Project Activities

The Museum of Ventura County (MVC) successfully completed its Collections Evaluation and Disaster Plan Project in June of 2021. The planned outcomes of a Risk Assessment Report, a Fire Suppression Assessment Report, and a Disaster Response Plan were all successfully created and accepted or adopted by the Museum’s Board of Directors. Further, the Reports and Plan lay the foundation for a continued effort and implementation for increased long-term preservation of the collections held in trust by the Museum.

Rather than working only with in-house staff in a siloed approach, the Museum employed a team strategy built on the recommendations of expert, professional opinion. A member of the Board of Directors who works with FEMA acted as Board Liaison and an advisor to staff throughout the project. After much consideration, a paper conservator and an objects conservator were sought to perform the risk assessments. MVC recognized that paper is one of its more vulnerable collections material types and that it represents the largest proportion of the collection. Two MVC staff members completed a workshop with the paper conservator and were familiar with her professional work. Combining her education background, familiarity with the coastal California region, and experience recovering artifacts from the Montecito debris flows, the conservator brought unique expertise and local knowledge to the project. The objects conservator was familiar with a variety of mediums and material types covering the rest of MVC’s collection. Her experience included conserving archaeological collections from the California Department of Parks and Recreation, completing General Conservation Assessments for historical museums and working for LACMA. MVC Staff met the disaster response consultant through his work with the Performing Arts Readiness initiatives in Houston, TX following Hurricane Harvey. He was selected for his holistic approach to emergency planning. Staff identified lack of fire suppression as one of the collections greatest risks due to the prevalence of wildfires and recent incidences in the immediate area and approached a local fire protection engineering and consulting firm to create an implementable fire suppression recommendation for the Museum.

The planning project included three phases, a Preparatory Phase, Assessment Phase, and Reporting and Dissemination Phase. Once the NEH notified MVC of the grant award, staff started the Preparatory Phase working across several departments to gather documents (such as museum floorplans, lists of priority items, and local emergency contact sheets) in advance of the consultants’ assessments. Staff provided these background materials to the Project Team for review. A project kick-off conference call with the Project Team oriented the consultants and clarified responsibilities and expectations for each member of the Project Team. This phase took place from October to November.

During the Assessment Phase of the project, each of the consultants spent either virtual or in-person time at the sites evaluating the facility and risks to the collection. The phase took place from December through February. Due to the pandemic, two of the consultants had to work closely with staff to tour facilities and identify risks remotely, utilizing the Zoom platform. While video tours gave the consultants a good idea of specific issues and spaces, it was difficult for them to get a larger sense of the site as a whole. Staff and these consultants spent additional time in conversation clarifying site and risk information. Everyone made the best of a less than ideal situation, but it required additional MVC Staff preparation time than originally estimated.

MVC asked that the conservators compile a report that summarized the specific risks our collections face based on our region’s history and climate as well as the MVC facility and envelope in which collections are housed rather than general collections recommendations. They were asked to ensure that their reports include passive and active strategies to mitigate risk with preference and prioritization given to solutions that didn’t require replacing major mechanical systems like the HVAC. The reports were to emphasize achievable targets for our collections environments that are energy efficient and economically
sustainable for the museum. The fire suppression engineer inspected the fire suppression systems already in place in the basement and developed a plan for installation on the second floor and off-site storage considering the recommendations from the conservators. Each of the three reports were made available to the disaster response consultant before his virtual visit. To conclude the Assessment Phase, the Project Team met virtually to discuss findings and provide additional input for the overall Risk Assessment Report and the Disaster Response Plan. This meeting was especially collaborative as each team member gave additional feedback regarding the risks and prioritization from their unique experiences.

The Reporting and Dissemination Phase took place from March through June. During this phase, MVC Project Staff worked with the disaster response consultant to compile all reports into an overall Risk Assessment Report. The Disaster Response Plan addresses how the Museum prepares, responds, and recovers in a disaster incident whereas the Risk Assessment Report consolidates the conservators’ assessments to guide future implementation efforts to mitigate the effects of threats to the collections. The final draft of the Disaster Response Plan and the assessment findings were approved and adopted by the MVC Board of Directors in June of 2021. The reports were then disseminated among MVC staff and County of Ventura staff.

