensure proper supervision, or has sufficient knowledge of the practitioner to be confident of the quality of the work. When appropriate, the owner, custodian, or agent should be informed if such delegation is to occur.

9. Education: Within the limits of knowledge, ability, time, and facilities, the conservation professional is encouraged to become involved in the education of conservation personnel. The objectives and obligations of the parties shall be agreed upon mutually.

10. Consultation: Since no individual can be expert in every aspect of conservation, it may be appropriate to consult with colleagues or, in some instances, to refer the owner, custodian, or authorized agent to a professional who is more experienced or better equipped to accomplish the required work. If the owner requests a second opinion, this request must be respected.

11. Recommendations and References: The conservation professional should not provide recommendations without direct knowledge of a colleague's competence and experience. Any reference to the work of others must be based on facts and personal knowledge rather than on hearsay.

12. Adverse Commentary: A conservation professional may be required to testify in legal, regulatory, or administrative proceedings concerning allegations of unethical conduct. Testimony concerning such matters should be given at these proceedings or in connection with paragraph 13 of these Guidelines.

13. Misconduct: Allegations of unethical conduct should be reported in writing to the AIC president as described in the AIC Bylaws, section II, 12. As stated in the bylaws, all correspondence regarding alleged unethical conduct shall be held in the strictest confidence. Violations of the Code and Guidelines that constitute unethical conduct may result in disciplinary action.

14. Conflict of Interest: The conservation professional should avoid situations in which there is a potential for a conflict of interest that may affect the quality of work, lead to the dissemination of false information, or give the appearance of impropriety.

15. Related Professional Activities: The conservation professional should be especially mindful of the considerable potential for conflict of interest in activities such as authentication, appraisal, or art dealing.

EXAMINATION AND SCIENTIFIC INVESTIGATION

16. Justification: Careful examination of cultural property forms the basis for all future action by the conservation professional. Before undertaking any examination or tests that may cause change to cultural property, the conservation professional should establish the necessity for such procedures.

17. Sampling and Testing: Prior consent must be obtained from the owner, custodian, or agent before any material is removed from a cultural property. Only the minimum required should be removed, and a record of removal must be made. When appropriate, the material removed should be retained.

18. Interpretation: Declarations of age, origin, or authenticity should be made only when based on sound evidence.

19. Scientific Investigation: The conservation professional should follow accepted scientific standards and research protocols.

PREVENTIVE CONSERVATION

20. Preventive Conservation: The conservation professional should recognize the critical importance of preventive conservation as the most effective means of promoting the long-term preservation of cultural property. The conservation professional should provide guidelines for continuing use and care, recommend appropriate environmental conditions for storage and exhibition, and encourage proper procedures for handling, packing, and transport.

TREATMENT

21. Suitability: The conservation professional performs within a continuum of care and will rarely be the last entrusted with the conservation of a cultural property. The conservation professional should only recommend or undertake treatment that is judged suitable to the preservation of the aesthetic, conceptual, and physical characteristics of the cultural property. When nonintervention best serves to promote the preservation of the cultural property, it may be appropriate to recommend that no treatment be performed.

22. Materials and Methods: The conservation professional is responsible for choosing materials and methods appropriate to the objectives of each specific treatment and consistent with currently accepted practice. The advantages of the materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, and function.

23. Compensation for Loss: Any intervention to compensate for loss should be documented in treatment records and reports and should be detectable by common examination methods. Such compensation should be reversible and should not falsely modify the known aesthetic, conceptual, and physical characteristics of the cultural property, especially by removing or obscuring original material.

DOCUMENTATION

24. Documentation: The conservation professional has an obligation to produce and maintain accurate, complete, and permanent records of examination, sampling, scientific investigation, and treatment. When appropriate, the records should be both written and pictorial. The kind and extent of documentation may vary according to the circumstances, the nature of the object, or whether an individual object or a collection is to be documented. The purposes of such documentation are: - to establish the condition of cultural property; -to aid in the care of cultural property by providing information helpful -to future treatment and by adding to the profession's body of knowledge; - to aid the owner, custodian, or authorized agent and society as a whole in the appreciation and use of cultural property by increasing understanding of an object's aesthetic, conceptual, and physical characteristics; and to aid the conservation professional by providing a reference that can assist in the continued development of knowledge and by supplying records that can help avoid misunderstanding and unnecessary litigation.

25. Documentation of Examination: Before any intervention, the conservation professional should make a thorough examination of the cultural property and create appropriate records. These records and the reports derived from them must identify the cultural property and include the date of examination and the name of the examiner. They also should include, as appropriate, a description of structure, materials, condition, and pertinent history.

26. Treatment Plan: Following examination and before treatment, the conservation professional should prepare a plan describing the course of treatment. This plan should also include the justification for and the objectives of treatment, alternative approaches, if feasible, and the potential risks. When appropriate, this plan should be submitted as a proposal to the owner, custodian, or authorized agent.

27. Documentation of Treatment: During treatment, the conservation professional should maintain dated documentation that includes a record or description of techniques or procedures involved, materials used and their composition, the nature and extent of all alterations, and any additional information revealed or otherwise ascertained . A report prepared from these records should summarize this information and provide, as necessary, recommendations for subsequent care.

28. Preservation of Documentation: Documentation is an invaluable part of the history of cultural property and should be produced and maintained in as permanent a manner as practicable. Copies of reports of examination and treatment must be given to the owner, custodian, or authorized agent, who should be advised of the importance of maintaining these materials with the cultural property. Documentation is also an important part of the profession's body of knowledge. The conservation professional should strive to preserve these records and give other professionals appropriate access to them, when access does not contravene agreements regarding confidentiality.

EMERGENCY SITUATIONS

29. Emergency Situations: Emergency situations can pose serious risks of damage to or loss of cultural property that may warrant immediate intervention on the part of the conservation professional. In an

emergency that threatens cultural property, the conservation professional should take all reasonable action to preserve the cultural property, recognizing that strict adherence to the Guidelines for Practice may not be possible.

AMENDMENTS

30. Amendments: Proposed amendments to the Code of Ethics and Guidelines for Practice must be initiated by petition to the AIC Board of Directors from at least five members who are Fellows or Professional Associates of AIC. The board will direct the appropriate committee to prepare the amendments for vote in accordance with procedures described in Section VII of the Bylaws. Acceptance of amendments or changes must be affirmed by at least two-thirds of all AIC Fellows and Professional Associates voting.

COMMENTARIES

31. Commentaries: Commentaries are prepared or amended by specialty groups, task forces, and appropriate committees of AIC. A review process shall be undergone before final approval by the AIC Board of Directors.

*Revised August 1994

3. Code of Ethics for Museums American Association of Museums

Introduction

Ethical codes evolve in response to changing conditions, values, and ideas. A professional code of ethics must, therefore, be periodically updated. It must also rest upon widely shared values. Although the operating environment of museums grows more complex each year, the root value for museums, the tie that connects all of us together despite our diversity, is the commitment to serving people, both present and future generations. This value guided the creation of and remains the most fundamental principle in the following Code of Ethics for Museums.

Code of Ethics for Museums

Museums make their unique contribution to the public by collecting, preserving, and interpreting the things of this world. Historically, they have owned and used natural objects, living and nonliving, and all manner of human artifacts to advance knowledge and nourish the human spirit. Today, the range of their special interests reflects the scope of human vision. Their missions include collecting and preserving, as well as exhibiting and educating with materials not only owned but also borrowed and fabricated for these ends. Their numbers include both governmental and private museums of anthropology, art history and natural history, aquariums, arboreta, art centers, botanical gardens, children's museums, historic sites, nature centers, planetariums, science and technology centers, and zoos. The museum universe in the United States includes both collecting and non-collecting institutions. Although diverse in their missions, they have in common their nonprofit form of organization and a commitment of service to the public. Their collections and/or the objects they borrow or fabricate are the basis for research, exhibits, and programs that invite public participation.

Taken as a whole, museum collections and exhibition materials represent the world's natural and cultural common wealth. As stewards of that wealth, museums are compelled to advance an understanding of all

natural forms and of the human experience. It is incumbent on museums to be resources for humankind and in all their activities to foster an informed appreciation of the rich and diverse world we have inherited. It is also incumbent upon them to preserve that inheritance for posterity.

Museums in the United States are grounded in the tradition of public service. They are organized as public trusts, holding their collections and information as a benefit for those they were established to serve. Members of their governing authority, employees, and volunteers are committed to the interests of these beneficiaries. The law provides the basic framework for museum operations. As nonprofit institutions, museums comply with applicable local, state, and federal laws and international conventions, as well as with the specific legal standards governing trust responsibilities. This Code of Ethics for Museums takes that compliance as given. But legal standards are a minimum. Museums and those responsible for them must do more than avoid legal liability; they must take affirmative steps to maintain their integrity so as to warrant public confidence. They must act not only legally but also ethically. This Code of Ethics for Museums, therefore, outlines ethical standards that frequently exceed legal minimums.

Loyalty to the mission of the museum and to the public it serves is the essence of museum work, whether volunteer or paid. Where conflicts of interest arise — actual, potential, or perceived — the duty of loyalty must never be compromised. No individual may use his or her position in a museum for personal gain or to benefit another at the expense of the museum, its mission, its reputation, and the society it serves.

For museums, public service is paramount. To affirm that ethic and to elaborate its application to their governance, collections, and programs, the American Association of Museums promulgates this Code of Ethics for Museums. In subscribing to this code, museums assume responsibility for the actions of members of their governing authority, employees, and volunteers in the performance of museum-related duties. Museums, thereby, affirm their chartered purpose, ensure the prudent application of their resources, enhance their effectiveness, and maintain public confidence. This collective endeavor strengthens museum work and the contributions of museums to society — present and future.

Governance

Museum governance in its various forms is a public trust responsible for the institution's service to society. The governing authority protects and enhances the museum's collections and programs and its physical, human, and financial resources. It ensures that all these resources support the museum's mission, respond to the pluralism of society, and respect the diversity of the natural and cultural common wealth.

Thus, the governing authority ensures that:

- all those who work for or on behalf of a museum understand and support its mission and public trust responsibilities
- its members understand and fulfill their trusteeship and act corporately, not as individuals
- the museum's collections and programs and its physical, human, and financial resources are protected, maintained, and developed in support of the museum's mission
- it is responsive to and represents the interests of society
- it maintains the relationship with staff in which shared roles are recognized and separate responsibilities respected

- working relationships among trustees, employees, and volunteers are based on equity and mutual respect
- professional standards and practices inform and guide museum operations
- policies are articulated and prudent oversight is practiced
- governance promotes the public good rather than individual financial gain.

Collections

The distinctive character of museum ethics derives from the ownership, care, and use of objects, specimens, and living collections representing the world's natural and cultural common wealth. This stewardship of collections entails the highest public trust and carries with it the presumption of rightful ownership, permanence, care, documentation, accessibility, and responsible disposal.

Thus, the museum ensures that:

- collections in its custody support its mission and public trust responsibilities
- collections in its custody are lawfully held, protected, secure, unencumbered, cared for, and preserved
- collections in its custody are accounted for and documented
- access to the collections and related information is permitted and regulated
- acquisition, disposal, and loan activities are conducted in a manner that respects the protection and preservation of natural and cultural resources and discourages illicit trade in such materials
- acquisition, disposal, and loan activities conform to its mission and public trust responsibilities
- disposal of collections through sale, trade, or research activities is solely for the advancement of the museum's mission. Proceeds from the sale of nonliving collections are to be used consistent with the established standards of the museum's discipline, but in no event shall they be used for anything other than acquisition or direct care of collections.
- the unique and special nature of human remains and funerary and sacred objects is recognized as the basis of all decisions concerning such collections
- collections-related activities promote the public good rather than individual financial gain
- competing claims of ownership that may be asserted in connection with objects in its custody should be handled openly, seriously, responsively and with respect for the dignity of all parties involved.

Programs

Museums serve society by advancing an understanding and appreciation of the natural and cultural common wealth through exhibitions, research, scholarship, publications, and educational activities. These programs further the museum's mission and are responsive to the concerns, interests, and needs of society.

Thus, the museum ensures that:

- programs support its mission and public trust responsibilities

- programs are founded on scholarship and marked by intellectual integrity
- programs are accessible and encourage participation of the widest possible audience consistent with its mission and resources
- programs respect pluralistic values, traditions, and concerns
- revenue-producing activities and activities that involve relationships with external entities are compatible with the museum's mission and support its public trust responsibilities
- programs promote the public good rather than individual financial gain.

Promulgation

This Code of Ethics for Museums was adopted by the Board of Directors of the American Association of Museums on November 12, 1993. The AAM Board of Directors recommends that each nonprofit museum member of the American Association of Museums adopt and promulgate its separate code of ethics, applying the Code of Ethics for Museums to its own institutional setting.

A Committee on Ethics, nominated by the president of the AAM and confirmed by the Board of Directors, will be charged with two responsibilities:

- establishing programs of information, education, and assistance to guide museums in developing their own codes of ethics
- reviewing the Code of Ethics for Museums and periodically recommending refinements and revisions to the Board of Directors.

Afterword

In 1987 the Council of the American Association of Museums determined to revise the association's 1978 statement on ethics. The impetus for revision was recognition throughout the American museum community that the statement needed to be refined and strengthened in light of the expanded role of museums in society and a heightened awareness that the collection, preservation, and interpretation of natural and cultural heritages involve issues of significant concern to the American people.

Following a series of group discussions and commentary by members of the AAM Council, the Accreditation Commission, and museum leaders throughout the country, the president of AAM appointed an Ethics Task Force to prepare a code of ethics. In its work, the Ethics Task Force was committed to codifying the common understanding of ethics in the museum profession and to establishing a framework within which each institution could develop its own code. For guidance, the task force looked to the tradition of museum ethics and drew inspiration from AAM's first code of ethics, published in 1925 as Code of Ethics for Museum Workers, which states in its preface:

Museums, in the broadest sense, are institutions which hold their possessions in trust for mankind and for the future welfare of the [human] race. Their value is in direct proportion to the service they render the emotional and intellectual life of the people. The life of a museum worker is essentially one of service.

This commitment to service derived from nineteenth-century notions of the advancement and dissemination of knowledge that informed the founding documents of America's museums. George Brown Goode, a noted zoologist and first head of the United States National Museum, declared in 1889:

The museums of the future in this democratic land should be adapted to the needs of the mechanic, the factory operator, the day laborer, the salesman, and the clerk, as much as to those of the professional man and the man of leisure. . . . In short, the public museum is, first of all, for the benefit of the public.

John Cotton Dana, an early twentieth-century museum leader and director of the Newark Museum, promoted the concept of museum work as public service in essays with titles such as "Increasing the Usefulness of Museums" and "A Museum of Service." Dana believed that museums did not exist solely to gather and preserve collections. For him, they were important centers of enlightenment.

By the 1940s, Theodore Low, a strong proponent of museum education, detected a new concentration in the museum profession on scholarship and methodology. These concerns are reflected in Museum Ethics, published by AAM in 1978, which elaborated on relationships among staff, management, and governing authority.

During the 1980s, Americans grew increasingly sensitive to the nation's cultural pluralism, concerned about the global environment, and vigilant regarding the public institutions. Rapid technological change, new public policies relating to nonprofit corporations, a troubled educational system, shifting patterns of private and public wealth, and increased financial pressures all called for a sharper delineation of museums' ethical responsibilities. In 1984 AAM's Commission on Museums for a New Century placed renewed emphasis on public service and education, and in 1986 the code of ethics adopted by the International Council of Museums (ICOM) put service to society at the center of museum responsibilities. ICOM defines museums as institutions "in the service of society and of its development" and holds that "employment by a museum, whether publicly or privately supported, is a public trust involving great responsibility."

Building upon this history, the Ethics Task Force produced several drafts of a Code of Ethics for Museums. These drafts were shared with the AAM Executive Committee and Board of Directors, and twice referred to the field for comment. Hundreds of individuals and representatives of professional organizations and museums of all types and sizes submitted thoughtful critiques. These critiques were instrumental in shaping the document submitted to the AAM Board of Directors, which adopted the code on May 18, 1991. However, despite the review process, when the adopted code was circulated, it soon became clear that the diversity of the museum field prevented immediate consensus on every point.

Therefore, at its November 1991 meeting, the AAM Board of Directors voted to postpone implementation of the Code of Ethics for at least one year. At the same meeting an Ethics Commission nominated by the AAM president was confirmed. The newly appointed commission — in addition to its other charges of establishing educational programs to guide museums in developing their own code of ethics and establishing procedures for addressing alleged violations of the code — was asked to review the code and recommend to the Board changes in either the code or its implementation.

The new Ethics Commission spent its first year reviewing the code and the hundreds of communications it had generated, and initiating additional dialogue. AAM institutional members were invited to comment further on the issues that were most divisive — the mode of implementation and the restrictions placed on funds from deaccessioned objects. Ethics Commission members also met in person with their colleagues at the annual and regional meetings, and an ad hoc meeting of museum directors was convened by the board president to examine the code's language regarding deaccessioning.

This process of review produced two alternatives for the board to consider at its May meeting: (1) to accept a new code developed by the Ethics Commission, or (2) to rewrite the sections of the 1991 code relating to

use of funds from deaccessioning and mode of implementation. Following a very lively and involved discussion, the motion to reinstate the 1991 code with modified language was passed and a small committee met separately to make the necessary changes.

In addition, it was voted that the Ethics Commission be renamed the Committee on Ethics with responsibilities for establishing information and educational programs and reviewing the Code of Ethics for Museums and making periodic recommendations for revisions to the board. These final changes were approved by the board in November 1993 and are incorporated into this document, which is the AAM Code of Ethics for Museums.

Each nonprofit museum member of the American Association of Museums should subscribe to the AAM Code of Ethics for Museums. Subsequently, these museums should set about framing their own institutional codes of ethics, which should be in conformance with the AAM code and should expand on it through the elaboration of specific practices. This recommendation is made to these member institutions in the belief that engaging the governing authority, staff, and volunteers in applying the AAM code to institutional settings will stimulate the development and maintenance of sound policies and procedures necessary to understanding and ensuring ethical behavior by institutions and by all who work for them or on their behalf.

With these steps, the American museum community expands its continuing effort to advance museum work through self-regulation. The Code of Ethics for Museums serves the interests of museums, their constituencies, and society. The primary goal of AAM is to encourage institutions to regulate the ethical behavior of members of their governing authority, employees, and volunteers. Formal adoption of an institutional code promotes higher and more consistent ethical standards. To this end, the Committee on Ethics will develop workshops, model codes, and publications. These and other forms of technical assistance will stimulate a dialogue about ethics throughout the museum community and provide guidance to museums in developing their institutional codes.

Updated: 2000

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Knell, Simon. *Care of Collections*. New York: Routledge. 1994.

Discusses the museum institution and how collections drive the work performed there. The text discusses ethical considerations, conservation and environmental preventive care, and disaster planning.

Lord, Allyn, et al. Steal This Handbook! A Template for Creating a Museum's Emergency Preparedness Plan. Southwestern Registrars Association. 1994.

As the title suggests, the authors intend for institutions to take their handbook and tailor it to their own situations and create their own Emergency Preparedness Plan.

National Maritime Initiative. Maritime Heritage Program. *1990 Inventory of Large Preserved Historic Vessels*. Prepared by the National Maritime Initiative. Maritime Heritage Program. Washington D.C. 1990.

Inventories of vessels still extant, their historic significance, architectural changes made, lists of owners, and assembled photographs.

National Museums Liverpool. *Cunard Archives*.

The Cunard Ships Plans Collections contains about 400-500 individual construction drawings of the Queen Mary (around 40 rolls). Mainly, these plans/drawings originate from two sources, the John Brown Shipbuilding Company and the Cunard Naval Architect's Department in Liverpool. As well as construction drawings, the collection also includes Boardroom Plans, Cabin Plans, specification books and engine performance books. The Cunard Collection also includes a large collection of correspondence from the Naval Architect's Department regarding the Queen Mary's design, building, fitting out details, maiden voyage, reconditioning, collisions and damages.

Ogden, Sherelyn. Conservation Planning: Guidelines for Writing a Long Range Plan. American Association of Museums, Washington D.C.1998.

How to write a long range plan, step by step. Intended for museums, libraries, and historical societies. Published loose leaf style for easy photocopying, with worksheets, guidelines, and even a computer disk.

Reibel, Daniel. Registration Methods for the Small Museum, Fourth Ed. Alta Mira Press. New York. 2008.

This text offers practical solutions for problems of a small museum. The author understands that many small museums do not have inventories or numbering museums, or several systems. Creating a working system can be daunting, but this text is very helpful.

Ripkyma, Donovan *The Economics of Historic Preservation: A Community Leader's Guide*. National Trust for Historic Preservation. Washington D.C., 2005

100 arguments why historic preservation is good for a community. Good reading for city officials, real estate developers, property owners, and other skeptics. Entertaining, enlightening, and his arguments are well documented and well-defended.

Sandwith, Hermione and Stainton, Sheila. *Manual of Housekeeping.* The National Trust. London. 2000

Written for art conservators as well as housekeepers, this text discusses how to operate a historic home, from cleaning ormolu to chandeliers, and maintaining low levels of light, humidity and dust in a practical manner.

Spectre, Peter H. Ed. *Painting and Varnishing.* The Wooden Boat Series. Wooden Boat Publications. Brooklin, Maine. 1995.

Maintaining old surfaces with modern materials can be difficult, but this book discusses materials for old ships and small wooden boats.

U.S. Department of the Interior. National Park Service. *Guidelines for Recording Historic Ships*. Prepared by the Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscapes Survey (HABS/HAER/HALS). Washington D.C., National Park Service, U.S. Department of the Interior, 1995.
http://www.nps.gov/hdp/standards/HAER/GRHS%20FINAL%20PDF.pdf

The guidelines show how to record a historic ship in a unified manner so that it may be entered into the Historic American Engineering Record. Examples provided. Available online at NPS.gov.

U.S. Department of the Interior. National Park Service. *Nominating Historic Vessels and Shipwrecks to the National Register of Historic Places.* National Register Bulletin 20. U.S. Department of the Interior, National Park Service, Interagency Resources Division.
http://www.nps.gov/history/nr/publications/bulletins/pdfs/nrb20.pdf

U.S. Department of the Interior. National Park Service. *Standards for Historic Vessel Preservation Projects with Guidelines for Applying the Standards*. Washington, D.C., Secretary of the Interior, U.S. Department of the Interior, National Park Service, National Maritime Initiative, 1990.

The standard that all maritime museums use, this is available online on several sites, and found via search engine.

U.S. Department of the Interior. National Park Service. *The Secretary of the Interior's Standards and Guidelines for Preservation Planning*. Secretary of the Interior, U.S. Department of the Interior, National Park Service. Washington D.C. 1983

Practical, easy to read, discussing how to decide on a historic context, set goals, and coordinating with public interests and professionals. Available online at nps.gov.

Wittman, Rebecca. *Brightwork.* McGraw-Hill Professional, New York. 1991.

For do-it-yourselfers of marine woodwork, this text is chatty, honest, blunt and opinionated. How to identify failing surface coatings, how to patch, how to strip. "Do it right or hire someone who will." Many photographs.

Wittman, Rebecca. The Brightwork Companion: Tried and True Methods and Strongly Held Opinions in Thirteen and a Half Chapters. McGraw-Hill Companies, New York. 2004.

For weekend do it yourselfers of marine woodwork, this is similar to her Brightwork, but with recipes and instructions with results in two days. Entertaining, well photographed.

Winterthur Decorative Art Series*. The Winterthur Guide to Caring For Your Collection*. University Press of New England, Hanover and London. 2000.

Written for use by anyone with fine art or heirlooms, this text has chapters on how to care for furniture, books, paintings, porcelain, musical instruments and other materials typically handed down in a family. Well illustrated.

Whelchel, Harriet, ed. *Caring For Your Collections*. Heritage Preservation. New York: Harry Abrams, Inc., 1992.

Written for anyone who wishes to understand how to preserve and maintain art and artifacts in their home. Good for homeowners and museum professionals with diverse collections. Well illustrated.

Wood, Byrd. Basic Preservation: What Every Board Member Needs to Know. National Trust for Historic Preservation. Washington D.C., 2009

Comes with a power point presentation cd introducing historic preservation. Suggests tools and organizations for starting a preservation organization in a community and legal and financial tools that may be useful.

Wuellner, Margarita J., Marlise Fratinardo, and Amanda Kainer. *Final Inventory Report, Survey of Original Fine and Decorative Arts on the Royal Mail Ship Queen Mary*. Prepared for City of Long Beach. Prepared by PCR Services Corporation, Santa Monica, California, April, 2009.

Appendix A – Conservation Assessment Summary

RMS Queen Mary

Conservation Assessment Summary

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APPENDIX A - CONSERVATION ASSESSMENT SUMMARY

A. RMS QUEEN MARY SITE INFORMATION

The RMS Queen Mary is a retired luxury ocean liner built by John Brown and Company, at Clydebank, Scotland, Great Britain and launched in 1936.

The Queen Mary and all her associated valuable assets, art and artifacts are owned by the City of Long Beach, California. These consist of the ship, architectural features, fixtures, equipment and artifacts relating to the history of the Queen Mary.

Currently she is moored in the Long Beach Harbor operating as a hotel, event location, and conference site and destination attraction with the distinction of being listed in the National List of Historic Places.

The City of Long Beach presently contracts Delaware North Companies to manage the Queen Mary's hotel, event and attraction activities.

B. GEOGRAPHIC PROFILE

Long Beach is a large city located in Southern California on the Pacific Coast. Situated in Los Angeles County, about 20 miles south of downtown Los Angeles, Long Beach is the 36th largest city in the nation and 6th largest in California.

RMS Queen Mary is moored in the Long Beach Harbor, sheltered by a man-made rock jetty.

The City of Long Beach website report on Natural Hazards Mitigation Plan indicates the City is in a designated tsunami zone, listing the port and surrounding commercial facilities as areas which would be significantly impacted by the occurrence of a tsunami.

The City of Long Beach report on Natural Hazards Mitigation Plan and the State of California recognizes the area is within a designated earthquake zone.

C. CLIMATE PROFILE

Long Beach Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg. Temperature	55.9	57.3	58.5	61.7	64.8	68.5	73.1	74.4	72.4	68.1	61.3	56.0	64.3
Avg. Max Temperature	66.8	67.7	68.0	71.5	73.3	77.0	82.7	84.0	82.1	78.4	72.1	67.0	74.2
Avg. Min Temperature	44.9	46.9	49.0	51.8	56.3	59.8	63.4	64.8	62.7	57.8	50.4	45.0	54.4

Long Beach Heating and Cooling	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Heating Degree Days	285	221	214	134	69.0	39.0	0.0	0.0	15.0	24.0	145	284	1430
Cooling Degree Days	0.0	5.0	13.0	35.0	63.0	144	255	295	237	120	34.0	0.0	1201

Long Beach Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Precipitation (inches)	2.5	2.5	2.0	0.7	0.2	0.0	0.0	0.1	0.3	0.3	1.6	1.7	11.8
Days with Precipitation 0.01 inch or More	6.0	5.0	5.0	3.0	1.0	< 0.5	< 0.5	< 0.5	1.0	2.0	3.0	5.0	32.0
Monthly Snowfall (inches)	< 0.05	< 0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

D. GENERAL INFORMATION

The exterior of the ship has evident condition problems such as rusted metals and equipment, teak deck warping and loss, deteriorating lifeboats, visual appearance of aging paint, accumulation of particulates and debris as a result of age and deferred maintenance.

Conditions on the interior of the ship range from well maintained (Lobby, Observation Bar, Piccadilly Circus, Restaurants); functionally maintained (Engine Room, Salons, Archive, Hotel Rooms); to neglected (Pool and Artifacts in storage).

The ship suffers from water leaks associated with rain. In addition, pipes carrying liquids occasionally fail, causing leakage.

Some exterior walls have peeling paint, exposing bare metal. Some handrails have peeling paint, exposing bare wood.

Double-paned windows with sealed glazing have a great deal of debris and paint flakes accumulated in the space between panes.

Some mildew and mold are inevitably present on a ship. The City of Long Beach is currently undertaking a detailed analysis and study of the types of mildew and mold present on the ship.

The ship is routinely inspected by local fire and safely officials, in order to continue operations as a hotel.

E. STAFFING

Currently there are 426 full and part time paid employees.

There are no qualified preservation or conservation specialists or collections managers on staff at this time. There is not a dedicated position vacated or available.

Currently one staff member, Jacki Fanzo, Attractions Manager is primarily responsible for collections care. Her job description does not appear to reflect all the aspects of preservation that Jacki takes responsibility for, including:

Staff person(s) responsible for:

a. planning exhibitions ..... Jacki Fanzo

b. designing exhibitions ..... Jacki Fanzo

c. choosing objects for exhibitions .....Jacki Fanzo

d. monitoring objects on exhibit .....Jacki Fanzo

e. exhibit & mount fabrication .....Jacki Fanzo

f. maintenance and monitoring of displays .....Jacki Fanzo and Engineering staff

The Facilities/Engineering Department is responsible for general and specialized maintenance of the ship under the lease agreement with the City and outlined in the Base Maintenance Plan (BMP).

There are groups such as the ham radio group and store owners and operators who maintain and/or lease space on the ship for related activities, but are not employees.

In the past a small group of volunteers assisted Jacki Fanzo in inventorying, labeling, sorting and storing the artifacts in storage.

Presently there is no volunteer program in place as there is not a 501(c) (3) organization to support a volunteer program

F. CLIMATE AND ENVIRONMENTAL CONTROLS, TEMPERATURE AND RELATIVE HUMIDITY

Environmental conditions are currently maintained for human comfort standards suitable for current adapted use as a hotel, conference center, tourist attraction and event location.

Hotel rooms have individual controls, but exhibit areas and most public areas are not climate controlled.

Engineering staff monitor and maintain environment and control systems as required by Best Management Practices.

Monitoring of environment and maintenance of environmental control systems are recorded and archived by Engineering staff.

Individual environmental control systems are manually controlled on localized equipment.

Air is conditioned using forced air, chilled water. Heat is maintained with forced air, steam. Temperature can be adjusted but relative humidity levels cannot be regulated.

Various public spaces and guest rooms have porthole windows that can be opened to provide ventilation.

Exhibit areas that are uncontrolled environmentally have fluctuating temperatures; the engine room can be unpleasantly damp and warm in summer, but clammy and cool in winter, for example.

The Bridge and House Deck (uppermost deck) appears to stay open to the environment year-round, allowing light damage to the stored flags in the cabinet adjacent the portside door, vandalism to the original chart drawers and changes in color and opacity of the varnish (crackling) in the wood panels.

Type and Location of Environmental Control Systems

	Guest and Public Spaces	Exhibit Spaces	Artifact Storage
Temperature Control System	YES	YES	NO
Humidity Control System	NO	NO	NO
Filtered Air	YES	YES	NO
Simple Air conditioning(window units)	NO	NO	NO
Simple Heating	YES	YES	NO

Source: Hudson Conservation Studio, LLC, 2010

G. AIR QUALITY, POLLUTANTS AND PARTICULATES

The ship, an artifact in itself, is exposed to pollutants and contaminated air and thereby vulnerable to associated deterioration.

Heavy accumulations of airborne particulates were observed surrounding vents and on surfaces adjacent to vents.

Heavy accumulations of airborne particulates were also observed inside some exhibit cases; for example, the telephone display on Bridge, which is in an open air space. The exhibit case is only partially covered.

Smoking is prohibited in all hotel rooms and enclosed areas. Smoking appears to be generally allowed on outside decks, where ashtray posts are found. However evidence of smoking was noticed on the starboard (right side) side Bridge Wing.

Potentially harmful substances such as paints, varnishes, paint removers, and paint thinners are stored on ship in various dedicated work areas. Marine paints typically have copper thiocyanate or cuprous oxide which is included as an anti-fouling agent, intended to prevent fouling of underwater structures (as the bottoms of ships).

1. Air Filtration

The air quality within in the ship can contribute to deterioration of valuable assets depending upon their individual vulnerability.

Air filtration systems are monitored and maintained to Base Maintenance Plan in tandem with the air conditioning and heating systems.

H. PEST CONTROL

Routine inspections and treatments for extermination are contracted to EcoLab, Inc., to maintain public health standards for the hotel.

Inspections for rodent, avian and insect presence are an integral part of monthly maintenance.

Standing water can be found in many areas, seemingly as a result of recent heavy rains. Condensation can accumulate and create standing water. Both attract and sustain biological activity.

Biological activity can be found throughout the ship, including moss, small plants, insects and other pests. It is unclear if pesticides are used routinely on valuable assets, art and artifacts, on the structure or in interior spaces. What type of pesticides are used by the contractor is unknown.

Artifacts are not actively collected, but artifacts are sometimes returned to the ship. These artifacts are not isolated before entry into collection areas.

1. Plants and Flowers

Live potted plants and faux plants are present in various indoor and weather deck public areas. The Queen Mary has three weather decks located on the upper three deck levels of the ship including the Bridge & House Deck, Sports Dec, and Sun Deck. The weather decks characteristically have no overhead protection from the weather. Flowers and plants are routinely brought on board for special events. These flowers and plants, generally commercially grown, are likely not treated for pests prior to entry to the ship. They are also not "museum prepped" (i.e., pistils and stamens removed, nectar and pollen swabbed out) prior to entry to the ship.

2. Food

Food is stored, prepared or consumed on board in many locations. At one time, all food was prepared on "R" ("Restaurant") Deck. The Pig & Whistle café serves the staff from "R" deck.

Over the years, restaurants, snack bars and delis have been installed in several different places, mostly on the weather decks. California Shakes and various souvenir shops all stock foods or prepare foods. Kitchens and pantries are also found adjacent to salons. Sir Winston's has a dedicated kitchen. Chelsea Room and Promenade Café are serviced by the main kitchen on Promenade Deck. Room Service is available within the hotel.

3. Evidence of Pest Activity

At the time of the survey, there was no significant evidence of insect pest infestation to the valuable assets, art and artifacts. It is recommended that all spaces, exhibits and storage areas containing valuable assets, art and artifacts be regularly monitored and controlled for the presence of pests, including insects as well as small animals and birds to avoid potential damage to the valuable assets. Open portholes and other means of access to exhibit and storage areas should be closed as a means of pest prevention. In addition, moisture and access to food creates an environment conducive to pests, and such areas with these conditions should also be carefully monitored and controlled to avoid the potential for pest infestations.

I. HOUSEKEEPING

Housekeeping in hotel, event, restaurant and attraction areas is the responsibility of the Engineering department and its staff.

Basic hotel and public health housekeeping appear to be accomplished in routine and ongoing practices. This includes dusting, trash emptying, vacuuming, sweeping, and mopping. Interior decorative metals (bronze, brass, German silver) appear polished; polish residue is often still visible in interstices. The salons are regularly and thoroughly cleaned between events.

It is unknown if housekeeping staff receives special instructions for the care and cleaning of unique, valuable assets, art and artifacts, or discussion on its frequency.

Polishing of bronze sculpture and other metallic art and decorative objects and hardware should be avoided as this will result in damage from abrasion by polishing. For example, damage from polishing is apparent on bronze sculptures in the Queen's Salon. Cleaning of metallic materials should only be conducted under the supervision of a conservator or by hotel staff who have been trained by a conservator in appropriate housekeeping methods for metallic objects.

The Queen Mary hotel does not appear to have regular housekeeping in exhibition or storage areas. Some of the period rooms are not accessible without dismantling built barriers.

It is unclear how cleaning of non-hotel areas such as the Wheel House, Archive and artifact storage areas can be accomplished with current number of staff.

Thoughtless visitors seem emboldened by some poorly maintained areas to deposit trash and unwanted items in the most obscure places, adding to the overall burden of maintaining a clean, cared-for environment throughout the ship.

J. ILLUMINATION

The institution utilizes compact fluorescent lamps (CFLs), limited tube fluorescents and incandescent bulbs throughout public spaces, hotel rooms and exhibits. Exhibits are lit with UV-safe CFLs. Daylight comes through portals, portholes, skylights and windows.

When fluorescent tube lights are exhausted they appear to be replaced with CFL's.

Filtration to reduce UV radiation is not found on portholes, windows, skylights or tube fluorescents. Some windows are painted out. Other portals and windows are left open day and night.

Window treatments are not uniformly present. Guest rooms are equipped with porthole drapes. The Observation Bar has louvers on its many windows. The Queen's Salon has two layers of curtains, heavy draperies and sheer curtains. The meeting rooms (Board Room, Regent Room) found on the Promenade Deck has heavy functional draperies, as film and PowerPoint presentations are given there.

It appears that lights are turned on 24-hours a day in areas such as the "A" Deck lobby, hallways and guest accessible exhibits such as the wheelhouse, officers' quarters on Sports Deck and second class sitting room on Sun Deck. The aft section engine room, theater and exhibition hall toward the stern or back of the ship are closed after business hours. These areas are seemingly inaccessible to visitors or hotel guests once the wharf tower is closed and presumably lights are turned off.

Photography by visitors is permitted in exhibit areas using all types of illumination: flash, floodlight, film or video recording.

Industrial filming is permitted in all areas of the ship. It is unclear whether RMS Queen Mary staff or managers are required to be present during commercial filming or photographic shoots.

Artifact storage in lower decks is essentially dark storage.

Illumination is not routinely monitored. The ship/hotel does not have lighting policies based on the sensitivity of various materials.

It should be noted that damage from light exposure is cumulative and irreversible.

1. Evidence of Light Damage

Teak decks are shrinking and any varnish present is deteriorating from constant exposure to daylight and other elements. Water leaks on the ship can be partially attributed to the shrinkage in the teak decks.

De-lamination and buckling of wood veneers is prevalent throughout the weather decks. A specific example is found on what appear to be original doors adjacent to an open door, portside Officers' Quarters.

Period room curtains, if present, are typically decorative only and are often light damaged. Upholstered furniture and floor coverings also show uneven fading.

In the Officer's Quarters original curtains are in tatters and one Roanoid closet handle in the Staff Captain's bedroom with exposure to direct daylight is weeping or disintegrating chemically. Roanoid, an early form of plastic which resembles Ivory was used throughout the ship as part of the original interior design program.

On the Bridge in the Chart Room the original wooden map and chart cabinet surfaces are crackled from prolonged daylight exposure. Also on the Bridge, the signal flags in the cabinet with glass panes show fading at the exposed edges.

Paper artifacts on display (original and reproduction) show uneven fading and discoloration from light exposure.

The following light readings are a representative sample of illumination sources and levels of light intensity measured in foot candles from representative areas of the ship.

Representative Illumination Sources and Levels of Light Intensity

Deck	Room/Area	Description	Light Type	f/c
Bridge and Housetops	Wheel House	Full sun	Day Light, CFLs	Not taken
	Chart Room	Full sun	Day Light, unshielded	Not taken
Sports Deck	Staff Captain Qtrs	Bedroom, by dresser	Day Light	4.0
		Bed, at pillow	Day Light	9.49
		Living Room Set	Day Light	18.94
	Radio Room	Center of Equipment Panel	Day Light and CFLs	81.0
		Outside Radio Room	Covered Walk, Day Light	12.0-18.0
Sun Deck	All Class Sitting Room	Avg. of readings taken in room	CFLs only	12.0
Promenade	Queen's Salon	Ctr dance floor	CFLs	3.8
		Center stage		10.8
		Window adjacent	Day light/CFL	45.4

Representative Illumination Sources and Levels of Light Intensity

Deck	Room/Area	Description	Light Type	f/c
"M" Deck	Mauretania Room	Wood Parquet Mural	CFLs	24.5
		Room Average	CFL	35-40
	Britannia Room	Paintings on Leather, Entrance	CFL	5.2-5.9
		Port by windows	Day Light, CFLs	21.9
		Starbd by windows	Day Light, CFLs	190.0
		Displays outside Britannia Room	CFLs	2.1-6.9
	Cunard Room (Ticket Office)	Painted Map	CFLs, fluorescents	18.82
"A" Deck	Bar-Lobby Area With original piano	Hunting Scene Parquet	Day Light, CFLs	12.9-13.2
		Tree Scene Parquet	Day Light, CFLs	6.0-8.3
		Porthole adjacent to bar	Day Light	70.1
		Big Glass Portals, Starbd Side	Day Light	160.0
	Lobby Area	Concierge Desk	Day Light, CFLs	1.9
	Firemen's Station	CO_2 Tanks	Day Light, CFLs	23.5
		Fireman's Display	Day Light	23.4
		Exhibit	Uncovered CFL	6.0
		Exhibit	Covered CFL	3.6
Deck	Room/Area	Description	Light Type	f/c
"B" Deck	Isolation Ward	Visitor's Bunkbed Room	Day Light, CFL	2.8
		Infirmary Bulletins in Exhibit Room	Day Light, CFL	9.3
		Embalming Kit, rubber tubes in Case	Day Light, CFL	13.5
"R" Deck	Grand Salon	Starbd Pheasant Mural, Left	Day Light, CFL	3.8
		Starbd Pheasant Mural, Right	Day Light, CFL	3.8
		Starbd Pheasant Mural, Center	Day Light, CFL	7.9
		Port side	Day Light	3.6
		Starbd side	Day Light	17.8
"C" Deck	Flag Store. Room	Portholes	Day Light	2.59-2.78
	Game Store. Room	Ambient Reading	Day Light	1.9-3.9

Representative Illumination Sources and Levels of Light Intensity

Deck	Room/Area	Description	Light Type	f/c
"D" Deck	Aft Historical Exhibit	Ambient in Room	Tube Fluorescents	10.2-11.9
		Vat Whiskey Bottle Case	Tube Fluorescents	6.9
		Sequined Evening Dress	Tube Fluorescents	8.8
		Stateroom Curtains Display	Tube Fluorescents	8.1
"E" Deck	Engine Room	Ambient Reading (no artifacts light sensitive here)	CFLs	3.8
	Maritime History Exhibits	1st Class Sitting Room Display	CFLs	12.0
		2nd Class Cabin Display	CFLs	6.0
		WWII Troop Transport, bunks	Blue Covered Gel CFLs	0.3
		WWII Canvas Duffle Bags Pile	CFLs	0.7
		War Bride Display, left bunk	CFLs	1.8
		War Bride Display, right bunk	CFLs	0.7
		Gymnasium	CFLs	0.8
"F" Deck	Archives	Lights off unless people present	CFLs, possibly tube fluorescents	12.0
"G" Deck	Forward empty space	Not in general use	Flashlights	Not taken

Source: Hudson Conservation Studio LLC, 2010

K. CURRENT AND PAST USE OF SHIP'S VALUABLE ASSETS

Valuable assets, art and artifacts are inventoried and described in PCR report.[1]

Valuable assets in this report, as previously defined in the Final Inventory Survey of Fine and Decorative Arts (PCR April 2009), refer to the works of fine art, decorative arts, built-ins, ephemera and other artifacts and objects significant to the history of the ship. Artifacts are the objects which are movable and significant to the history of the ship. Ephemera are artifacts such as photographs, log books, menus, signal flags, uniforms, textiles, and other objects consisting of impermanent materials that are best preserved under archival storage conditions.