Risk Assessment Findings

The Risk Assessment Report combined the findings of the paper conservator, objects conservator, and fire suppression specialist, as well as the observations of the disaster response consultant. The report summarizes and prioritizes major risks to the Museum’s collections. Fire risks are prevalent in the Museum due to both the high probability of wildfires (the Thomas Fire almost reached the facility in 2017), a lack of fire detection and suppression systems in several of the Museum’s buildings, and the flammable nature of collections materials. The report also details security issues from both internal and external sources. Additionally, all of the Museum’s collections storage areas are 25 to 50% over capacity. This overcrowding makes collections materials susceptible to damage in earthquake, flooding, and fire incidents. At the Main Museum site, there is an active water leak in the basement storage area, due to the slope of land next to the building. There is also the potential for larger-scale flooding in some of the other collections storage locations.

The report also found that there is a lack of equipment to regularly monitor the Museum environment, and more importantly, a lack of heating, ventilation, and air conditioning equipment to maintain stable levels of humidity and temperature in collection storage areas. This can cause damage to the collections from fast-moving mold outbreaks or longer-term deterioration of materials due to high heat and humidity levels.

Recommendations

This report included both passive and active strategies for the Museum to mitigate these risks. The most important recommendation and action is the installation of fire suppression systems (fire alarm and sprinklers) in the parts of the main Museum and other Museum facilities not currently protected. In addition, consultants recommended taking steps to discuss with local fire departments how to best address external fire threats from wildfires or transportation-related fires. In each of the Museum facilities, the recommendation is to centralize the storage of any flammable or dangerous materials such as paint, lubricants, etc. in fire-safe, OSHA approved cabinets.
While the Museum is being proactive in looking at disaster risks and vulnerabilities which could potentially damage the museum’s collection, staff, and visitors, and the development of a Disaster Response Plan is an important step to mitigate the effect of future disasters, the report found that there are important policies that are not in place. The report calls for the Museum to create Objects Handling, Exhibitions, Loans, and Collections Maintenance and Facilities policies.

The Museum’s storage spaces are overcrowded, with collections far exceeding the amount of space available to store them. Consolidating collections and the number of buildings they are stored in was recommended to keep the collection under Museum control and lower the risks to the collection that overcrowding creates. Installation of compact shelving was also recommended in sites where it will help reduce storage concerns.

Working with an earthquake remediation and preparedness consultant to review the Library and Museum buildings was strongly suggested by all consultants. While addressing the overcrowded shelves in collection storage areas may improve both staff and collections safety, and making sure collections shelving, exhibits, and other heavy furniture is secured to the floor will also help, a specialist will be able to help identify problems and solutions of which the staff are unaware. Additionally, installation of security cameras was recommended.

Consultants recommended installing environmental monitoring equipment in all Museum facilities to determine heat and humidity levels, tracking them year-round, so that staff can quickly respond to dangerous spikes in temperature and moisture levels. This recommendation has since been instituted by staff. Data has begun to be collected on a regular basis and this data is being tracked and stored to help identify current risks and establish the environmental trends that need to be addressed across the institution.

Consultants strongly recommended that once the Museum’s Disaster Plan was developed it be reviewed every year. It was recommended that the Museum consider regularly adding new vendors and suppliers, as well as state and local organizations and partners that the Museum can network with for disaster preparedness and, if needed, recovery. It was emphasized that training on the plan is imperative, and plans must be regularly practiced so that all staff and volunteers become familiar with the procedures.

**Fire Suppression Report Findings**

The Fire Suppression Report found that the Museum lacks sufficient fire suppression in almost all sites. Through site surveys and field observations, the consultant confirmed the existing fire protection systems currently serving the buildings and assessed their ability to protect the buildings and their contents in accordance with current industry practices, codes, and standards.

**Recommendations**

Based upon observations, the consultant recommended that fire suppression be added to several sites and upgraded in others. Based upon these findings, the consultant created a summary report which includes recommendations for fire protection system upgrades that rank the priority level of each upgrade based on the buildings’ current conditions and existing fire protection systems. The report provides a basis for schematic design efforts to commence as a separate project once final recommendations are adopted by the Museum. The consultant also included Rough Order of Magnitude
budgetary estimates for the design, material, permitting, and labor costs for the proposed recommendations.

In the Main Museum building, only the lobby, restrooms, and one section of administrative offices in the basement is protected by fire suppression. The consultant recommended that fire suppression systems be added to the exhibitions, library, office, and collections storage spaces where it currently does not exist. Additionally, the site requires upgrades to the smoke detection systems throughout the building. In the spaces that store collections, he recommended that a specialized system called a Single-Interlock Pre-Action dry fire sprinkler system be installed in lieu of the automatic wet fire sprinkler system. These systems would be installed as subsystems to the new automatic wet fire sprinkler system recommended for retrofitting throughout the building. Single interlock pre-action systems require a signal from a fire detection component such as a smoke detector which then opens a valve filling the system with water. Water is not discharged from the sprinklers until individual sprinklers open due to ceiling temperatures. This system will increase the cost and complexity of the fire sprinkler system and will require the installation of a fire detection system utilizing either standard spot smoke detection or an aspirating smoke detection system in the subject areas.

In the Museum’s offsite storage space, there is no fire suppression or fire alarm system. Again, the consultant recommended that the entire building be fitted with both systems and that any section of the building that stores collections should have the Single-Interlock Pre-Action dry fire sprinkler system installed. The final space to be evaluated was the Museum’s Ag Museum. This building has been kept up to code since systems were installed in 2011. There are minor upgrades that the consultant recommended, including enclosure of open space under the building and the extension of sprinklers that cover these enclosed areas under the building.

**Disaster Response Plan**

The Disaster Response and Recovery Plan, completed by the disaster response consultant in consultation with all consultants, staff, and the Board Liaison, was completed in early June 2021. The plan is focused on the safety of staff and collections at all facilities and covers the organization institution-wide. The plan includes an overview of institutional risks; a list of internal staff who will respond in the event of a disaster as well as external emergency personnel, disaster recovery vendors, utility and systems contacts, and supplies and suppliers; collection salvage priorities as identified by staff; response activities by type of disaster with a focus on human safety to protect staff and guests; instructions for response and recovery be format to aid in recovery of damaged collections items; and an Emergency Procedures Plan that includes evacuation instructions provided by Museum staff.

The risks identified include both location risks and facilities risks. Examples of location risks include severe weather, fire, security issues, vandalism, terrorism, and pandemic. Facilities risks include aging infrastructure, inadequate smoke detectors, inadequate fire suppression, and leaking roofs. Each risk is ranked by its probability and whether it has occurred before. The consultant worked with staff to identify the key personnel who would respond in the case of disaster. Additionally, locations of emergency systems and utilities were identified for all sites and floorplans were marked accordingly. These plans are included in the document and pictures of actual shutoffs were included where possible. Contacts for all utilities and for specialized maintenance were also identified for each location, as were emergency services and salvage supplies.
Salvage priorities were identified by Museum staff in the areas of Administration, Collections, and General departments. The Curator, Collections Manager, Library Director, and Agriculture Museum Manager conferred to create the list of collections salvage priorities. All staff in the Administration, Marketing, Education, Finance, Exhibits, and Events departments were consulted to create the General and Administration lists of salvage priorities.

The disaster response consultant provided an Emergency Procedures Guide that includes guidelines for human safety in the Museum. The Guide includes general instructions for staff in an emergency situation, as well as addressing weapons, suspicious mail, bomb threats, flooding, earthquake, tsunami, fire, fire alarms, hazardous materials, suicide attempts, assaults, fights, terrorism, active shooters, and exposure to human blood or body fluids.