[1] *Margarita J. Wuellner, Marlise Fratinardo, and Amanda Kainer. Final Inventory Report, Survey of Original Fine and Decorative Arts on the Royal Mail Ship Queen Mary, Prepared for the City of Long Beach. PCR Services Corporation, Santa Monica, California, April 2009.*

Interpretive period rooms and static displays are found throughout the various decks such as the Officers' Quarters on Sports Deck and the Isolation Ward on "A" Deck. Art and artifacts are also part of staged tableaus in period rooms with acrylic walls and locking doors.

The radio room houses historic radio equipment alongside modern equipment currently in use. Operated by The Associated Radio Amateurs of Long Beach, Inc. (ARALB), volunteers are there daily. Documents on the walls are light damaged. Plaques are nailed into the wall through original wood paneling. Piles of wires, rocks and old equipment are stored outside behind the radio room. Evidence of smoking and eating are found outside behind the radio room.

During our survey, we discovered and notified staff of several changes of condition within displays such as mold accumulation in one of the Officer's Quarters sitting rooms on the original carpets. Upon entering this sitting room the odor of mildew and mold was strong as a result of the combination of humidity, temperature and absence of air ventilation.

Current exhibitions and displays have been in place for a great deal of time, faded, dated and in need of new signage and didactic content.

In the past temporary exhibits been staged in collaboration with local groups and civic organizations. At the time of assessment there were no temporary exhibits.

The current practice of using original textiles as window coverings or as backdrops, from an archival point of view is not sustainable since the quantity of original textiles is limited.

The ship's history is also evidenced by extant architectural features integrated into the public spaces, salons and foyers, and in the staterooms. Architectural features such as wood parquet murals, paintings, reliefs, columns, stair banisters, architectural ornament, mantels, art glass, mirrors, decorative metal work, clocks, exotic wood veneer surfaces, stone veneer surfaces, stone torcheres, Roanoid fixtures, light fixtures, original hardware, and original built-in furniture are all vulnerable to damage from intentional or unintentional contact.

A few refinished, original deck chairs are outside available for guest use. Other pieces of original ship's furniture are located in the interior public spaces and in the staterooms. It is reported that these are subject to damage and destruction when in use.

Original linoleum is found in various areas throughout the ship. In some areas, faded and buckled, and in other areas, dented and damaged.

The existing life boats, which are in generally fragile condition, are reported to be replacements sold by Cunard to the City with the ship.

1. Display Methods

Most artifacts are displayed inside cases and vitrines with glass and acrylic glazing, improvised supports and ephemeral signage, illuminated by exterior sources.

In some instances these types of displays are staged in association with architectural features such as converted retail window display cases in Piccadilly Circus. Architectural features used as cases are often not air-tight.

Cases appear to be scavenged from many sources, from defunct businesses and remodeling campaigns of restaurants. They are not unified in appearance, and their hardiness is questionable. While materials used are not tested for hazards, the construction materials do not appear to be causing damage to the objects within.

Exhibit cases are accessed when objects are dislodged or when leaks occur.

Housekeeping is minimal due to a lack of staff.

Artifacts on display are generally supported, but not secured. There is little evidence of fish-line or wax in use to secure objects in place in case of earthquake or visitors' jostling cases.

Ventilation in fabricated cases is non-existent.

One vitrine on the starboard side of Sun Deck has a heavy accumulation of moisture and debris trapped inside. Some of the metal artifacts inside are actively corroding. Signage printed with water soluble ink is only partially legible.

Acid-free materials are not in evidence, but acidic commercial paper products are also not visible. Generally, it appears that artifacts are laid on commercially available textiles or recycled original textiles from the ship.

Evidence of cumulative light damage was observed, indicating overexposure of paper and textiles to natural and electric light.

2. Display Security

Some displays are shown behind barriers with little security other than chains between stanchions. The firehouse exhibit on "A" Deck and the Wheel House on the Bridge for example has easily breached chain barriers.

Visitor misbehavior is inevitable when spaces are easily accessible and security is not evident. In the Chart Room on the Bridge, there is an ongoing problem with written and carved graffiti inside the drawers which are operable.

Graffiti was observed in varied instances such as the veneer of an elevator interior, the exterior of the ship, ship internal walk way, and acrylic case tops.

Other barriers are more substantial, but still easy to breach; for example, the propeller box, the dark maritime exhibits ("war brides") have higher, solid half-wall barriers that can be climbed. The engine rooms have banisters that can easily be slipped through.

It is to be expected that some portion of the maritime equipment and architectural features will be accessible for handling and abuse by the public.

Cases and vitrines are often not entirely secure. In several cases, it was easy to lift a corner of a case and reach a hand inside near the locking device.

There is no dedicated closed circuit television, electronic monitoring or alarms of display areas.

Staff person(s) responsible at present time for:

a. planning exhibitions .....Jacki Fanzo

b. designing exhibitions .....Jacki Fanzo

c. choosing objects for exhibitions .....Jacki Fanzo

d. monitoring objects on exhibit .....Jacki Fanzo

e. exhibit and mount fabrication .....Jacki Fanzo

f. maintenance and monitoring of displays .....Jacki Fanzo and Engineering staff

L. STORAGE OF VALUABLE ASSETS, ART AND ARTIFACTS

Valuable assets, art and artifacts are primarily stored aboard the ship. Some objects, such as one lifeboat in poor condition, are stored in nearby adjacent storage.

Artifacts are primarily stored in the forward Decks "C", " D", and "E". The Archive is aft "F" Deck. Office records of recent history are stored in several rooms on "R" Deck.

The artifacts are generally stored by categories of objects and materials of manufacture i.e. furniture, fixtures, china, textile, flag, games, glass and metal.

1. Condition of Storage Areas

Floors in storage are uneven. The iron remnants of shower stalls and walls are found jutting out of the floor in some areas. Conditions are dark, dusty and crowded. Evidence of the occasional presence of birds was found.

Storage areas do not appear to flood, but leaks occur throughout the ship, including storage and exhibit areas. The danger of leaks is constant, particularly after heavy rain, and evidence of leaks and damage from leaks was found.

Water, sewage and fire prevention pipes run through storage areas. Again, leaks from above decks are a constant concern.

In the storage areas can be found rectifiers, which are anti-corrosion devices placed along the length of the ship protecting the hull against rust. These require easy access to allow monitoring and servicing by ship personnel. The on and off switch for the rectifier labeled "A" is a toggle switch without a barrier cover or electronic alarm, so that the switch could be accidentally turned on or off.

Doors are not sealed with gaskets to buffer against changes in the environment or pest entry.

Portholes, if extant or operable, are generally left open for ventilation and provide the only inconsistent light.

The hallways, stairways and doorways are narrow. Occasionally artifact storage blocks all aisles. There is just enough space to permit the movement of staff, equipment and objects into, out of and through storage.

While most of the stored artifacts are small to medium sized, there are heavy pieces of furniture, rolled carpets and over-sized light fixtures and glass.

Storage areas are occasionally used for activities other than art and artifact storage. At one time, séances were performed in the lowest deck of the ship, with claims of POWs having died there.

Smoking evidence is found in one area, adjacent to a large portal that appears to remain open day and night.

Furniture is stored uncovered. As a result, some evidence of pests was found on furniture, along with some mold in evidence on textile upholstery, likely due to the humidity and lack of air circulation. Marine paint is peeling on the ceilings of many storage areas, which crumbles and falls, settling on stored objects.

Graffiti is found written in dust throughout storage. Additionally, graffiti is found on the walls in the cargo hold in the dust. Trash debris is often found in the corners of storage; water bottles, industrial wrappings, plastic.

At one location, which was locked, an original door was found kicked in to access a room. There was significant damage to the door and the door jam. It is unclear for what reason, whether it was for leaks, for updating fire equipment, or for theft, though nothing of value seemed to be taken.

2. Access to Storage Areas

At entrances from public spaces, doors are not alarmed to protect against unauthorized entry. Doors are secured with padlocks.

Jacki Fanzo attempts to keep storage area access very limited, with varying success. Access registers are not maintained.

Individuals who are not staff members are generally not allowed to work in storage areas alone.

There are no policies regarding storage area monitoring, and moving materials in and out of storage. Materials and objects are moved as needed primarily as replacement parts or objects.

Storage areas are not routinely monitored for environmental problems, object conditions, evidence of pests or ship's structural issues.

At this time, not all objects are readily accessible. Objects must be shifted and relocated to access other objects.

3. Storage Methods and Materials

Artifacts are numbered with white Avery labels; most objects do not have assigned unique locations in storage. Furniture, at one time, was numbered before being sold; these are also found in addition to the Avery label numbers.

Heavy furniture is stacked atop one another with no padding to prevent scratches.

Room sized original carpet is rolled and stored in high inaccessible piles.

Unique, original objects are stored along with discarded hotel card tables.

Broadly sorted categories of original, breakable objects are found stored in piles on the floor (piles of deco glass lamps, piles of glass faced clocks) and are covered with dust.

Some objects, such as fans and lighting fixtures, have been disassembled and stored in piles by part.

Boxes and bins are found overflowing or hold objects are too large to be contained safely, such as brass poles or pipes.

Porthole glasses, which are extremely heavy, are stacked on a shelf; heavy, sharp edged, and in an awkward space, a situation which makes lifting and moving the glasses hazardous.

Bins, boxes, shelving and other storage furniture are either non-original from current or previous tenants, or are original to the ship herself.

Some heavy duty angle iron shelving is found to be rusting in the dampest portions of storage.

Though sorted by categories and materials, artifacts are stored in piles on the floor, in bins, crates, boxes, and open shelving.

Objects and storage equipment are not stored off the floor to protect against flooding.

Storage equipment is not always free from splinters, nails and bolts which can damage objects.

Often, original artifacts are found in work spaces or construction areas, in harm's way.

Objects are not well supported or secured in storage, and padding is not available to cushion objects from each other.

The objects are generally stored in acidic storage. Typically, there are no buffering materials between artifacts and the commercially available (often acidic) materials.

Original china is stored in non-archival boxes, in padded envelopes and Ziploc baggies, organized and numbered and accessible on shelves. A photograph of the object within is attached to the front to minimize handling. The padded envelopes keep artifact surfaces away from the acidic cardboard.

Textiles such as curtains, flags, and bedspreads are hung on plastic and metal hangers and covered in dry cleaning plastic.

Not all valuable assets, art and artifact storage areas were accessible for examination by the surveyor. Some areas were extremely crowded and difficult to safely access.

4. Archive

The Archive has a caged, secure entrance. Most of the archive consists of paper-based items; there are also furniture, video tapes, ship models, uniforms, knot sample boards, clocks, framed photographs and posters and various ephemera.

The space is extremely overcrowded with many items stacked on shelves, table tops or the floor without primary housing.

Textiles are hung on wood, satin and metal hangers with some covered in plastic barrier.

Journals and log books on book shelves are divided into sections with brown acidic cardboard sheets. Oversized charts and drawings are rolled and stored vertically.

Especially sensitive or valuable objects are stored in the Archives in three locking metal cabinets.

The Archive room has a musty odor indicating high humidity and little air circulation.

Artifacts which are donated or returned to the ship are stored in the Archive.

Stains on overhead pipes and walls indicate leaks in the area.

Staff person(s) responsible for:

a. choosing furniture, enclosures, materials and set up for storage .....Jacki Fanzo

b. organizing art and artifact storage.....Jacki Fanzo

c. moving objects in and out of storage.....Jacki Fanzo

d. checking for evidence of damage.....Jacki Fanzo

e. monitoring security/access.....Jacki Fanzo

f. conducting inventories.....Jacki Fanzo

Staff appears to avoid going to storage unless absolutely necessary, such as when a Roanoid handle breaks and needs to be replaced. Staff will then sift through piles to find a usable spare part. Such collection relocations are not documented.

Staff is dedicated and hard working, but they are not a museum staff, and there are no collection management policies. Artifact protection would be improved greatly by the introduction of comprehensive collection management policy and staff education.

Every item aboard ship, from the smallest screw to donated, non-original furniture, is considered part of the ship's history.

M. ARTIFACT VULNERABILITIES AND RISK FACTORS ABOARD THE RMS QUEEN MARY

Artifact Vulnerabilities and Risk Factors Aboard The RMS Queen Mary

Collection Material Vulnerabilities		**Artifacts of Most Concern**	**The Ten Agents of Deterioration**	
Most Sensitive Materials ▲	Papers and Books Textiles Iron Unpainted Wood Leather	Original Nursery Wall Paper found in storage is in extreme danger of being lost forever	Custodial Neglect	Of Most Concern Aboard ▲
		Wood Veneers, Decks are in fair to very poor condition	Direct Physical Forces: Scraping, Scratching, Tripping, Tipping, Dropping	
	Mixed Objects: ship models, metal knives with handles of wood or ivory, rubber tools, furniture Photos, Film Paintings Wood Veneer Plastic	Most metal artifacts (other than iron) onboard are in fair to good condition, aside from polish residue	Light	
			Water	
▼ Least Sensitive Materials			Temperature	▼ Of Least Concern Aboard
	Porous Stone Ceramics Sound, Video Glass Bronze and Other Metal Alloys as well as Iron and Steel		Relative Humidity	
			Pests	
			Contaminants: Pollution, Dust, Acid	
			Thieves/Vandals	
			Fire	

Appendix B – Meteorological Conditions Monitoring Plan

RMS Queen Mary

Meteorological Conditions Monitoring Plan

PREPARED BY:
PCR SERVICES CORPORATION
790 E. COLORADO BLVD., SUITE 906A
PASADENA, CA 91101
MAY 2010

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I. EXECUTIVE SUMMARY

On March 10, 2010, PCR services Corporation (PCR) conducted a field survey of sites within the RMS Queen Mary to assess the ambient meteorological conditions and how those conditions may be affecting various artifacts. The locations were determined by PCR and its Team (Lisa Forman and Caroline Kunioka, Conservators of Hudson Conservation Studios). PCR measured and recorded the temperature and relative humidity, and made observations regarding the presence or absence of odor and perceivable drafts.

The data collected confirmed that environmental conditions are less than ideal for many of the artifacts. Accordingly, PCR recommends that regular monitoring be established within the RMS Queen Mary and that existing maintenance issues be addressed. A system of regular monitoring will be able to detect leaks and/or changes in localized conditions more readily, such that they can be swiftly rectified before (further) damage to an artifact occurs. In addition, because the RMS Queen Mary is located in close proximity to the Ports of Long Beach and Los Angeles, the RMS Queen Mary and her artifacts are continuously exposed to some of the highest levels of air borne pollutants in the South Coast Air Basin.

II. INTRODUCTION

A. PURPOSE

PCR conducted a survey of locations where artifacts are displayed or stored aboard the RMS Queen Mary on March 10, 2010, between the hours of approximately 10 A.M. and 1 P.M. The purpose of this study was to measure and document environmental conditions and environments, namely, temperature and relative humidity, related to artifact condition and preservation. PCR staff used a Skymaster SM-28 by Speedmaster Instruments to measure the temperature, relative humidity (RH), and, if warranted, wind speed at the various sites. In addition, visual, olfactory, and other physical observations were recorded as appropriate.

B. LOCATIONS VISITED

The locations surveyed were based on a list provided by Caroline Kunioka, the Objects Conservator of Hudson Conservation Studios. The list was reviewed and approved by Margarita J. Wuellner, Ph.D., Director of Historic Resources, PCR. PCR visited the following areas to measure temperature and relative humidity.

- Wheelhouse on the Bridge
- Navigator's Room on the Bridge
- Officers' quarters on the Sports Deck
- Radio Room and/or Radio Exhibit on Sports Deck
- Verandah Grill on the Sun Deck
- Observation Bar on the Promenade Deck
- Queen's Salon on the Promenade Deck
- Royal Salon on the Promenade Deck
- Ticket Office on Main Deck
- Fire Station, Four Chaplains, and Treasures from Archives area on A Deck
- Hotel Lobby on A Deck
- Isolation Ward on B Deck
- Grand Salon on R Deck
- Chair and furniture storage area on C Deck
- Pool Area on C Deck
- Dish/glass and metal storage on D Deck
- Queen Mary Historical Exhibit on D Deck
- Archives Area on F Deck
- Engine Room Exhibit on G Deck
- Cargo Hold on F Deck and G Deck

C. AMBIENT METEOROLOGICAL CONDITIONS

Meteorological data are collected at a number of privately and publicly owned sites in and around the Port of Long Beach. A review of historical temperature and relative humidity data demonstrates the following[1]:

- Daily maximum temperatures range from 84 degrees Fahrenheit (°F) in the summer to 67 °F in the winter,
- Daily minimum temperatures range from 65 °F in the summer to 45 °F in the winter,
- Average daily temperature fluctuations range from approximately 17 to 22 °F, and
- Maximum average daily relative humidity is fairly consistent throughout the year, at 64 to 68.5 percent.

D. AMBIENT AIR QUALITY DATA

The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the South Coast Air Basin (Basin), an area of 10,743 square miles including all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino counties. The SCAQMD develops and adopts an Air Quality Management Plan, which serves as the blueprint to bring this area into compliance with federal and state clean air standards (designed to be protective of human health) and adopts Rules to reduce emissions from various sources which are permitted to operate in the Basin. In addition, SCAQMD continuously monitors levels of criteria air pollutants (those with federal or state clean air standards) and toxic air contaminants (TACs) at 38 locations throughout the four-county area.

Criteria air pollutants monitored at the stations most representative of the vicinity of the RMS Queen Mary include gaseous pollutants, such as ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter less than 2.5 microns in diameter (PM2.5) and less than 10 microns (PM10). The most recent data available shows:[2]

- O_3 levels that occasionally exceeded the California standards but are consistently below the (less conservative) national standards over the last 5 years;
- CO, NO_2 and SO_2 concentrations consistently below all applicable standards over the last 5 years; and
- PM10 and PM2.5 levels which consistently exceed State and national standards every year. Short-term (24-hour average) concentrations exceed applicable standards up to 19 percent of the days. The major source of airborne particulate matter is fuel combustion in ships, trains, vehicles and equipment involved in commerce at the Ports of Long Beach and Los Angeles.

The SCAQMD has been monitoring levels of TACs for the past two decades, and released the final report of the third round of its Basin-wide Multiple Air Toxics Exposure Study (MATES III) in 2008.[3] MATES III represents one of the most comprehensive studies of TACs ever conducted in an urban environment. The study focused on those compounds which pose a carcinogenic health risk to humans, and did not estimate

[1] *http://www.climate-zone.com/climate/united-states/california/long-beach/* Accessed May 5, 2010.

[2] *Historical Data by Year,* South Coast Air Quality Management District, *http://www.aqmd.gov/smog/historicaldata.htm,* Accessed May 17, 2010.

[3] *http://aqmd.gov/prdas/matesIII/MATESIIIFinalReportSept2008.html,* Accessed May 10, 2010.

other health effects. Based on measurements at numerous monitoring sites, the study concluded the following:

- "Overall, air toxics risk improves to varying levels in most of the Basin with the exceptions of the areas directly downwind of the ports and those areas heavily impacted by activities associated with goods movement. The model comparison shows an increase in air toxics risk occurred in the immediate areas encompassing the ports… [which] …correlates with the increased container cargo moving through the ports…"[4]

The air surrounding the Ports of Long Beach and Los Angeles and the Queen Mary is amongst the most polluted in the Basin. Although the focus of the SCAQMD study was on human exposure and health impacts, the results show that artifacts of the RMS Queen Mary and the ship itself are being exposed to air borne compounds with potentially corrosive, reactive, and harmful effects at levels which have increased over recent time.

[4] *SCAQMD, MATES-III Final Report, Executive Summary, http://aqmd.gov/prdas/matesIII/Final/Document/-ab-MATESIIIExecutiveSummary-Final92008.pdf,* Accessed May 10, 2010.

III. FINDINGS

Many of the areas visited were open to the outside weather conditions, had visible water damage or leaks, and had a musty or dank odor. The temperature and relative humidity measurements confirmed these observations. Occasionally, two sets of readings were taken in order to determine if and to what extent there was a difference in conditions inside and outside of the rooms, when they were vented to the outside.

As shown on **Table 1,** *Bridge*, temperature and relative humidity readings taken on the Bridge reflected the general openness of the rooms to the outside and ambient weather conditions. Even the rooms that appeared to be sealed were found to be passively vented to the ambient air. These data are typical of the marine environment in Long Beach.

Table 1

Bridge

Area	Temperature (°F)	Relative Humidity	Observations
Wheelhouse	68.5	38.3%	Open to the elements
Chart Room	68.9	40.2%	No climate control
Navigator's Room	68.3	41.8 %	Vented to the outside
Chief Engineer's Room	70.5	37.8%	Outside reading
	69.4	37.0%	Inside reading

Source: PCR Services, 2010

On the Sports Deck, there were also rooms that were open to the outside, but most notably, the readings taken in the Captain's Quarters showed the ongoing issue of water leaks. The readings in **Table 2**, *Sports Deck*, illustrate the stark difference in relative humidity between the sitting area and the bedroom area. PCR witnessed a large water leak in the bedroom area, which likely contributes to the higher relative humidity, as well as the musty smell. The sitting room area, though connected, was noticeably less musty in smell, and had a lower relative humidity.

Table 2

Sports Deck

Area	Temperature (°F)	Relative Humidity	Observations
Officer's Quarters	66.0	41.1%	Outside reading
	67.4	37.7%	Inside reading
Captain's Quarters: Sitting Room	66.0	38.2%	
Captain's Quarters: Bedroom	65.4	41.4%	Musty Smell Water leak visible through ceiling
Clothing Displays	65.1	42.0%	Readings taken at three separate exhibit rooms. The rooms have non-operable windows but no ventilation.
	64.4	42.6%	
	64.8	42.7%	
Radio Room	64.1	46.2%	Doors open to the outside.

Source: PCR Services, 2010

Data recorded in four rooms on the Promenade Deck are summarized on **Table 3**, *Promenade Deck*. No leaks or musty smells were detected in the Promenade Deck areas. It was evident that heating ventilation and air conditioning (HVAC) systems were at work to improve the overall air quality, as well as the indoor comfort level. However, doors to the outside from the Observation Bar lack weather stripping and insulation. The doors were found to be chained together, leaving a visible gap which allows wind to enter. Thus, the bar is unintentionally exposed to the ambient elements continuously.

Table 3

Promenade Deck

Area	Temperature (°F)	Relative Humidity	Observations
Royal Salon	76.4	36.6%	Readings potentially affected by a garment steamer used in the room.
	69.7	39.9%	
Queen's Salon	67.5	38.5%	HVAC/ventilation system clearly audible.
Piccadilly Circus	71.4	39.3%	
Observation Bar	68.6	37.6%	No weather stripping, open to the outside. Breeze entering at 2 MPH.

Source: PCR Services, 2010

The temperature and relative humidity readings taken at the Sun Deck and Main Deck, as shown on **Table 4**, *Sun Deck, Main Deck, and R Deck,* were normal and no adverse conditions were noted.

Table 4

Sun Deck, Main Deck, and R Deck

Area	Temperature (°F)	Relative Humidity	Observations
Verandah Grill	72.5	38.3%	
Ticket Office	72.4	34.4%	

Source: PCR Services, 2010

Meteorological conditions recorded for the five areas surveyed on the A, B, and R Decks are shown on **Table** 5, *A Deck, B Deck, and R Deck*. The A Deck was characterized by exposure to the outside and to the elements and subject to the wind and cooler temperatures of the outside. The areas were well ventilated, and no musty smells were detected. No adverse conditions were noted on the B or R Decks.

The A Deck was characterized by exposure to the outside and to the elements and subject to the wind, the cooler temperatures of the outside. The areas were well ventilated, and no musty smells were detected. No adverse conditions were noted on the B or R Decks.

Table 5

A Deck, B Deck, and R Deck

Area	Temperature (°F)	Relative Humidity	Observations
Fire Station	70.1	41.0%	Open to the elements.
Four Chaplains	67.2	36.0% 40.1% by the open window	Open to the elements.
Piano/Hotel Lobby	67.8	41.5%	Doors to lobby area are open to the elements, but area has HVAC.
Isolation Ward	70.3	43.9%	Some leakage. Readings taken from outside the door. Room vented.
Grand Salon	66.4	42.1%	

Source: PCR Services, 2010

The outer chamber where chairs and furniture are stored had an open porthole, allowing a strong, 5.3 mile per hour wind to enter the area. In addition, a leaky fire hose was noticed. **Table 6**, *C Deck and D Deck,* lists the data for the C and D Decks.

Table 6

C Deck and D Deck

Area	Temperature (°F)	Relative Humidity	Observations
Chair and Furniture Storage outer chamber	66.9°	35.8%	Strong breeze entering from the open porthole at 5.3 MPH. Fire hose leaking
Chair and Furniture Storage inner chamber	66.4°	38.9%	
Linen Storage Area	65.3°	43.4%	
Dish/Glass and Metal Storage	65.5°	41.0%	
Aft Exhibit – near tour stop #16	66.1°	43.9%	Doors open to outside.
Aft Exhibit – near propeller box	66.9°	48.1%	

Source: PCR Services, 2010

As we descended lower into the ship, the humidity levels rose, which can be attributed to being closer to and below the sea level. The worst musty smells within the exhibits were also the areas that had the greatest relative humidity levels. **Table 7**, *E Deck, F Deck, G Deck,* contains data for the E, F, and G Decks.

Table 7

E Deck, F Deck, G Deck

Area	Temperature (°F)	Relative Humidity	Observations
Cargo Hold – Lamp Room	63.5°	48.8%	
Cargo Hold – "paranormal room"	63.5°	43.2%	
Engine Room Exhibit	71.7°	40.8%	
Outer memorabilia room	65.7°	53.1%	Musty Smell
Inner memorabilia room with books	67.6°	44.1%	Weaker musty smell.

Source: PCR Services, 2010

IV. CONCLUSIONS AND RECOMMENDATIONS

The measurements taken throughout the RMS Queen Mary show that many of the areas in which artifacts are stored and displayed are not equipped with HVAC controls and or meteorological monitoring devices. This may be unavoidable in areas that are open to the public; however, exposure to ambient meteorological conditions is not ideal for many of the artifacts. The lack of properly closing doors and windows in some areas of the RMS Queen Mary allows for unintentional continuous exposure to the humid marine air prevalent in the port region. In addition, existing and prior leaks from water pipes, fixture malfunctions, or accidental spills have allowed water to penetrate the display and storage areas and the lack of proper response (thorough drying of the affected carpet, walls, and air) has created environments which may damage the artifacts directly or indirectly, as damp conditions may lead to mold and mildew growth.[5]

The overall conditions found on the RMS Queen Mary are not conducive to the preservation of her valuable, fragile artifacts due to the fact that many areas of the ship are generally uncontrolled and open to the marine environment, leading to potentially harmful fluctuations in humidity and temperature levels. Therefore, as a result of the onboard survey of temperature and relative humidity, PCR recommends a system of monitoring be established aboard the RMS Queen Mary. Monitoring can be conducted through the installation of hygrometers and thermometers strategically placed in the areas aboard the ship that are most prone to leaks or hold the most fragile artifacts. A system of regular monitoring will be able to detect leaks and/or changes in air quality conditions more readily, such that they can be swiftly rectified before (further) damage to artifacts occurs.

The process of evaluating temperature and relative humidity conditions involves data gathering, data interpretation, and action planning. Ideally, these activities should be conducted regularly throughout the duration of a year. Data gathering typically takes place with one of these instruments:

- a recording hygrothermograph (described as labor-intensive, requiring frequent calibration, providing only a short-term view);
- data-loggers (which are usually more accurate, but require facility with computers); or
- built-in sensors (where data extraction is not easy, and facility with computers is a must).

Data interpretation includes an examination of environmental damage, which can include:

- mechanical damage (such as warping, shrinking, swelling, cracking, caused by humidity that is either too high, too low, or with changes occurring too fast);
- biodeterioration (such as insects and mold, caused by interaction of temperature and relative humidity); and

[5] http://www.cdc.gov/niosh/pdfs/appenc.pdf Accessed May 6, 2010

- inherent chemical decay or natural aging (here the material reacts with itself at a rate determined by temperature and relative humidity).[6]

Since fragile artifacts are imminently threatened by uncontrolled humidity levels and fluctuations in temperature depending upon climactic conditions and/or the presence of leaks, PCR recommends implementation of a program to control meteorological conditions within the ship, year round, in all areas where valuable artifacts are exhibited, stored or permanently installed. This can be achieved economically by controlled utilization of the ship's existing passive ventilation system in a manner conducive to artifact conservation, such as regulating the use of doors and windows to maintain steady humidity and temperature levels and adequate ventilation, as well as repairing ill-fitting doors and installing weather stripping where needed, repairing seals around windows, and monitoring meteorological conditions on a regular basis. In addition, PCR recommends stopping and repairing leaks as soon as they occur and employing dehumidifiers as an immediate interim measure to regulate humidity levels where necessary. Installation of an HVAC system is recommended as a long term goal which should be considered and coordinated with other improvement efforts, since conditions for human comfort are very different from that appropriate for collections. In some cases, such as in the lower storage holds where fragile ephemera, valuable decorative arts objects, paper and textiles are housed, removal of fragile artifacts to a secure and climate controlled environment may be recommended.

Generally, meteorological conditions within areas where valuable and fragile artifacts are housed should be climate controlled to achieve steady non-fluctuating year-round humidity and temperature levels. The following goals are recommended:

- maintaining relative humidity between 40% and 55% throughout the year, allowing seasonal fluctuations between the two extremes, but holding daily fluctuations to ± 3%,
- maintaining temperature between 65° and 75° F throughout the year, allowing seasonal fluctuations between the two extremes, but holding daily fluctuations to ± 5° F,
- designing filtration to remove at least 50% of particulates,
- designing gaseous filtration to maintain preservation standards throughout the facility, or using area filtration as necessary, and
- providing adequate ventilation to avoid stagnant air pockets, "dead" zones, and similar problems that are conducive to the growth of mold and mildew.

Typically, humidity is much more important than temperature and should be controlled first. Further, fluctuations (seasonal and particularly daily) tend to be more damaging than constant levels, whatever they may be. Humidity is most often associated with an increased probability of mold growth and other forms of biodeterioration. Levels at 60% RH should be considered the threshold for damage - over that level and a museum will eventually have trouble.[7] It should be noted that mold and mildew growth may still be possible even if monitored values are below 60% RH. Different surfaces (such as walls, windows, furniture, etc.) exhibit differing abilities to retain and radiate heat within a space. Likely the RH and temperature values of

[6] *"The New Museum Climate: Standards & Technologies," Abbey Newsletter, Vol. 20, No. 4-5, September 1996, http://cool.conservation-us.org/byorg/abbey/an/an20/an20-4/an20-411.html, accessed May 6, 2010.*

[7] *Managing the Museum Environment, Chicacora Foundation, Inc., 1994, http://cool.conservation-us.org/byorg/chicora/chicenv.html, accessed May 6, 2010.*

the air immediately surrounding objects within a room vary from surface to surface. Therefore artifacts in close proximity to windows or exterior walls, for example, may still experience conditions which are conducive to condensation and mold and mildew growth. If mold or mildew is suspected, immediate and appropriate cleaning should be undertaken and the leak or spill corrected. If the problem appears persistent, a long-term solution (i.e. increasing air flow, increasing temperature, improving insulation, etc.) should be studied and implemented.

Because many collections are also hygroscopic, the humidity levels will also affect dimensional stability. For example, some types of wood board can vary up to one inch in length over a foot between 10% and 90% RH. Since the RMS Queen Mary is finished extensively throughout in wood veneer and appointed with wood furniture and art works crafted of wood, the regulation of humidity levels is a high priority. Variation in relative humidity can warp wood, loosen furniture joints, cause paint to chip from canvas, and cockle paper. In addition, fluctuating relative humidity can lead to chemical reactions. Metals will corrode, many dyes will fade, and even glass and mineral collections can be damaged.[8]

With regard to air quality, both particulate and gaseous air pollutants can damage valuable art works and historical artifacts. Particulate contaminates such as dust, soot and pollen can soil, chafe or otherwise blemish artifacts and discolor and damage art works. Gaseous pollutants such as ozone, peroxides, nitrogen oxide and sulfur dioxides can react chemically with other materials to form acid which can harm artifacts.[9] Paper and leather are particularly vulnerable to damage caused by acid. Paper becomes discolored and brittle, and leather becomes weak and powdery. [10] There are no air quality standards established for the protection of historic artifacts. Thus, the most reasonable recommendation is that the amount of pollutants in the air be reduced as much as practicable.[11]

There are several ways to control air quality which may help decrease the effects of pollutants on the ship's collections including provision of good air exchange in areas where collections are stored or used, keeping exterior windows and doors closed, storage of artifacts in archival-quality enclosures and containers, all of which will help decrease the effects of pollutants on materials. Additionally, origins of pollution should be eliminated as much as possible including cigarettes, photocopying machines, certain types of construction materials, paints, sealants, wooden storage/display materials, and cleaning compounds.[12]

In those areas with functioning HVAC systems, limiting exposure to particulate contaminants can be effectively achieved by equipping existing systems with proper mechanical filtration. . Standard pleated filters , those which achieve a Minimum Efficiency Reporting Value (MERV) 8 and found in most modern homes and offices, only remove approximately 35 percent of the PM. Improvement in the removal efficiency can be achieved (up to 90 percent) by using filters with MERV ratings of 9-13. However some retrofit modification may need to be designed for these thicker filters to be compatible with existing HVAC intake or return systems. Removal efficiencies of greater than 90 percent are possible, such as those commonly required for high-tech manufacturing "clean rooms" and hospitals. However due to the increased filter

[8] *Ibid.*

[9] *Basic Guidelines for the Preservation of Historic Artifacts,* Texas Historical Commission, undated, http://www.thc.state.tx.us/museums/musWord/BasicGuideforPreservHistArtifacts.doc , Accessed May 17, 2010.

[10] *Preservation Leaflet 2.1,* Northeast Document Conservation Center, undated, http://www.nedcc.org/resources/leaflets/2The_Environment/01BasicGuidelines.php, Accessed May 17, 2010.

[11] *Ibid.*

[12] *Ibid.*

thickness and/or decreased air flow, filter media capable of these higher removal rates may not be compatible with existing HVAC systems on-board the RMS Queen Mary without costly upgraded fans and/or redesigned intake plenums. The design of new or replacement HVAC systems should be done by a qualified mechanical engineer, or equivalent, mindful of the balance between pollution reduction goals and capital and operating costs.

Gaseous pollutants, being much smaller in size, are not affected by the filter media described above. The control of airborne gaseous pollutants is more difficult and typically more costly to achieve, relying on wet scrubbers or chemical filters. Based on the data presented in Section II.D above, gaseous pollutants may not represent the highest threat to the RMS Queen Mary and her artifacts. However, it may still be advisable to store artifacts vulnerable to the effects of gaseous pollutants in archival-quality enclosures/containers, made with molecular traps such as activated carbon or zeolites[13].

All filters and removal systems need to be properly sized and maintained (filters replaced regularly) to achieve the targeted pollutant removal rate. In addition, rooms and display cases should be properly sealed and opened only when necessary. The location of passive and active air intake to artifact storage and display areas should be investigated; avoid introducing air from highly polluted local sources such as loading docks, restaurant exhaust, cigarette smoke, and cleaning and maintenance products and activities (adhesives, paints, and other chemicals).

As discussed above, temperature, relative humidity, and air quality all affect the longevity of art collections and artifacts. In addition, light conditions were studied by the project team during the site survey. The light level testing was conducted by HCS and was not a part of the Air Quality analysis conducted by PCR. However, a brief discussion is provided below in the context of this PCR study.

Light accelerates deterioration of art and archival materials, causing paper to bleach, yellow, or darken and causing other media and dyes to fade or change color. Any exposure to light, even for a brief time, is damaging, and the damage is cumulative and irreversible. All wave lengths of light are damaging, however, ultraviolet (UV) radiation is especially harmful to art objects and archival materials. The sun and tungsten-halogen or quartz lamps, mercury or metal halide high intensity discharge lamps, and fluorescent lamps are some of the most damaging sources of light because of the high amounts of UV energy they emit. Because total damage from light is a function of both intensity and duration of exposure, illumination should be kept as low as possible (consistent with user comfort) for the briefest amount of time feasible. Ideally materials should be exposed to light only while in use, and light should be from an incandescent source kept as low as possible and at a distance from the materials to reduce heat. Windows should be covered by drapes, shades, blinds, or shutters that block the sun, which will also aid in temperature control by minimizing heat loss and limiting generation of heat by sunlight during the day. Filters made of special plastics can help control UV radiation, including Ultraviolet-filtering plastic films or UV-filtering Plexiglas, which can be used to cover windows, art works and for display cases to lower the amount of UV radiation passing through them. However, filters do not provide 100% protection against light damage. Drapes, shades, blinds, or shutters that completely block the light are preferable. Fluorescent tubes should be covered with ultraviolet-filtering sleeves in areas where collections are exposed to light; an alternative is the use of special low-UV fluorescent tubes. Since even slight exposure to light is damaging, permanent exposure is not advisable and should be avoided. If materials must be displayed, it should be for the briefest time and at the lowest light levels, with light coming from an incandescent source. Materials should never be displayed where the sun shines

[13] *Ibid.*

directly on them, even if for only a short time and even if the windows are covered with an ultraviolet-filtering plastic.[14]

In summary, temperature, relative humidity, light, and air quality all have an effect on the longevity of the ship's valuable assets including art works, decorative arts, historic artifacts and archival materials as well as the character-defining features and finishes of the ship itself. By following the recommendations provided above, the City, the ship's operator, and the ship's staff can significantly extend the life of the valuable assets aboard the RMS Queen Mary. For further information and recommendations, see the discussions included in the Conservation Management Plan.

[14] *Ibid.*

Appendix C – Fundraising Strategies

Fundraising Strategies for Conservation and Ongoing Care of the RMS Queen Mary

Cherilyn Parsons, M.A., Fund Development
President, Strategic Communications

Philanthropic donations and grants can help support the care and conservation of the Queen Mary's art and artifacts. This document describes strategies for raising funds.

There are several angles that the City could take for fundraising: maritime preservation (which is the framework of the Conservation Management Plan), historical preservation, museums, and community enrichment (i.e., the Long Beach region, because the Queen Mary is a major community asset and tourist attraction). Support could come from the following sources:

1. Government programs such as the National Endowment for the Humanities, National Endowment for the Arts, Institute of Museum and Library Services programs, etc.
2. Associations such as the American Association of Museums
3. Private foundations, which range from large program-oriented foundations to small family foundations
4. Community foundations, which restrict their support to particular communities and which also often manage donor-advised funds on behalf of individual philanthropists, which is the case with the Community Foundation of Long Beach
5. Corporations, whose donations can come from a corporate foundation or an marketing/advertising budget; both sources usually require that the name of the corporation be publicized in designated ways as a supporter
6. "Major" individual donors, who give over $5,000, $10,000, $50,000 or more (the category "major donor" depends on the size of the campaign)
7. Smaller individual donors, who may give as part of a campaign, make online donations, or give on-site.

Each of these potential sources of support requires a distinct strategy and staffing resources.

Successful fundraising also will require four essential commitments from the City and the larger community:

1. **Commitment from top City leaders to the care and conservation of the Queen Mary and her art and artifacts,** a commitment that will involve an initial investment in hiring an experienced fundraising consultant (a professional with expertise in developing and executing fundraising plans for historic maritime vessels).
2. **Commitment of a group of civic leaders to the work of raising funds**. If the City wants to carry out a campaign that raises funds from individual donors and corporations, an active group of local philanthropists, business leaders, and influential community members must be organized to help solicit funds. The fundraising consultant will collaborate closely with this group.
3. **A defined organizational structure through which to carry out a fundraising campaign.** This could be (a) a nonprofit organization with the sole purpose of carrying out a campaign to raise funds for preservation, with the City overseeing the actual conservation work, (b) a nonprofit organization that raises funds for preservation and *also* carries out (or directly subcontracts) the actual conservation of the art and artifacts, or (c) a department within the City and the Preservation Management Team that has the responsibility of implementing the Conservation Management Plan and that hires the fundraising consultant.