The Plan includes recovery instructions for materials based on what materials they are made of. These range from microfiche to motion pictures to organic materials and all materials housed at the Museum are represented in these instructions. Each sheet of instructions includes a contact to call for consultation with a conservator.

Finally, the Emergency Procedures Plan outlines specific evacuation instructions for staff in the event of an emergency and covers all sites regularly staffed. The plan outlines responsible parties for training and drills, as well as onsite staff in the event of an emergency. Evacuation procedures are provided for general alarm evacuations, fire, earthquake, bomb threats, power outages, active shooters, and police activities outside the building. The plan also includes announcement scripts and instructions for evacuating the building.

**Accomplishments**

The Risk Assessment Report, Fire Suppression Assessment Report, and the Disaster Response Plan were presented to the Museum’s Board of Directors on June 22, 2021. The Board of Directors voted to accept both reports and to adopt the Disaster Response Plan. The Board directed staff to add the Disaster Response Plan to the Board of Director’s annual policy calendar, which will ensure that the Plan must be reviewed by staff and presented to the Board on a biannual basis. Additionally, the Board of Directors appointed an Ad Hoc Committee of the Board to work with staff to address the most pressing concerns in the Risk Assessment Report and Fire Suppression Assessment Report and ensure that the high priority recommendations made by the consultants are addressed in a timely manner. This group is especially focused on the issues of fire suppression, environmental controls, and collections overcrowding, which have major fiscal implications to the Museum. An added accomplishment of the project is that it energized the Board in their engagement with collections. The project’s clear, direct presentation of risks to the collection moved preparedness and collections management to the forefront. Staff have developed a prioritized list of risks that do not require Board input and are developing timelines, budgets, and sequencing for these risks to be addressed.

**Audiences**

The current audience for this project is internal in nature. The staff and Board of Directors were the target of this planning effort. However, future audiences of this project include the public, private funders, local, state, and national government funding agencies, and foundation funders. This effort is also geared towards ensuring that the collections in the Museum’s care are available for ALL future audiences at the Museum. Ensuring that risks are mitigated over the long and short term will help to
ensure that a collection exists in the Museum for the public to view. During the nine months of this project, the Museum served visitors almost exclusively through its website’s remote offerings and virtual events. The Museum’s remote offerings were visited by 79,852 unique visitors. The Museum’s virtual events were attended by 4,179 visitors. Additionally, twelve board members, four staff persons, four consultants benefited from the project.

Evaluation

This project was evaluated throughout by the Board Liaison, who is a disaster response expert. In addition, the team-built opportunities into the project for both staff and the outside professional consultants to review and discuss each other’s findings. This allowed the group to point out any omissions and to discuss best practices and standards applied to the reports.

Continuation of the Project

Since the completion of the project, in addition to the Board’s efforts, staff have developed a training schedule to ensure that all staff are trained to follow instructions in the event of a disaster or emergency. In October 2021, an Evacuation and Emergency Event Training will be presented by the Project Director. The training will be recorded and will be added to the Museum’s growing archive of training videos. The Emergency Procedures Plan will also be added to mandatory readings for new employees and a yearly training schedule is under development.

Long Term Impact

This project has uncovered major insufficiencies in the Museum’s infrastructure. The Fire Suppression Assessment Report was created in such a way that it will enable the Museum to quickly transition into an implementation phase in order to ensure adequate fire suppression for the Museum’s collections and spaces. Also as a result of the consultant’s finding, the Museum hired a Space Assessment Consultant, whose report and suggested sequencing for addressing the space, fire suppression, environmental control, and public space issues at the Museum are currently being reviewed and assessed by the Board of Director’s Ad Hoc Committee. These major projects will be undergirded by the reports produced during this process. The identification of the risks to the collection will enable Museum staff to seek funding on the local, state, and national level. Additionally, the time and effort put into this process by the staff and the Board of Directors underscores the Museum’s mission to preserve collections for future interpretation. The Museum is investing in ensuring that collections are preserved for the long term.