Below I will briefly summarize some pros and cons of these three potential organizational structures, with the caveat that the City should retain legal assistance specialized in nonprofit law to analyze the options. After that, I will outline the necessary development/fundraising staff resources, and then delve into funding opportunities within each of the potential seven areas of support, as well as dynamics and nuances of each. This document is simply an overview; to create and implement an actual fundraising plan, the City would need to hire a full-time development director or executive director.

POTENTIAL ORGANIZATIONAL STRUCTURES

Variation 1: Nonprofit Organization Focused Exclusively on Fundraising

In this scenario, the City would manage the ongoing care and conservation of the ship and her artifacts, but it would set up a 501(c)(3) nonprofit organization for the sole purpose of seeking and receiving philanthropic donations for the care and preservation of the ship and its artifacts. There are many resources for establishing an ethical, transparent, well-functioning nonprofit organization. A core group of City and/or community leaders would develop the articles of incorporation and determine the nonprofit's bylaws, which would state the nonprofit's mission, set restrictions on the organization's activities, institute transparency and oversight principles, and establish guidelines for a Board of Directors, which would govern the nonprofit. The Center for Nonprofit Management (www.cnmsocal.org/) provides consulting (or could recommend professionals) to help the City with these tasks, help establish a strong Board of Directors (including community and public leaders), and assist in hiring staff. The Board of Directors would provide financial and legal oversight of the nonprofit's activities. The Board could be constructed in a way that provides checks within the Board itself. The nonprofit also would be audited annually—an activity that many government and foundation funders would require.

The Board would hire and evaluate an executive director, who would manage and carry out the nonprofit's activities (fundraising campaigns, grant writing, cultivation of major donors in collaboration with the Board, etc.) and hire and supervise personnel. This person would collaborate very closely with the Board members in raising funds.

Using a 501(c)(3) organization could simplify fundraising. Some funders—such as the American Association of Museums and many private foundations—are legally restricted to giving only to 510(c)(3) organizations. It also would be easier for corporations to make donations to a nonprofit organization than to the City (avoiding real or seeming conflicts of interest). The same is true for large donations from individuals.

The nonprofit organization would have a distinct purpose and a separate organizational structure from any entities that manage activities on the ship, such as the hotel and tours. The philanthropic funds thus would be segregated, making them easier to monitor and allocate.

Variation 2: Nonprofit Organization That Handles *Both* Fundraising and Ongoing Care and Conservation

The mission to preserve the Queen Mary and her art and artifacts for the public good—as part of the nation's historic, artistic and maritime legacy—necessarily involves both fundraising and the actual work of conservation. Establishing a 501(c)(3) organization that raises funds *and* oversees ongoing care of the collection could create efficiencies and improve oversight:

- Rather than having the nonprofit organization raising funds for conservation and then turning those funds over the City, which then would define and pay for conservation services—a process that involves several steps and transfers of funds—the nonprofit would directly retain maritime

and conservation experts to define the work that needs to be done, would raise the funds, and would contract directly with the shipwrights and conservators to carry out the work. The nonprofit could be structured in a way that defined clear lines of ownership, authority, communication, transparency and accountability.

- Grant proposal budgets would be much simpler and overhead expenses lower.
- While conservation is a very different kind of work than fundraising, the two kinds of professionals will need to collaborate closely to develop grant proposals. Enabling them to have a direct relationship could speed the process.
- All the other benefits of establishing a nonprofit organization would apply, as described in Variation 1.

In this scenario, the Board of Directors may include conservation specialists as well as community and civic leaders. A clear Conflicts of Interest policy could be established so that Board members had no financial interest in the conservation activities. The nonprofit's executive director would not need to have conservation experience; he or she could consult with experts and then retain the appropriate contractors to carry out the conservation work. Alternatively, conservation specialists could be brought on staff. It would be more important for the executive director to have fundraising expertise, especially if the City wanted to launch a large campaign.

Variation 3: The City Raises and Receives Funds for Ongoing Care and Conservation (No Nonprofit Organization)

It is possible for the City in collaboration with fundraising consultant, without establishing a nonprofit organization, to design a fundraising campaign, carry it out, and receive donations for the Queen Mary's preservation from most of the seven sources listed above (though not some foundations and associations). The City then also would select and hire shipwright and conservation services. But this approach is more complicated.

If the City wants to receive large donations from individuals, it will have to create clear guidelines for the use of donations if these donations are to be tax-deductible. According to IRS Publication 526 (http://www.irs.gov/publications/p526/ar02.html#en_US_publink1000229641), donations to "a political subdivision of a state or U.S. possession" can be tax-deductible if they are "made solely for public purposes." Historic preservation generally qualifies; though the City should consult attorneys specialized in nonprofit law because the Queen Mary also operates profitable activities. Tax-deductible donations cannot be made to profit-making entities. Note that donations to chambers of commerce or other "business leagues or organizations" or to "civic leagues and associations" also are not tax-deductible. If there is no nonprofit organization, the City will have to establish the donation guidelines very carefully.

It will be important that the City draw boundaries between the funds raised for conservation purposes and revenues generated by the ongoing operations of the hotel, tours, etc. It may be more difficult to draw these lines without a separate entity (such as a nonprofit) to segregate the two streams of revenue, one philanthropic and the other "earned."

As mentioned earlier, some funders are legally restricted to giving only to 510(c)(3) organizations. And some corporations might face real or perceived conflicts of interest in donating to the City (particularly making a tax-deductible donation), even if the purpose is for the Queen Mary's preservation and not for political aims or new business.

If the City wants to try to launch a fundraising campaign with setting up on nonprofit for that purpose—and it should consult legal professionals before doing so—it should hire a high-level fundraising consultant to create the campaign, hire and manage fundraising/campaign personnel, and carry out the

work. This person should report to the City and the Preservation Management Team charged with overseeing the preservation of the Queen Mary. No official Board of Directors would be needed, but the City still would need to establish a highly committed, active fundraising committee that includes community leadership, philanthropists (major individuals as well as heads of local foundations), business and government. This group would also be important to the effort described in more detail under "Community Leadership" below.

Recommendation among the three possible variations: *#2, creating a nonprofit organization that carries out a fundraising campaign and also manages the conservation and care of the Queen Mary and her artifacts.*

Community Leadership and Staff

Community Leadership. The importance of a committed, active Board of Directors or fundraising committee of community leaders (here called "Leadership Committee") cannot be overstated if the City intends to raise significant funds. It is virtually impossible to carry out a successful campaign without having powerful and/or well-heeled individuals to carry forth the effort. Except when it comes to government grants, personal connections are by far the most valuable tool in the fundraising toolbox.

The Board of Directors or Leadership Committee should include community leadership in philanthropy (major individual philanthropists as well as heads of local foundations), business and government, as well as members with expertise in legal matters (ideally in nonprofit law) and financial oversight, so that the Board or City can be confident in its oversight and receive knowledgeable pro bono expertise. (See the Long Beach Museum of Art's board for a good example.) The Board or Committee may also include conservation experts—but it should be weighted heavily toward civic leaders who can help raise funds. A major responsibility of the group should be fundraising. All Board or Leadership Committee members should be expected to carry out fundraising among colleagues and social connections for the sake of the cause. If the conservation expert members lack the personal means to make a large contribution, they should help make connections among philanthropists and grant makers in the preservation and conservation worlds.

Staff. If the City establishes a nonprofit, the Board of Directors would hire an executive director. Even if the nonprofit's activities include management of the conservation effort, the executive director would be expected to lead fundraising. This person may also hire a fundraising consultant. The first deliverable would be a clear elucidation of fundraising goals (shaped with input from the conservation management team and from the Board of Directors), an assessment of the prospect base, and a realistic fundraising plan, with a timeline of activities and staffing needs identified at the different phases. This plan should involve all of the seven funding sources mentioned above, though they would be prioritized depending on the director's assessment of likelihood of success.

Additional fundraising efforts may include a "major donors" (or major gifts) fundraiser (for individuals); a foundations/corporations consultant who identifies, cultivates and secures funding from these specialized sources (ideally this person also can do grant writing); a grant writer for government grants (this might be same person as the foundations/corporations consultant, *or*, if the nonprofit director manages foundation/corporation relations, the government grant writer could handle *all* grant writing, including for foundations, corporations, government and individuals); a communications or campaign director; and/or a web outreach and donations manager. Not all of these positions may be necessary. Ideally the executive/fundraising director has experience managing or working in all these functional areas, and thus can assess what is needed.

To find candidates, the Foundation Center operates a jobs board that is distributed widely among professionals in the nonprofit world. The Center for Nonprofit Management also could help to advertise positions. The Association of Fundraising Professionals, www.afpnet.org, is another outlet. For higher-level positions, there are search firms specialized in finding an experienced executive director and/or development director. (Koya Consulting in Boston is a highly qualified firm.)

Note that *it is unethical and may be illegal for any development professional or executive director to receive a percentage or commission on funds raised.* All genuine development professionals are paid as regular staff people or consultants. Depending on the person's experience, full-time salaries range from $80,000 to $160,000/year. Once a fundraising program is in full swing (which can take several months or a year or so, depending on the existing donor "prospect" base and the board/committee involvement), a development effort overall should be able to raise at least ten times its cost in a year, as a rule of thumb.

I strongly recommend that the City engage a very experienced fundraising consultant—and ideally a person well-connected in the philanthropic world—even though that person will be more expensive. A skilled fundraising professional can do more in one phone call than a novice fundraiser can do with a pile of Internet research and scattershot grant applications. There tends to be high turnover in the development profession. It is hard work now made more difficult by the recession, and fundraisers fail more than they succeed; many nonprofits do not invest sufficiently in professional expertise or build a strong Board, thus setting up a fundraising program for failure. And anyone can call him/herself a fundraiser.

Certified Fundraising Professional Executive (CFRE) International, www.cfre.org, certifies fundraising professionals "who demonstrate the knowledge, skills and commitment to the highest standards of ethical and professional practice in serving the philanthropic sector." The certification is voluntary and involves passing tests, maintaining continuing education, and adhering to a code of ethics. While CFRE can help guide the City, it is not necessary that the person hired have CFRE certification; many of the most accomplished fundraisers do not. What matters most is a track record of success, relevant experience, and excellent references.

Once the City has a Conservation Management Plan in place (but not the funds to carry it out), the City could apply for government grants *before* embarking upon a larger campaign. This work would involve hiring an experienced government grant writer and retaining a preservation or conservation management firm to participate in preparing the applications. Government grant proposals are specialized and complex, always more difficult than they appear at first glance. The key skills needed are exceptionally strong writing capabilities, ability to gather and organize information from various partners, detail orientation, time management (deadlines are non-negotiable), formatting skill, and experience structuring grant budgets. General fundraising and experience in writing grants for foundations or individuals may not be sufficient for these types of grants.

ADDITIONAL ISSUE TO CONSIDER IN ADVANCE OF LAUNCHING FUNDRAISING ACTIVITIES

An important question to funders will be whether the City and Ship's Operator are able/willing to use some of the revenues earned from day-to-day operations of the Queen Mary as matching funds to help further the preservation/conservation mission, if there is sufficient revenue to do so.

Many government grant programs require a 1:1 match for Federal dollars. This match can come from private donors, but private donors increasingly want to see that charitable/public endeavors are maximizing all opportunities for earned revenues. Why, they may feel, should they donate funds for

conservation if the City or Ship's Operators do not? They might also argue that the City and Ship's Operators will earn more revenue from the Queen Mary as a result of the conservation efforts, and that this revenue should be returned to the ship's preservation. Preservation and conservation is important to providing a high-quality visitor experience.

GENERAL SOURCES FOR INFORMATION ON FUNDERS

The CT Trust for Historical Preservation website offers a variety of approaches to funding conservation and preservation: National http://www.cttrust.org/index.cgi/106. The Conservation Assessment Program (http://www.heritagepreservation.org/CAP/) and the American Association of Museums (http://www.aam-us.org/museumresources/ic/index.cfm) also can provide resources, advice and updates.

GOVERNMENT GRANT AND ASSISTANCE PROGRAMS

The Catalogue of Federal Domestic Assistance, https://www.cfda.gov/, is the searchable clearinghouse for all government domestic grants. Most Federal grants must be applied for through www.grants.gov. Be aware that grants.gov may take up to 4 weeks to process the initial inquiry to set up an application on the site, requiring advance planning.

Because the landscape of these grants is changing rapidly, it is recommended that when the City is ready to apply, it contact the IMLS senior program officer for conservation activity (contact information below) for advice and updates. This approach will be far more effective simply than searching the CFDA. (Simple search is not effective: For example, a CFDA search of "maritime" turns up only programs for port security, oceanic research, etc.)

Institute of Museum and Library Services Grants (http://www.imls.gov/applicants/name.shtm)

The IMLS staff overseeing the IMLS grants is Christine Henry, Senior Program Officer, Phone: 202/653-4674; e-mail: chenry@imls.gov. The government grants person or development director should contact her for advice. Once we are preparing applications, an extremely useful resource offered by the IMLS for all its grants programs is an array of examples of successful grant applications for various programs: http://www.imls.gov/applicants/sample.shtm#SAT.

Save America's Treasures Grants *(*http://www.imls.gov/about/treasures.shtm *and* www.nps.gov/history/hps/treasures/—look at both sites)

If the Queen Mary project wants to apply for this grant, it should hire a qualified government grants writer immediately, full-time, to work with the conservation assessment team and submit an application. There are still funds available ($14 million) for FY 2010, and this program is on the list of the President's budget cuts (for elimination) for 2011. *The deadline for received applications is midnight May 21, 2010, and applicants must register on Grants.gov—which can take up to 4 weeks to process—in order to submit an application.* The applications forms are complicated and available on the websites above.

Saving America's Treasures has been one of the largest and most successful grant programs for the protection of our nation's cultural heritage. These grants are administered by the National Park Service (NPS) in partnership with the National Endowment for the Arts, the National Endowment for the Humanities, the IMLS, and the President's Committee on the Arts and the Humanities. Save America's Treasures grants are available for "the preservation of our nation's most significant and endangered cultural treasures, which illustrate, interpret, and embody the great events, ideas, and individuals that

contribute to America's history and culture. This legacy includes the built environment as well as documents, records, artifacts, and artistic works." Specifically:

- The collection or historic property must be nationally significant (which is defined on the websites). Collections or historic properties not meeting this criterion will receive no further consideration.
- The collection or historic property must be threatened or endangered, and the application must document the urgent preservation and/or conservation need.
- Projects must substantially mitigate the threat and must have a clear public benefit (for example, historic places open for visitation or collections available for public viewing or scholarly research).
- The project must be feasible (i.e. able to be completed within the proposed activities, schedule, and budget described in the application), and the application must document adequately the required non-Federal match.

As with many of the Federal grants listed here, these highly competitive grants require a dollar-for-dollar, non-Federal match (or cost-share). The minimum grant request for historic collections projects is $25,000 Federal share; the minimum grant request for historic property projects is $125,000 Federal share. The maximum grant request for all projects is $700,000 Federal share.

What is not funded by this program: acquisition; survey or inventory of historic properties or cataloging of collections; long-term maintenance or curatorial work beyond the grant period (which is up to two years); interpretive or training programs; reconstruction of historic properties; moving historic properties or work on historic properties that have been moved; construction of new buildings; historic structure reports and condition assessments, unless they are one component of a larger project to implement the results of these studies by performing work recommended by the studies; costs of fund-raising campaigns; costs of work performed prior to announcement of award.

A list of past, funded projects can be found at www.nps.gov/history/hps/treasures/search.htm. This list also gives examples of the activities supported by these grants.

Museums for America
http://www.imls.gov/applicants/grants/forAmerica.shtm

This flexible grant program, which offers between $5,000 and $150,000 and likewise requires a 1:1 match, is the Institute's largest grant program for museums, supporting projects and ongoing activities that build museums' capacity to serve their communities. The most recent deadline was November 2, 2009; no deadline set for 2010 as of March 2010. Applications must go through www.grants.gov.

The Queen Mary appears to qualify under the guidelines for "museums" defined by this program. MFA grants strengthen a museum's ability to serve the public more effectively by supporting high-priority activities that advance the institution's mission and strategic goals. Grants are awarded in the following categories:

- Engaging Communities (Education, Exhibitions, and Interpretation)
- Building Institutional Capacity (Management, Policy, and Training)
- Collections Stewardship

The Collections Stewardship (or management of collections) category "supports all activities that museums undertake to maintain and improve the management of museum collections in order to fulfill the museum's public service mission." Projects may include, but are not limited to, the following:

- Collections planning
- Collections security and safety
- Database development/enhancements
- Digitization of collections
- Registration/cataloguing
- Research/documentation
- Risk assessment

The program notes that some collections-care activities may be more appropriate for the Conservation Project Support program (CPS, described below) rather than MFA. Guidelines are at www.imls.gov/applicants/grants/pdf/CPS_2008.pdf. In sum, for Collection Care Activities, the following are best for the **MFA** program:

- Cataloguing
- Database development/software
- Digitization of collections
- Documentation
- Emergency/disaster planning
- Inventory
- Long-Range Conservation Planning
- Research
- Risk Assessment
- Security/fire suppression system

While the following activities are more appropriate for the **CPS** program:

- Collections surveys
- Conservation supplies/materials
- Environmental monitoring equipment
- Integrated Pest Management
- Rehousing collections
- Storage cabinets/shelving
- Treatment of collections
- Treatment reports
- Ultraviolet filtering

Conservation Project Support Program
http://www.imls.gov/applicants/grants/conservProject.shtm

The Conservation Project Support program awards grants to help museums identify conservation needs and priorities, and perform activities to ensure the safekeeping of their collections. All applications must demonstrate that the primary goal of the project is conservation care, and not collection management or maintenance. Grants are available for many types of conservation activities, including surveys (general, detailed condition, or environmental); training; treatment; and environmental improvements.

This competition, which requires a 1:1 match, offers up to $150,000 for up to two years. Note that all applicants for the Conservation Project Support program are required to file their applications online

through Grants.gov. The most recent deadline was October 1, 2009; the next deadline has not been set as of March 2010.

American Heritage Preservation Grants
http://www.imls.gov/collections/grants/boa.htm

A special initiative of the Conservation Project Support Program in partnership between IMLS and Bank of America, these grants will help to preserve specific items, including works of art, artifacts and historical documents that are in need of conservation. Grants are made only up to $3,000. Per the website, "applicants build on completed conservation assessments of their collections to ensure that the grants are used in accordance with best practices in the field, and underscore the importance of assessment planning. The latest deadline was September 2009; the next application phase has not been announced as of March 2010.

Museum Assessment Program
http://www.imls.gov/applicants/grants/museumAssessment.shtm and http://www.aam-us.org/museumresources/map/index.cfm

This program also provides technical assistance. The Museum Assessment Program (MAP) is supported through a cooperative agreement between the IMLS and the American Association of Museums. Assessments are funded on a first-come, first-served basis. According to the website, MAP

> helps maintain and improve operations through a confidential, consultative process. We provide guidance in meeting priorities and goals and understanding how your museum compares to standards and best practices. If your museum is facing challenging financial times, participating in MAP can help:
>
> - prioritize goals so you can allocate resources wisely,
> - document your needs so that you can make a stronger case to funders,
> - provide recommendations on ways to become an even stronger institution.
>
> In less than a year, your museum can complete a self-study, have a site visit by a peer reviewer and begin implementing recommendations.

National Leadership Grants (NLG)
http://www.imls.gov/applicants/grants/nationalLeadership.shtm

This large program makes grants from $50,000–$1,000,000 and up to $100,000 for planning grants, which might be appropriate for the Queen Mary project at this stage. The project website provides details about the nuances of purposes for this grant. Each year IMLS establishes a list of program priorities that are given preference for funding. For the applications that were due February 1, 2010**,** priorities included digitization and research, for instance.

National Park Service Grants

National Maritime Heritage Grants
http://www.nps.gov/history/maritime/grants.htm

The City is familiar with this program, funded by the National Park Service, Department of the Interior. The Queen Mary project fits the guidelines well ("activities which serve to enhance public access, use, and appreciation for maritime heritage collections"). However, in March 2010 the program website states: "Currently, there is no funding available for the Maritime Heritage Grants Program. It is also uncertain

when, and if, enough funds will be available for future grants."

Historic Preservation Fund
www.nps.gov/history/hps/hpg/HPF

The Historic Preservation Fund (HPF) provides grants to states, tribes, and local governments to preserve historic properties. Support is provided to pay part of the costs of staff salaries, surveys, comprehensive preservation studies, National Register nominations, educational materials, as well as architectural plans, historic structure reports, and engineering studies necessary for preservation.

For information on potential grants for California, contact the State Historic Preservation Office:

http://www.ohp.parks.ca.gov/
Mr. Milford Wayne Donaldson, SHPO
Office of Historic Preservation
Department of Parks & Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
Phone: 916-653-6624
Fax: 916-653-9824
E-mail: mwdonaldson@parks.ca.gov

Deputy: Mr. Stephen Mikesell
E-mail: smikesell@parks.ca.gov

National Endowment for the Arts (NEA)
www.nea.gov

The Arts Endowment includes programs such as *Save America's Treasures*, supports the documentation. A search on the NEA website could reveal any additional opportunities.

National Endowment for the Humanities (NEH)
NEH Preservation Assistance grants (PAG)
www.neh.gov/grants/guidelines/pag.html

Preservation Assistance Grants help small and mid-sized institutions—such as libraries, museums, historical societies, archival repositories, cultural organizations, town and county records offices, and colleges and universities—improve their ability to preserve and care for their humanities collections. They may be used for:

- general preservation assessments (to engage a conservator, preservation librarian, archivist, or other appropriate consultant to conduct a general preservation assessment and to help draft a long-range plan for the care of humanities collections);
- consultations with professionals to address a specific preservation issue, need, or problem (e.g., developing disaster preparedness and response plans; establishing environmental monitoring programs; studying light levels in exhibition and storage spaces and recommending appropriate methods for reducing damage to collections; developing detailed plans for improving storage or rehousing a collection; and assessing the conservation treatment needs of selected items in a collection);

- purchase of storage furniture and preservation supplies; purchase of environmental monitoring equipment for humanities collections; and
- education and training for staff members to attend workshops addressing both preservation and access topics. Education and training requests may address both preservation and access topics. For example, workshops could focus on such topics as the following:
    - preservation and care of humanities collections (often offered by collection type, e.g., textiles, paintings, photographs, archival records, manuscripts, and books),
    - methods and materials for the storage of collections,
    - environmental monitoring programs,
    - disaster preparedness and response,
    - best practices for cataloging art and material culture collections,
    - proper methods for the arrangement and description of archival collections,
    - best practices for sustaining digital collections,
    - standards for digital preservation, and
    - care and handling of collections during digitization.

The deadline for projects to start in January 2011 is May 21, 2010. Awards range up to $6,000; cost sharing is not required. Small and mid-sized institutions that have never received an NEH grant are especially encouraged to apply. Applicants may combine two or more elements of the project types listed above in a single application.

National Historical Publications and Records Commission (NHPRC)
www.archives.gov/grants/index.html

Archival Grants provide support to ensure that records documenting the American experience are saved and made available for public use. Most of these programs focus on publication. However, others include:

- Archives - Basic Projects
  The National Historical Publications and Records Commission seeks proposals for fundamental archival activities that promote the preservation and use of America's documentary heritage. Most recent deadline was October 6, 2009.
- Archives- Detailed Processing Projects
  The National Historical Publications and Records Commission seeks proposals for detailed processing and preservation of collections of national significance. Most recent deadline: October 6, 2009
- State and National Archival Partnership Grants
  The National Historical Publications and Records Commission seeks proposals to strengthen archives and historical records programs in each of the states and build a national archival network. Deadline: March 4, 2010
- Strategies and Tools for Archives and Historical Publishing Projects
  The National Historical Publications and Records Commission seeks proposals to develop new strategies and tools that can improve the preservation, public discovery, or use of historical records.
  Two annual competitions: June 3, 2010; October 7, 2010

National Trust for Historic Preservation
http://www.preservationnation.org/resources/find-funding/grants/
Information on all the sources below are provided on this website.

National Trust Preservation Funds provide two types of assistance to nonprofit organizations and public agencies: 1) matching grants from $500 to $5,000 for preservation planning and educational efforts, and 2) intervention funds for preservation emergencies. Matching grant funds may be used to obtain professional expertise in areas such as architecture, archeology, engineering, preservation planning, land-use planning, fund raising, organizational development and law as well as to provide preservation education activities to educate the public.

The **Johanna Favrot Fund for Historic Preservation** provides nonprofit organizations and public agencies grants ranging from $2,500 to $10,000 for projects that contribute to the preservation or the recapture of an authentic sense of place. Individuals and for-profit businesses may apply only if the project for which funding is requested involves a National Historic Landmark. Funds may be used for professional advice, conferences, workshops and education programs.

The **Cynthia Woods Mitchell Fund for Historic Interiors** provides nonprofit organizations and public agencies grants ranging from $2,500 to $10,000 to assist in the preservation, restoration, and interpretation of historic interiors. Individuals and for-profit businesses may apply only if the project for which funding is requested involves a National Historic Landmark. Funds may be used for professional expertise, print and video communications materials, and education programs.

The **Partners in the Field Challenge Grant for Statewide and Local Partners** is a transformative challenge grant program to expand preservation field services nationwide. The grant program is collaboration between the National Trust for Historic Preservation and Statewide and Local Partners, funded by a generous gift from Robert Wilson. The primary purpose of Partners in the Field is to expand the delivery of preservation field services across the country by building the capacity of statewide and local preservation organizations to provide these services on the ground, and by building their long-term capacity for philanthropy to sustain their preservation work. Partners in the Field challenge grants are only available to recognized National Trust Statewide & Local Partners.

The Peter H. Brink Leadership Fund helps to build the capacity of existing preservation organizations and encourages collaboration among these organizations by providing grants for mentoring and other peer-to-peer and direct organizational development and learning opportunities. The purpose of these grants is to support the leadership and effectiveness of staff and board members of preservation organizations to fulfill their mission and to create a stronger, more effective preservation movement. Grants from the Peter H. Brink Leadership Fund pay for travel costs and honoraria and generally range up to $1,500.

PRIVATE FOUNDATIONS

There are several pathways to finding potential foundation funders. Then the best way to secure a grant is to engage with a program officer or foundation board member about the project. That can happen through personal relationships, a customized email or letter query that presents the project in light of the funder's expressed interests, or a phone call. Full grant proposals sent "cold" seldom meet with success.

Databases

The highly recommended Foundation Center (www.foundationcenter.org) offers easily searchable databases, tutorials, classes, news updates, and much more. The basic Foundation Directory Online is $29.95/month subscription, or free at most major public libraries. The Foundation Center has just introduced a new "Power Search" subscription, which searches through nine Foundation Center databases, including grant makers, grants, 990s, and companies, as well as jobs, RFPs, news, foundation publications, and nonprofit literature. The cost is $179.95/month, and may be well worth the investment

for an intensive research phase, which a full-time development director easily could complete in a month.

The key to searching the Foundation Center databases is no surprise, keywords. For finding grant makers, search terms can be chosen from a list of "fields of interest" or by city, for instance. Neither "maritime" or "ship" is a "field of interest, though—but a text search of Grants can turn up all grants made that include "ship," for instance, or "maritime" or "conservation." The Power Search function provides more opportunities for nuanced searches.
The fundraising professional (especially a foundation relations professional) will be skilled at using the Foundation Center databases and also familiar with the limitations. In the basic Foundation Director Online, a search under "historic preservation/historical societies" (in "fields of interest") turned up 336 foundations supporting this activity. However, the great majority of these foundations already designate all their funds for particular purposes, such as a local historical society. Time is wasted in sending grant proposals to foundations unless there is a direct alignment of the Queen Mary's needs with the foundation's stated funding priorities (found on its website or in the Foundation Directory), and/or a clear expression of interest from the foundation's staff or a board member. *It is far better to send five well-targeted grant proposals than to send out 500 in a scattershot way.* It is wiser to hire a very experienced (even if more expensive) foundation relations person or grantwriter than to waste time on a less seasoned person. Foundation assets have shrunk, and the competition is extremely tough.

Given the importance of the Queen Mary to the City of Long Beach, approaching local foundations could be fruitful; there already is a built-in convergence of interests. A quick search of foundations by "Long Beach" turned up this:

Grantmaker Name, City, State	**Total Assets**	**Total Giving**
Alpert Foundation, Raymond & Barbara Long Beach, CA	$2,063,829	$1,818,071
Archstone Foundation Long Beach, CA	$120,590,638	$5,239,940
Bauer Foundation, Evalyn M. Long Beach, CA	$27,436,554	$1,709,200
Breslauer-Soref Foundation, Long Beach, CA	$8,901,570	$663,250
Denney Foundation, Corwin D., Long Beach, CA	$5,917,533	$444,750
Gumbiner Foundation, Josephine S. Long Beach, CA	$10,633,492	$602,957
Hsu Charitable Foundation, Hong-Yen and Lin-Run Long Beach, CA	$6,706,730	$465,000
McDonald Family Foundation Long Beach, CA	$9,258,222	$599,999
Miller Foundation, Earl B. & Loraine H. Long Beach, CA	$41,395,887	$2,551,053
Munzer Foundation, Rudolph J. & Daphne A., Long Beach, CA	$8,394,769	$438,000
Norris Foundation, Kenneth T. and Eileen L., Long Beach, CA	$137,172,415	$8,524,365
Reid Foundation, Will J. Long Beach, CA	$13,150,697	$1,481,630

Zee Foundation Long Beach, CA $7,462,536 $435,546

Note that most of the foundations listed above are "family foundations," which are led by the donors and are approached in the same way as individual major donors, described below. Board members decide which grants to make based on personal interests.

Larger foundations, such as the Archstone Foundation (or the Parsons Foundation in Los Angeles, or the statewide James Irvine Foundation in San Francisco, etc.), have established certain formal programs or giving priorities. These larger, "programmatic" foundations are best approached via the program officers who manage grant making for the various programs. These program officers often are experts in the particular content area. They are approachable via "letter of inquiry," email or phone—though as always, personal connections are by far the most effective way of getting attention.

Another good way of searching the Foundation Center database is by "Grants" instead of "Grantmaker." In the "Grants" search, the text word "ship" revealed 249 grants—and the foundations throughout the country that made them—related to ships. Details are provided on the grant, with a link to the foundation.

Board of Director or Leadership Committee

Members of the Board of Directors or Leadership Committee should personally know some board members of private foundations, and should help identify foundations to approach.

Supporters of Organizations with Similar Characteristics

An excellent way to identify prospects is to look at supporters of organizations that share your interests. For instance, the Long Beach Museum of Art's "Sponsors" page on its website, http://www.lbma.org/sponsor.html, includes a long list of foundation and individual supporters who would be good prospects for the Queen Mary project.

Another similar effort is the fundraising for the U.S.S Constitution. See their Support page for ideas on foundations and strategies: http://ussconstitutionmuseum.org/support/foundations.htm.

A report titled *A Public Trust at Risk: The Heritage Health Index Report on the State of America's Collections*, was published in December 2005 and may provide useful background and other information for constructing arguments to funders. http://www.heritagepreservation.org/hhi/.

COMMUNITY FOUNDATIONS

These foundations are geographically based and exist to benefit a local community. They also often manage "donor-advised funds" on behalf of individual philanthropists.

The Long Beach Community Foundation (www.lbcfoundation.org) would be an ideal partner for the Queen Mary fundraising project. According to its website, the Long Beach Community Foundation's goals are to:

- Encourage charitable giving
- Help individuals and families manage their philanthropic giving
- Establish endowment funds to benefit local nonprofits
- Make strategic grants to Long Beach nonprofits.

The Queen Mary fundraising staff and leadership should engage the Long Beach Community Foundation

early in the process of raising funds. The LBCF staff, which advise on and manage charitable giving for individual donors, could help direct donations to the Queen Mary.

The LBCF's Board of Directors (http://www.longbeachcf.org/Board%20of%20Directors), which consists of civic, business and philanthropic leaders, exemplifies the kind of Board of Directors or Leadership Committee that should be established for the Queen Mary. Ideally, a board member from the LBCF would also sit on the Queen Mary fundraising board.

CORPORATIONS

Most corporate donors will want public relations opportunities in exchange for their support. The "funding opportunity" should be presented in a way that aligns with the image that the corporation wants to present to the public. Support for the Queen Mary could come either from the corporate foundation or from the company's advertising/marketing division.

A variety of corporations might be interested in associating themselves with the prestige, historical value, spirit of adventure, or other qualities that the Queen Mary represents. Other prospects could include companies that want to reach tourists who visit the Queen Mary (for instance, Jet Blue, which operates from Long Beach). Because many corporations try to "give back" to their local communities, corporations based in the Long Beach area would be good prospects.

As mentioned earlier, any fundraising effort for the Queen Mary must involve local leaders, and they should have contacts among local corporations. The Foundation Center offers a searchable database of corporate donors, and workshops on how to approach corporations for donations.

Fundraising could include a "corporate membership" plan, as offered by the Long Beach Museum of Art. Its website describes the program:

> Long Beach Museum of Art's Corporate Partnerships program provides a wonderful opportunity for local corporations to become actively involved in the arts community. LBMA Corporate Partners provide generous support to the Museum's exhibitions, educational programs, special events, and annual fundraisers at a variety of sponsorship levels. The LBMA Corporate Partners program allows corporations to invest in the cultural development of the community while connecting to over 100,000 highly diverse individuals each year.
> Sponsorships begin at the $1,000 level with increasing visibility and benefits available at higher levels. The Museum works with its Corporate Partners to tailor each sponsorship package to meet their specific marketing and philanthropic needs.

Note that "services" provided in response to a donation will reduce the tax-deductible value of that donation, depending on the value of the service. A nonprofits or tax attorney can clarify.

Local, high-traffic service companies (such as a grocery chain) might also be persuaded to create a partnership through which the company solicits small donations at the register, for instance, in return for the association with the Queen Mary or some other incentive. Fundraisers used these kinds of partnerships very effectively in raising millions of dollars in small gifts for Haiti, for instance.

INDIVIDUAL DONORS

Individuals can make donations via cash; private trust, family foundation, or managed funds (for instance, by an investment firm or a community foundation); stock; or bequest or other "planned gifts," such as charitable remainder trusts. (Other assets such as real estate or vehicles also can be given, though much

less frequently; there are services that for a fee process these complicated donations.) A development director will know how to set up systems to pursue and receive all these forms of gifts.

Securing "planned gifts" involving estate planning usually requires retaining an additional specialist, which can happen on a contract basis. Military veterans could be interested in making a bequest that would help to preserve military history, especially if the veteran or his/her family had a personal connection with the Queen Mary and her role in WWII.

"Prospect research" is a professional service in fundraising that identifies individuals who are "qualified prospects," meaning they have capacity to make a major gift and may have an interest in the project. Prospect research can be expensive, and while it should be part of a larger campaign, at the beginning of the process the fundraising consultant should be able to generate a list on their own that is more than enough to pursue at first.

If the Queen Mary wants to raise significant (five-figure and higher) gifts from individuals, it should hire a Major Gifts professional. This person may already have a strong rolodex and understands how to "cultivate" (in fundraising lingo) major donors over time, gradually engaging them with the project and its people. The Major Gifts director either makes an "ask" directly or sets up City or Ship's Operators, or the fundraising consultant, to do so. Initial, lower requests are easily handled by consultants. Often the best person for the big "ask" (which is built up to over time) is a peer of the donor prospect, and him/herself a donor who has agreed to be associated with the effort to preserve the RMS Queen Mary.

The most likely donor is a past donor—if that past donor has been informed about the use and effectiveness of his/her funds, and has been engaged in the project. "Stewardship," also handled by the fundraising consultant, is the art of cultivating existing donors so they renew (and increase) their gifts.

The Queen Mary may want to create a donor wall, similar to those displayed at symphony halls. Then it would be possible to offer public recognition for major gifts. Formalized tiers of giving (often with names—Captain's Circle, etc.) can be a useful tool in encouraging donors to give at higher levels than they otherwise would have. The Queen Mary might also consider "naming opportunities," whether smaller donations such as a porthole for $1,000, or (for very large gifts—six figures and over) naming a hall or a program.

SMALLER INDIVIDUAL DONORS

These donors can be accessed through a public campaign (whether direct mail, email, radio, web advertising, social networking) or through donation requests of visitors to the ship. The Queen Mary's fundraising consultant should develop a website that vividly makes the pitch for support, provides background, tracks accomplishments, lists supporters (once there are a reasonable number to list), and makes it possible to give online (Network for Good is a reliable online donation service for nonprofits). The various means of giving—cash, stock, etc.—could be outlined on the web site.

If the Queen Mary launches a major campaign, a vibrant web site could be a hub. It could include blogs and interactive features, not merely "flat" content. It would be helpful to contract part-time with services that help optimize search and otherwise drive traffic to the site, which would spur donations.

More than merely raising funds, the existence of hundreds or thousands of small donors illustrates public support for the cause. This fact can be used persuasively in seeking larger chunks of support from foundations, corporations and government entities.

When a person solicited in this general way gives $1,000 or over, it is worth investigating the person as a potential major donor. If the person has potential and interest, they can be moved into the major donor pipeline and cultivated to make larger and larger gifts, moving “up the giving ladder.”

Foundation Support Previously Given for Maritime Preservation

Albert O. Wilson Foundation

Alice Willard Dorr Foundation

Arthur Vining Davis Foundations

Bank of America Foundation

Cabot Family Charitable Trust

Camden-Kings Bay Council, Navy League of the United States

Catalogue for Philanthropy

Charles Hayden Foundation

Dainger Fund

Fleetwing Charitable Foundation Trust

Frank M Barnard Foundation

Gladys Krieble Delmas Foundation

George & Alice Rich Charitable Foundation

The Grainger Foundation

Greater Los Angeles Women's Council Navy League of the United States Navy Belles

Henry Luce Foundation

Holt Foundation

Jacksonville Council, Navy League of the United States

James A. Macdonald Foundation

The John J. & Mary R. Schiff Foundation

Joseph Pellegrino Family Foundation

Klarman Family Foundation

The Lowell Institute

Mabel Louise Riley Foundation

McCune Foundation

The MacPherson Fund

National Endowment for the Humanities

The Rice Family Foundation

The Robbins Foundation

Sara Scaife Foundation

Schrafft Charitable Trust

St. Augustine Council, Navy League of the United States

Sunfield Foundation

Tawani Foundation

The Tazewell Foundation

USAA Foundation

USS LIBERTY Veterans Association

The W. Bradford Ingalls Charitable Foundation

William Randolph Hearst Foundation

Corporate Support Previously Give for Maritime Preservation

Alion Science and Technology

BAE Systems North America

Band of America

Bluejacket Ship Crafters, Inc.

Booz Allen & Hamilton, Inc.

CitiBank

Cubic Corporation

Functional Design and Engineering, Inc.

IReady Systems

iRobot Corporation

John Hancock Financial Services

KPMG, LLP

Liberty Mutual Group

MICRO USA INC

Myriax Inc.

Ocean Innovations

Orca Maritime

ProFinance Associates, Inc.

Proctor & Gamble Corporate Giving Fund

Rolls-Royce Naval Marine, Inc.

SeaBotix, Inc.

Seacon

SIDUS Solutions, Inc.

Teledyne RD Instruments

VeroTek

List of Books, Websites and Other Resources

Books

Grassroots Grants: An Activist's Guide to Proposal Writing.
By Andy Robinson (Chardon Press, 1996)
Excellent examples and a thorough treatment of the proposal-writing process. While examples pertain to activist organizations, this book is a valuable resource for any organization.

Winning Grants Step by Step.
By Mim Carlson (Jossey-Bass Publishers, 1995)
Worksheets and checklists take the reader through the proposal-writing process. Text is excellent for early stages of planning for project design and fundraising.

Program Planning & Proposal Writing, Expanded Version
by Norman Kiritz. (The Grantsmanship Center, 1980)
The low-cost entry in the field, at 47 pages this booklet is still gives excellent value for the price. Be aware that it was written in 1980, so the budget numbers are low and do include current technology. However, the rest of the material still stands as an excellent presentation of proposal writing. It's available for purchase from the **Grantsmanship Center**.

Publications

Philanthropy News Digest (PND)
PND is a free website that offers up-to-date information on philanthropy, covering foundation giving and national news. From the PND Home page you can search for articles in their archive, or sign up for a free, weekly e-mail newsletter called the RFP Bulletin that gives a list of recent Requests for Proposals (RFPs). Be sure to search the RFP Bulletin section of the site for past RFPs.

The Grantsmanship Center Magazine
Free, quarterly newsletter contains excellent articles on various aspects of fundraising. About half of the newsletter promotes The Grantsmanship Center's training programs. Subscribe online, or pick up a complimentary copy at our location, while supplies last.

Chronicle of Philanthropy
A bi-weekly newspaper with articles on philanthropy, listings of recent grants, newly published

annual reports, book reviews, events, and much more. Subscriptions are $69.50 for one year. Subscribe online, or pick up a complimentary copy at our location, while supplies last.

Nonprofit FAQ Sites

1. **Nonprofit Genie: Fundraising**
2. **Idealist.org Nonprofit FAQ: Development**
3. **Free Management Library: Fundraising**
4. **American Institute of Philanthropy (AIP)**
5. **CharityChannel**

E-Newsletters

1. **The Center's E-Newsletter**
   Provides Center news, nonprofit sector news, announcement of events and networking opportunities, tips, funding leads, and more...
2. **Food for Thought**
   Published by CompassPoint
3. **GrantStation Insider**
   Provides information on new funding programs, upcoming deadlines, conferences, seminars, and general information.
4. **Fund$Raiser Cyberzine**
5. **Nonprofit Quarterly e-Newsletter**
6. **Thompson Publishing Free News Alerts**
7. **PNN Alert**

Appendix D – Resumes

Margarita J. Wuellner, Ph.D., DIRECTOR OF HISTORIC RESOURCES

Education

- Ph.D., Art History, University of California, Los Angeles, California, 2005
- M.A., Architectural History, University of Virginia, Charlottesville, Virginia, 1991
- Certificate of Historic Preservation, University of Virginia, Charlottesville, Virginia, 1991
- B.A., Art History, Oberlin College, Oberlin, Ohio, 1983

Professional Affiliations

- Society of Architectural Historians
- California Preservation Foundation
- National Trust Forum, Center for Leadership, National Trust for Historic Preservation
- Documentation and Conservation of Buildings, Sites and Neighborhoods of the Modern Movement

Summary

Margarita J. Wuellner, Ph.D., has over 20 years of experience in the practice of architectural history, historic preservation, and cultural resources management in California, the United States and abroad. She has an extensive background in art and architecture from the eighteenth through twenty-first century. She is a specialist in the study of visual culture, Modernism, urbanism, and cultural landscape. Her qualifications and experience meet and exceed the Secretary of the Interior's Professional Qualification Standards in History, Architectural History, and Historic Preservation Planning.

Dr. Wuellner has received numerous awards and fellowships for her work including the Samuel H. Kress Foundation Fellowship, Art History; American Council of Learned Societies Fellowship; and Edward A. Dickson Graduate Fellowship, University of California.

Experience

Historic Preservation and Cultural Resources Management: Dr. Wuellner has extensive experience in the management, preservation and treatment of historic properties for compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA), National Environmental Protection Act (NEPA), Section 4(*f*) of the Department of Transportation Act, California Environmental Quality Act (CEQA), and local preservation ordinances. Dr. Wuellner is experienced in the assessment of projects for conformance with the Secretary of the Interior's Standards and has assisted clients with State Historic Preservation Office consultation, Programmatic Agreements, and Memorandum of Agreements.

Dr. Wuellner has over 15 years of experience as a principal investigator, project manager, and technical lead for international, national and regional firms, including EDAW, Inc. and Parsons, Inc. She gained her professional training and experience with John Milner Associates in Alexandria, Virginia, and Land and Community Associates in Charlottesville, Virginia. Since returning to Los Angeles in 1995, she has conducted a wide variety of regional and local projects for compliance with CEQA and local preservation ordinances. These projects have included the completion of city-wide and county-wide surveys, as well as evaluation of regional resources.

Surveys and Historic Contexts: Dr. Wuellner has surveyed thousands of properties and conducted extensive research to document and evaluate the significance of historic resources at the local, state, and national levels. She has designed and implemented a variety of large-scale state-wide, county-wide, and city-wide surveys throughout the United States, as well as transportation, military, industrial, urban, and rural surveys. Dr. Wuellner has conducted numerous projects in California and metropolitan Los Angeles for state and local agencies and private clients. She continues to work on a national basis and recently completed the innovative South Texas Ranching Study for the Texas Department of Transportation (TxDot). Dr. Wuellner is conducting two large-scale surveys under contract to the Community Redevelopment Agency of the City of Los Angeles. These surveys are evaluating historical resources in the Wilshire Center/Koreatown Recovery Redevelopment Project Area and the Normandie 5 Redevelopment Project Area.

Professional Publications: Dr. Wuellner has authored over 100 technical reports representative of a full spectrum of historical resources investigations for incorporation into CEQA/NEPA environmental review documents and other stand-alone reports such as National Register nominations and historic preservation plans.

Dr. Wuellner is experienced in the preparation and implementation of mitigation recommendations to reduce potential impacts to historic resources. She has demonstrated experience in the preparation of Historic Structure Reports (HSRs); Historic Buildings Maintenance and Treatment Plans; Historic Preservation Management Plans; Historic American Building Surveys (HABS); Historic American Landscape Surveys (HALS); and Cultural Landscape Reports (CLRs).

Amanda Kainer, ASSISTANT ARCHITECTURAL HISTORIAN

Education

- M.S., Historic Preservation (Emphasis: Conservation), Columbia University, New York, New York, 2008
- B.S., Design, (Emphasis: Interior Architecture), University of California, Davis, California, 2002
- B.A., Art History, University of California, Davis, California, 2002

Professional Affiliations

- American Society of Interior Designers
- National Trust for Historic Preservation
- Association for Preservation Technology
- Los Angeles Conservancy
- Santa Monica Conservancy

Summary

Amanda Kainer has over four years of professional and academic experience in the practice of historic preservation and architectural history throughout the United States.

Ms. Kainer's qualifications and experience meet and exceed the Secretary of the Interior's Professional Qualification Standards in History and Historic Preservation Planning. She has a wide-ranging knowledge of nineteenth- and twentieth-century American Architecture and Interior Design. Ms. Kainer has advanced skills in researching and documenting residential interior design, and analyzing preservation easements. She also specialized in conservation with knowledge of analytical methods, and materials such as stone, metal, mortar, bricks and finishes.

Experience

Historic Preservation Documentation and Research: Ms. Kainer has conducted extensive archival research, field observation, and recordation for numerous historic documentation projects. She provided database management for the Adelante Eastside Redevelopment Project and the Wilshire Center/Koreatown Historic Resources Survey and served as the Survey Team Leader for the survey of fine and decorative arts aboard the RMS Queen Mary in Long Beach. Ms. Kainer is currently assisting with the management of the survey database and research for the Normandie 5 Survey in Los Angeles.

Ms. Kainer has completed character-defining features reports, and assistance with investment tax credit applications and Historic American Building Survey (HABS) documentation. She has contributed to Historic Resource Assessments for residential properties in Laguna Beach and Redondo Beach, as well as a bowling alley in Chatsworth. Ms. Kainer has prepared Conditions Assessments and provided recommendations for two projects in New York, including the East and West Parlors of the Van Cortlandt House Museum in the Bronx and the Orange County and Government Center in Goshen. She has assisted with the HABS documentation of the Schoebnerg Institute and the Santa Monica City Jail. Ms. Kainer has contributed to character-defining features reports for All Saints Church and Polytechnic Elementary School in Pasadena.

Santa Monica: Ms. Kainer has served as a research assistant and co-author for numerous reports for the City of Santa Monica as part of PCR's on-call contract with the City. She has experience providing research assistance, critical analysis, and writing for City Landmark Assessment and Evaluation reports, Preliminary Assessment Memoranda, and Structure of Merit Evaluations. The reports evaluated a variety of commercial, residential and institutional properties, including the Bay Builders Exchange (1503-1509 4th Street), the Keller Block (1456-1460 3rd Street/227 Broadway), the Santa Monica Doctor's Building (2125 Arizona Avenue), the Shangri-La Hotel (1301 Ocean Avenue), and a residential property (142 Hollister Avenue).

Heidi Rous, CPP, PRINCIPAL, DIRECTOR OF AIR QUALITY, CLIMATE & ACOUSTICS

Education

- B.S. Physics, California State Polytechnic University, Pomona, California, 1990

Professional Affiliations

- Certified Permitting Professional (CPP), Registered with South Coast Air Quality Management District, #B6027

Summary

Heidi Rous has over 19 years of experience in permitting, compliance, air quality planning, training, emissions estimations, and special studies.

Ms. Rous has managed Air Quality Impact Assessments (AQIA) and Health Risk Assessments (HRAs) required under various state and federal environmental regulations including National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), RMPP, Cal ARP, AB2588, and Proposition 65. Ms. Rous has extensive expertise with all applicable modeling tools including ISCST, URBEMIS, HARP, DEGADIS, EMFAC, Cal3QHC, Caline4, and EDMS.

Ms. Rous has comprehensive experience with design and permitting of air pollution control devices, including BACT determinations, and emission credit (ERC and RECLAIM) assistance. Ms. Rous has extensive experience with Risk Management Plans and other compliance services. She has authored Start-up, Shut-down, and Malfunction plans, and frequently supervises emissions and performance testing of new, modified, and demonstration units. She has extensive knowledge in quantifying, modeling, and mitigating emissions from stationary and mobile sources. Ms. Rous also possesses extensive experience with regulatory compliance under the CAA, CWA, CERCLA, RCRA, EPCRA, and related statutes.

Experience

CEQA, NEPA, and Environmental Assessments: Ms. Rous has authored numerous Air Quality, Human Health Risk, and Risk of Upset sections to Environmental Impact Reports (EIR), Environmental Impact Statements (EIS), Environmental Assessments (EA), and other special studies. Clients include the Port of Los Angeles, the Port of Long Beach, the South Coast Air Quality Management District, the Port of Oakland, the United States Environmental Protection Agency, the Federal Aviation Administration, the Federal Highway Administration, numerous municipalities, and all major branches of the Department of Defense.

Health Risk Assessments and Offsite Consequence Analyses: Ms. Rous has managed or performed numerous HRAs and Offsite Consequence Analyses (OCAs) for a diverse range of clients and source types. HRAs include manufacturing, surface coating, metal plating, landfills, aggregate plants, refineries, ports, and bulk storage terminals. In addition, HRAs required for new school development for LAUSD and other districts must include quantification of the health risk posed from exposure to mobile sources such as freeways and train operations. OCAs were performed for water supply and waste water treatment facilities, power plants, cold storage facilities, and chemical plants.

Permitting and Compliance: Ms. Rous has extensive experience providing comprehensive planning and compliance services to numerous facilities in the energy and heavy manufacturing sectors. Specific experience includes permitting of new and modified facilities throughout California, especially within the SCAQMD jurisdiction, including refineries, cogeneration facilities, electrical production plants, steel rolling mills, metal plating operations, aerospace manufacturing, food production landfills, and wastewater treatment plants. Tasks include regulatory analyses, emissions inventories, AQIAs, HRAs, and BACT determinations.

Ms. Rous has prepared and negotiated permit applications, performed audits, assessed air quality impacts and HRAs for petrochemical and energy clients such as ARCO, British Petroleum, Chevron, Shell, Valero, Unocal, Ultramar, Well Head Electric, Oklahoma Gas & Electric and Southern California Edison. She has provided on-site compliance support (staff augmentation) at various times for ARCO and BP, and is familiar with all aspects of applicable health and safety requirements. With BP, Ms. Rous was responsible for GHG emission calculations, field surveys, and permitting of a new FCCU unit.

She has supported on-call permitting requests, such as review of Title V operating permits, completion of applications for authority to construct, case-by-case BACT determinations, and cost-effectiveness calculations.

Lisa Courtney Forman Hudson Conservation Studio, LLC

EXPERIENCE

CONSERVATOR AND PRESERVATION CONSULTANT 1991 - PRESENT
Private Practice Los Angeles, CA

Examine, document and treat works of art on paper, photographs, archival materials, manuscripts, and maps. Provide consultation for short and long range strategic planning, risk assessment, disaster preparedness, and acquisition evaluation, exhibition planning from inception to completion, including couriering nationally and internationally.

Institutional clients include Norton Simon Museum, Japanese American National Museum, UCLA Special Collections, Skirball Cultural Center, California State University Northridge, Hammer Museum, Henry Ford Museums, Phoenix Art Museum, Santa Barbara Museum of Art, and Corita Kent Archive at Immaculate Heart and Searles Valley Historical Society.

Participated in large institutional survey projects for Los Angeles County Museum of Art, Walt Disney Imagineering, Huntington Library and Botanical Gardens: Virginia Steele Scott Gallery, Norton Simon Museum and University of California at Santa Barbara.

PROJECT MANAGER AND LEAD CONSERVATOR July 2003 – October 2005
Preservation Project at Southwest Museum of the American Indian at the Autry National Center

Awarded contract on basis of response to Request for Proposal to design, plan and develop institutional infrastructure to relocate 250,000 ethnographic artifacts. The Preservation Project included the creation of staff health and safety plan, implementing pest management processes, defining registration protocols, implementing bar coding technology, designing packing methods, defining inventory process as well as designing and creation of new storage areas. 10,000 artifacts were registered, packed and moved to create work spaces and artifact storage spaces. Supervision of eight full-time project staff.

CONSULTING CONSERVATOR 1999 - 2002
GETTY RESEARCH INSTITUTE AT GETTY CENTER Los Angeles, CA

Surveyed, documented and treated photographs and works of art on paper for exhibitions including: Gradiva, Edible Monument, Mexico: Empire to Revolution, Devices of Wonder and The World From Here.

ASSISTANT PAPER CONSERVATOR 1994 - 1996
Los Angeles County Museum of Art Los Angeles, CA

Examined and treated works of art on paper for the Department of Prints and Drawings, Robert Gore Rifkind Center for German Expressionist Studies, Twentieth Century Art and Department of Photography. Evaluated works of art on paper and photographs for acquisition and exhibition. Supervised and trained technicians and interns. Coordinated, managed and couriered exhibitions for national and international venues.

PAPER CONSERVATOR, IMS SURVEY PROJECT 1993 - 1994
Los Angeles County Museum of Art Los Angeles, CA

Surveyed, selectively treated and re-housed Japanese woodblock prints in the collection of the Pavilion for Japanese Art.

ASSISTANT PAPER CONSERVATOR 1989-1991
Aitchison and Watters, Inc. Los Angeles, CA
Examined and treated 19th and 20th Century works of art on paper.

ASSISTANT PAPER CONSERVATOR 1989
Conservation of Paintings, Ltd.. Los Angeles, CA
Examined and treated Modern and Contemporary works of art on paper.

1037 S. Hudson Ave. Los Angeles, CA 90019 Tel. (323) 939-7341 Email:hudsonstudio@gmail.com

CONSERVATION ASSISTANT 1986 - 1987
Huntington Library and Botanical Gardens Pasadena, CA
Surveyed, cleaned, repaired and selectively treated 72 oversize bound volumes containing 15,000 prints from the Granger Collection at the Huntington Library and Botanical Gardens under the supervision of Griselda Warr.

EDUCATION

MASTER OF FINE ARTS, ART AND ART HISTORY 1991
University of California, Los Angeles Los Angeles, CA

BACHELOR OF FINE ARTS, BOOK ARTS AND PAPERMAKING 1982
Texas Woman's University, Magna Cum Laude Denton, TX

Identification of Digital Prints 2001
Marten Juergens at J. Paul Getty Museum Los Angeles, CA

Inpainting for Works of Art on Paper 1999
Jim Bernstein and Deborah Evans at J. Paul Getty Museum Los Angeles, CA

Photographic Inpainting 1995
Jose Orraca, Conservator of Photographs Kent, Connecticut

Book and Paper Conservation Training 1986 - 1988
Olivia Primanis, Conservator in Private Practice Los Angeles, CA

Book and Paper Conservation Training 1986
Griselda Warr, Conservator, Huntington Library Conservation Department Pasadena, CA

PROFESSIONAL ASSOCIATIONS

The American Institute for Conservation of Historic and Artistic Works
Western Association for Art Conservators
Los Angeles Preservation Network, Steering Committee (LAPNET)

PROFESSIONAL DEVELOPMENT WORKSHOPS

- Workshop Leader for "Developing Exhibition Practices in the Institutional Context" two-part workshop exploring issues relating to exhibition of collection materials in non-traditional spaces, for Librarians, Archivists, Collections Managers, and Registrars, 2006, UCLA Friday Forum.
- Program Co-Chair for "Color Photographic Materials: Issues of Storage, Display, and Preservation" seminar for Librarians, Archivists, Collections Managers, and Registrars, 1997 at the Huntington Library and Botanical Gardens for LAPNET.
- Program Chair for "Collecting and Preserving Black and White Photographic Materials" for Librarians, Archivists, Collections Managers, and Registrars in 1996 at the Huntington Library and Botanical Gardens for LAPNET.
- Program Chair for "Maintaining a Delicate Balance: Exhibitions and Loans" seminar for Librarians, Archivists, Collections Managers, and Registrars in 1995 at Los Angeles County Museum of Art for LAPNET.

Caroline M. Sakaguchi-Kunioka
8400 Wells Street Rosemead, California 91770
626.309.9924 * 626.673.2002
sakaguchikunioka@yahoo.com

EDUCATION

Winterthur/University of Delaware Program in Art Conservation July 2000 – January 2004
Wilmington, Delaware
M.S., Art Conservation

University of Nevada, Las Vegas September 1999 - December 1999
Las Vegas, Nevada
Course in Chemical Qualitative Analysis

Moorpark College and Mission College September 1993 - May 1996
Moorpark and Sylmar, California
Courses in General and Organic Chemistry

Pitzer College May 1991
Claremont, California
B.A., Double majoring in Studio Art and English

EXPERIENCE

Caroline Kunioka Fine Art Conservation September 2004 - Present
Owner and Sole Proprietor
Current clients include the Clark County Museum, the Skirball Museum, and the Broad Foundation.

Autry National Center at the Southwest Museum April 2005 – October 2005
Assistant Object Conservator, Hudson Project
Assisted in movement of objects between stations within the preservation project, designed artifact freezing protocols, assessed and cleaned artifacts and recorded their condition and any treatment steps performed. Also responsible for advising other team members on appropriate materials for use in contact with collections. Supervised a preprogram intern.

The Arizona State Museum March – July 2003
Third-Year Conservation Intern
Assisted in creating lab procedures for new XRF device. Performed chemical spot testing on artifacts to ascertain treatment decisions. Performed technical study on Brazilian feather artifacts, part of a group project examining NAGPRA issues, which Nancy Odegaard presented at AIC 2003. Participated in archaeological dig near Winslow, Arizona with Homol'ovi Research Program.

The Autry Museum of Western Heritage July 2002 – February 2003
Third-Year Conservation Intern
Responsible for preparation of artifacts for display, including designing textile mounts and dressing mannequins. Lead Conservator for two cameo exhibits, "Gene Autry and the Angels" and "Recent Acquisition: The Carrillo Family Papers." Completed research project on common leather dressings and treatments and their aging properties. Performed treatment and documentation on 26 artifacts.

The Liberace Museum and Foundation June – August 2001
Summer Conservation Intern
Researched and wrote Emergency Response Handbook and Disaster Preparedness Policy. Founded the Museum Safety Team. Directed the closing of the main costume gallery in preparation for museum construction. Performed four minor treatments on museum artifacts.

EXPERIENCE continued

Dr. Vicki Cassman, University of Nevada at Las Vegas November 1998 – July 2000
Pre-Program Conservation Intern
Researched and wrote a proposal for the UNLV Planning Initiative Grant, "Museum Envirnmental Monitoring Kit and Loan Project" and implemented same. Responsible for performing support research on questions posed to Dr. Cassman from local museums. Treated archeological specimens, and conducted research in forensic identification for a historic burial in the UNLV Anthropology Department.

The Howard W. Cannon Aviation Museum April 1999 – July 2000
Exhibit Technician
Responsible for the installation and management of museum exhibits and traveling shows. Began a program of preventive maintenance of permanent collections galleries.

Neil C. Cockerline Fine Art Conservation February - October 1999
Pre-Program Conservation Intern
Responsible for researching, examining and treating paintings and works of art on paper in a private conservation practice.

Sculpture Conservation Studio October 1997 - February 1999
Conservation Technician and Office Manager
Assisted in the on-site conservation of sculpture in varying media. Performed treatments on stone, metal, marble, ceramic and porcelain objects. In addition, responsible for routine office and studio management, accounting and secretarial support.

Tatyana M. Thompson & Associates, Inc. July - October 1997
Conservation Intern
Assisted in the conservation of murals in the loggia of Royce Hall at University of California, Los Angeles. Performed brush vacuuming, cleaning and consolidating lifting and flaking paint, and inpainting areas of loss.

The UCLA Fowler Museum of Cultural History January 1997 - July 1997
Conservation Assistant
Pre-training conservation internship as introduction to the preventive care and minor treatment of artifacts and textiles. Responsible for semi-permanent museum number marking on objects and textiles as joint intern between two departments.

Visual Resource Center, Los Angeles County Museum of Art April 1995 - June 1996
Research Assistant
Responsible for accessioning and cataloging new slides, and managing circulating slides. Located esoteric information. Assisted patrons in their research and monitored slide circulation.

Antiquities Conservation, J. Paul Getty Museum April - September 1995
Conservation Intern
Performed minor treatments on objects: cleaned and consolidated surfaces of various objects and ceramic sherds, joined sherds on study artifacts and documented treatments. Created experimental objects for study. Performed research for ceramic desalination project.

Registrar's Office, Museum of Contemporary Art (MOCA) January 1993 - April 1995
Intern for Reproduction Rights
Performed extensive research on artists represented in permanent collection and studied art reproduction laws. Responsible for obtaining reproduction rights to all work in permanent collection and for maintaining artists' database and inventory of collection.

Registrarial Assistant September - December 1993
Oversaw museum preparators and provided security for John Cage's exhibition, *Rolywholyover: A Circus*. Responsible for installation, removal and temporary storage of objects in show. The gallery location of exhibition objects changed hourly or were removed entirely for periods of time, based on Cage's random computer composition.

EXPERIENCE continued

Registrar's Office, Los Angeles County Museum of Art September 1992 – April 1993
Registration Intern
Assisted in all aspects of large collections management, receiving, shipping, lending works of art. Assisted in installation of major exhibitions. Responsible for ongoing research and inventory of collection. Wrote over 700 condition reports for incoming and outgoing objects. Numbered and documented newly acquired pieces.

Mystic Seaport Museum Summer 1992
Munson Institute Intern
Performed demonstrations in exhibits and interacted with the public. Participated in weekly two-day seminars that addressed all aspects of museum work. Performed brush vacuum cleaning on 19th century artifacts and reorganized storage space in Conservation Department work project. In context of an intern group project, curated and designed a traveling exhibit in Schaeffer Gallery, *The Nautical ABSeas.*

PRESENTATIONS AND PUBLICATIONS

Human Remains Guide for Museums and Academic Institutions, Dr. Vicki Cassman, Dr. Nancy Odegaard, Dr. Joseph Powell, et al (including Caroline Kunioka) Alta Mira Press, 2006.

"Disaster Planning and First Response Workshop" Guest lecture and workshop period at the annual conference of the Nevada Museums Association, held at the Nevada State Museum, Las Vegas, September 29, 2004.

"New Ideas for the Testing, Documentation and Storage of Objects Previously Treated with Pesticides" Nancy Odegaard, et al (including Caroline Kunioka), pp.33-42, Objects Specialty Group Postprints, Volume 10, 2003. Proceedings of the Objects Specialty Group Session, 31st Annual Meeting, American Institute for Conservation of Historic and Artistic Works. Washington, D.C.: AIC, 2004.

"Museum Environmental Monitoring"
Guest lecture and laboratory period, Museum Operations (Anthropology 413),
University of Nevada, Las Vegas, Las Vegas, Nevada. March 2, 2000

"Art Conservation in a Museum and Private Practice."
Guest lecture, Introduction to Museum Methods (Anthropology 410),
University of Nevada, Las Vegas, Las Vegas, Nevada. October 11, 1999.

"Museum Environmental Monitoring Kit and Loan Project."
Presentation at the annual conference of the Nevada Museums Association, held at the Clark County Heritage Museum, Las Vegas, Nevada. October 6-8, 1999.

"Recommended Procedures for Marking Semi-Permanent Accession Numbers."
Directed Workshop for new interns, Fowler Museum of Cultural History at UCLA, Los Angeles, California. July 9, 1997.

SKILLS AND LANGUAGES

Experienced in most aspects of museum work: grant writing; completing registrarial paperwork for traveling exhibits; accepting, opening and inspecting art crates; planning, designing and executing small temporary exhibits; art hanging and mountmaking; reading and maintaining environmental monitoring equipment.

Certified in x-ray fluorescence analysis and data interpretation.

Fluent in most word processing and database programs. Typing speed of 80 wpm.

Fluent in conversational Japanese.

David F. Mathieson
838 Voluntown Rd. Griswold, CT 06351
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DMThistle@aol.com

Employment:

Private consultant, historic collections management, treatment, long range collections planning, exhibition design and fabrication. Practicing artist. 2006 - present
Mystic Seaport Museum, Inc., Mystic, CT. 1971 - 2006
New Bedford Whaling Museum, 1968-1971

Education: formal

Swain School of Design, - BFA, 1971
Post graduate courses in chemistry, Connecticut College 1974

Education: courses, workshops, and training sessions.

"Dockyard Ship Models from the 17th, 18th, & 19th Centuries"
"Collections in Historic Buildings"
"Maintenance of Outdoor Sculpture: Whose Job Is It?"
"Natural Disaster Mitigation Workshop"
"Museum Design, Conservation Considerations"
"Traveling Exhibitions and Conservation"
"Water Gilding"
Numerous other courses, workshops and training programs attended.

Selected presentations and publications:

"Building an Emergency Plan," The Getty Conservation Institute
"Maritime Museum Emergency & Disaster Preparedness and Recovery Manual"
"Reproductions, Preserving the Artist's Original Intent"
"Ship Carvings: Their Examination and Treatment"
"Conservation of Wooden Maritime Artifacts"
Selected from over 30 presentations and publications written or performed.

Surveys, assessments, and consultations:

Avery Memorial Association, 2009
Mystic Seaport Museum, 2008-2009
New London Maritime Society, 2007
Gov. J. Trumbull House, 2007
FDR Presidential Library collection, 2007
Michigan Maritime Museum, 2006
Long Island Maritime Museum, 2006
Thirty-one other assessments and surveys over the past eighteen years.

Professional Affiliations:

American Institute for Conservation
Wooden Artifacts Specialty Group of AIC,
New England Conservation Association (board member from 82 – 84),
Nautical Research Guild, Inc.

Cherilyn Parsons
2839 Forest Ave., Berkeley CA 94705
ph/f: 510-548-9909 ◆ c: 310-435-5365 ◆ e: cherilynp@earthlink.net

SUMMARY OF EXPERIENCE

- Directly instrumental in securing tens of millions of dollars in grants from foundations and individuals for a variety of projects.
- Over 17 years working in grantwriting and fundraising, including management of development offices.
- Also experienced at leading strategic planning, business planning, and initiatives.
- Excellent at building relationships and at forging collaborations among people with differing agendas.
- Skilled at communicating with clarity, passion, and respect to diverse audiences. Twenty years of experience in professional writing.
- Entrepreneurial and self-motivated; also enjoy working in teams.

EDUCATION

- Master's in Professional Writing, University of Southern California, 1988. Full fellowship. Master's thesis (a novel) won the Phi Kappa Phi award, the university's highest graduate honor.
- B.A. in English, *magna cum laude*, University of California, Los Angeles, 1984. Phi Beta Kappa honors.

DEVELOPMENT AND FOUNDATION RELATIONS EXPERIENCE

President, Strategic Communications 1992-1995; 1998 – present

Carry out fundraising for non-profit organizations, including prospect identification, grantwriting, cultivation and solicitation of individuals, consulting to non-profit boards to facilitate fundraising, strategic planning. Directly secure major philanthropic gifts. **Clients and responsibilities have included the following:**

Center for Investigative Reporting March 2008 – present
Berkeley, CA

- Lead all fundraising/development activities for this 32-year-old journalism non-profit that produces investigations for national media (e.g. NPR, *Frontline*, major print and web outlets).
- Manage a portfolio of 20 current foundation funders. Currently developing major donor campaign.
- Directly instrumental in securing $4.5 million in grants over the past 10 months.
- Develop relationships with program officers; prepare Executive Director and board for meetings; participate in funder meetings; make solicitations; follow up.
- Conceptualize, write/edit, and submit proposals. Also strategically craft budgets and budget narrative. Collaborate internally and externally in developing proposals.
- As part of core management team, help develop the organization's overall business strategy.
- Have developed excellent relationships with CIR's board, generating unprecedented engagement by the board in fundraising. Created development advisory committee.

Center for Media, Crime and Justice February 2007 – present
John Jay College of Criminal Justice, City University of New York, NY

Raise funds from foundations. Have helped secure approximately $1 million. Identify prospects, conceptualize and write/edit proposals, and help craft budgets. Designed and co-organized development events, including a luncheon at the *New York Times* with top journalists and a dozen foundation officers and presidents.

Maynard Institute for Journalism Education Sept. 2007 – Jan. 2009
Oakland, CA

Orchestrated fundraising for this non-profit that provides professional education for diverse journalists. Played key role in securing five- and six-figure grants. Conceptualized and wrote all proposals; advised on budgets. Also wrote case statements, wrote direct mail pieces, and advised on individual donor strategies.

Institute for Justice and Journalism (IJJ) 2001 – 2007
USC Annenberg School, Los Angeles, CA
Was instrumental in securing $5 million in grants for this non-profit that improves journalism on social justice issues. Led strategic planning process.

Antioch University Southern California (Los Angeles and Santa Barbara) Nov. 2003 – Dec. 2006
Advised the President on planning and strategy for all programs. Oversaw development work; hired and supervised Development Director. Personally instrumental in securing the largest gift AUSC had received, $800,000 from a family foundation. Hired personnel in Admissions.

KCRW Public Radio Station 2002 – 2003
Hired to implement a one-year capital campaign. Advised station manager on her first major solicitation, which resulted in a $250,000 lead gift. Strategized and implemented use of large subscriber database. Worked with board and staff to build a regular flow of major gifts. Campaign goal was met.

Nepalese Youth Opportunity Foundation 2002 – 2003
Sausalito, CA & Kathmandu, Nepal
Advised on fundraising and communications for this U.S.-based foundation that serves children in Nepal. Doubled donor base and donations by capturing responses from *Oprah Show* appearance. Redesigned and rewrote the large web site (www.nyof.org), greatly increasing exposure and donations.

University of Southern California, Various Schools and Departments 1998 – 2002; 1992 – 1995
Wrote numerous successful proposals (seven- or eight-figure grants) for Federal agencies, private foundations and individuals for projects throughout USC, including at the Provost's Office, USC Libraries, Annenberg School for Communication, School of Medicine, and Independent Health Professions.

Director of Foundation Relations 1997 – 1998
University of Southern California, Los Angeles Full-time
Responsible for the university's relations with private foundations. Worked closely with USC's President, Provost and deans in this leadership position in USC's central Office of University Advancement. Oversaw $21 million in grants throughout the university. Secured many grants, from five-figure project grants to several seven-figure grants, on diverse subjects. Wrote or oversaw the writing of large proposals. Prepared briefings for President, Provost, Deans, etc. Maintaining excellent relations throughout the university, resigned to return to consulting, initially for USC's Provost and the Annenberg School Dean.

Director of Development—Nursing, Physical Therapy, Occupational Therapy 1995-1997
University of Southern California, Los Angeles Full-time
Created a comprehensive development office from scratch in a challenging environment of conflicting interests from three different departments. Hired and supervised staff; built boards; implemented donor tracking systems. Identified and cultivated foundation and individual prospects; wrote case statements and proposals; secured gifts. Was recruited to become USC's Director of Foundation Relations.

SELECTED UNIVERSITY TEACHING EXPERIENCE
- **Business Communications**: As lecturer in the USC Marshall School of Business from 1991 to 1994, taught undergraduate business writing and public speaking. Guest-taught in the MBA program.
- **Academic Writing**: From 1990-1995 provided one-on-one writing consulting to graduate students.
- **Communications Management.** Guest-lectured in USC Master of Communication Management program.

SELECTED OTHER EXPERIENCE
- Taught grantwriting to government agencies and non-profit organizations.
- Ghosted non-fiction books and edited many academic papers, policy papers, dissertations, and articles.

DAVID T. DOLIM
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EDUCATION

University of California, Los Angeles, Masters of Library and Information Science
June 2004
Specialization: Informatics

Pomona College, Bachelor of Arts
May 1997
Major: English

EXPERIENCE

Adult Services Librarian, City of Arcadia Public Library, Arcadia, CA

February 2006 – Present

Collection Development and Management

Evaluate and procure new titles for print and audiovisual collections utilizing a variety of sources, including review materials, trade catalogs, and patron recommendations. Develop and manage e-book and e-audio digital collections and related workflows and technical infrastructure to assure findability and accessibility. Regularly weed and develop existing collections utilizing collection statistics and bibliographic research. Run database reports in support of collection analysis and weeding. Currently developing procedures to systematize and coordinate weeding of library collections.

Federal Depository Coordination

Monitor and update FDLP (Federal Depository Library Program) item selection profile. Maintain government documents collection database (MS Access). Integrated FDLP collection with general library collections. Created digital collection of FDLP materials and currently working to integrate records into the library's OPAC. Administer FDLP collection weeding in accordance with federal government regulations and under the direction of the California State Library. Register and broker access to federal government databases made available through the FDLP. Compile and report FDLP collection statistics to library administration. Maintain and update policies and procedures manual.

Professional Development

Regularly attend local and regional professional development workshops and seminars. Maintain current awareness of library trends and developments through regular monitoring of library journals, periodicals, and blogs.

Reference, Instruction, and Programming

Provide reference and readers' advisory service at busy adult and teen shared reference desk, as well as by phone, email, and IM. Also provide children's reference as part of departmental cross-training program. Develop online information literacy tutorials, instruction sheets and handouts, and subject bibliographies. Created and currently administer library's information literacy program. Conduct one-on-one and group information literacy

sessions. Supervise volunteer computer instructors. Create library exhibits and displays. Lead book discussion groups and administer annual adult summer reading program.

Systems
As a member of the library's Web and Technology Committee, regularly evaluate web-based tools and technologies for inclusion in program and service strategies. As chair of the Library 2.0 Committee, developed and implemented a 10-week staff training program focused on Web 2.0 tools and technologies. Regularly update library website utilizing Vision Internet Content Management System. Completely revised and re-populated Government Information Services and Collections web pages and regularly update with featured original content. Contribute to library blogs. Developed protocols and procedures for instant messaging reference service. Create and run database reports in support of general library administration. Provide general information technology support for public-access computers.

Systems Librarian, Hudson Conservation Studio, LLC, Los Angeles, CA

July 2004 – December 2005
As a consultant for Hudson Conservation Studio, developed information management protocols, tools, and procedures for a multi-year collections preservation and relocation project at the Autry National Center's Southwest Museum of the American Indian.

Object Tracking System

Developed and implemented an automated barcode-based object tracking system for monitoring and documenting the inventory, movement, conservation, and re-housing of over 150,000 museum artifacts. Designed, oversaw programming of, performed quality assurance testing on, and trained staff in the use of custom application for use on barcode scanner PDAs. Designed underlying information architecture that corresponds to data standards instituted through collection management database. In consultation with conservators, designed and selected materials for object, tray, and box barcodes, including barcode label and tag materials, adhesives, and printing method and ribbons. Developed protocols for printing object barcodes from collection database. Developed procedures for barcode association. Assisted in the development of upload module and associated procedures to transfer scanned data to collection database. Developed quality control procedures for monitoring performance of system during initial implementation and subsequent use. Developed file naming protocols and procedures for managing barcode scanner outputs.

Collections Management Database Customization and Data Standards Definition

In consultation with Autry staff, customized location, condition, and conservation database modules for project usage. Defined protocols for field usage and layout. Negotiated database user roles and permissions. Assisted in the development of controlled vocabularies for describing registration discrepancies, condition assessments, and conservation treatments. Defined data standards and upload procedures for x-ray fluorescence analyses.

Statistics and Quality Control

Designed and wrote database reports to monitor project progress. Defined data rules and wrote corresponding database reports for quality assurance checks on object, tray, and box locations and data entry integrity.

Digital Resources Management

Based upon constituent-user interviews, developed controlled vocabulary for indexing diverse array of digital images utilizing digital asset management system. Image types included inventory, object damage, project documentation, packing solutions, and object condition and treatment. Supervised the application of schema to collection of over 1200 images.

General Project Administration

Supervised project registrar and interns. Provided information systems support and interfaced with Autry information technology staff regarding networking and software-related issues. Developed and administered project-related intranet. Processed and managed project's financial records (purchase orders, invoices, packing slips, check requests, expense reports) and interfaced with Autry accounting staff as needed.

Reference Desk Assistant, UCLA College Library, Los Angeles, CA
September 2002 – June 2004
Provided reference service in undergraduate academic setting, serving a diverse clientele composed of faculty, college and high school students, and the general public. Instructed patrons in the use of library resources, including the online catalog, article databases, and print reference tools. Contributed to annotated bibliography of subject encyclopedias.

MCLS FILL (From Interns to Library Leaders) Intern, El Segundo Public Library, El Segundo, CA
April 2004 – June 2004
Responsible for original and copy cataloging utilizing AACR2, MARC, LCSH, and DDC standards. Trained on the Millennium Integrated Library System and OCLC Connexion and Passport. Provided desk and phone reference.

MCLS FILL Intern, Palos Verdes Public Library, Rolling Hills Estates, CA
January 2004 – March 2004
Provided reference and readers' advisory service at busy public library reference desk. Wrote bibliographic instruction scripts for library proprietary databases.

Intern, USC Norris Medical Library, Los Angeles, CA
September 2003 – January 2004
Wrote, designed, and began installation of an exhibit on the advent of electronic publishing and the resultant crisis in scholarly communication. Performed collection management activities related to holdings of electronic journals. Trained on the Horizon Integrated Library System.

Intern and Reference Desk Assistant, UCLA Science & Engineering Library, Los Angeles, CA
June 2003 – August 2003 (Intern), September 2002 – June 2003 (Reference Desk Assistant)
Performed desk, phone, and digital reference for a clientele composed of faculty, scientific researchers, students, and the general public. Instructed patrons in the use of library resources, including the online catalog, article databases, and print reference tools. Revised and updated library resources handouts.

Teacher, Los Angeles Unified School District, Los Angeles, CA
August 2001 – June 2002, May 1998 – June 2000
Teacher for students at the Kindergarten level, and substitute for multiple elementary grades. Planned and administered lessons, conducted assessments, and interfaced with parents. Involved in grant writing and chaired library committee.

Editor/Producer, Homeworkhelp.com, Sunnyvale, CA
July 2000 – December 2000
Researched, developed, and wrote articles, reviews, and lesson plans for the educator pages of an eLearning site. Managed digital image and content assets. Designed and implemented website format and design specs. Developed and managed editorial plan and content production schedule. Developed roster of freelance writers. Edited and proofread copy.

Senior Library Assistant, Hughes Aircraft Company Library, El Segundo, CA
August 1997 – May 1998
Assisted patrons with searches for books and engineering standards. Maintained serial and video spreadsheets. Processed incoming materials. Worked circulation desk.

SKILLS

Technical
Microsoft Office (Word, Excel, Outlook, PowerPoint, Publisher, Access, Visio); Adobe Acrobat; Thesaurus-Construction-Software 8; Vision Classroom Management Software; Camtasia Studio; Extensis Portfolio; Business Objects Crystal Reports; Seagull Scientific BarTender (barcode formatting and printing application); Image Permanence Institute's Climate Notebook; DebugMode Wink; Vision Internet Content Management System; HTML/XHTML, CSS, XML, and SQL; Drupal configuration and administration

Languages
Reading knowledge, German

PROFESSIONAL ACTIVITIES

Authored Talks and Presentations

"Anatomy of a Collections Move," 2006 Western Association of Art Conservation Annual Meeting, Tucson, AZ

October 22, 2006

"Library Exhibits: Planning and Implementation," UCLA Department of Information Studies Friday Forum, Los Angeles, CA

March 3, 2006

Leadership

Member, Digital Resources Steering Committee, Califa Library Group
September 2008 – present

Member, 2009 Conference Planning Committee, California Library Association
October 2008 – present

Financial Chair, Student Governing Board, UCLA Department of Information Studies
September 2003 – June 2004

Editor, Book Review and Member, Advisory Board, *Interactions: UCLA Journal of Education and Information Studies*
September 2003 – June 2004

Caitlin E. Brewer
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Biography

A recent graduate at the top of her UCLA class, Caitlin Brewer's work ethic and talents are unquestionable. Ms. Brewer is committed to facilitating the needs of making art from inception to creation. An accomplished artist in her own right, Ms. Brewer's deep understanding of the artistic process allows her to harness her education, experience, and considerable talents in order to serve as a compassionate, confident, goal focused arts administrator.

OBJECTIVE To gain a position in arts administration and grant writing.

EDUCATION **University of California, Los Angeles**

Bachelor of Arts in World Arts and Cultures, Dance **June 2009**

- 3.95 Cumulative GPA, Magna Cum Laude

Coursework Includes: "Production"(lighting, set, crew, stage management), "Go Produce Yourself" (promotion/marketing, statements of mission/purpose, press releases, etc.), "Internet Practicum" (HTML/CSS design, Filming/Lighting/Editing), and "Teaching Dance in Schools", "Arts Internship"(all aspects of grant writing and arts admin).

SKILLS

Proficient at Microsoft Word and Excel, Final Cut Pro, Adobe Photoshop; experience with web design and CSS/HTML programming, working understanding of DVD Studio Pro.

EXPERIENCE

Grant Writing/Administrative Assistance **Dec. 2008-Present**
CONTRA-TIEMPO, Los Angeles
* Research and write grants and letters of inquiry with active deadlines
* Coordinate grant collaborations with school administrators
* Compile budgets, write press releases and internet marketing materials
* Designed promotional materials using Constant Contact
* Edit video footage for professional work samples

Stage Management/Sound&lighting **Dec.2009-Feb.2009**
Phoenix Remains Theater Company, Los Angeles
* Preparation and maintenance of space
* Finding and coordinating volunteer staff and scheduling for a 12 show run
* Lights/sound operation during performance
* Promotional marketing assistance

Personal Assistance/ Art Preparation **Sept. 2007-June 2008**
Hammer Museum, Los Angeles
* Assisted preparator of the Grunwald Center of the Hammer Museum
* Framed and handled priceless artwork
* Inventory formatting and compilation

ACTIVITIES AND HONORS

* Graduated top of the School of Arts and Architecture
* Undergraduate Commencement Speaker
* Chancellors Marshal

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