Cataclysm and Challenge

Impact of September 11, 2001, on Our Nation's Cultural Heritage

A Report by Heritage Preservation

Cover: *Sphere for Plaza Fountain* by Fritz Koenig underwent a transformation as a result of the events of September 11, 2001. Originally installed at the World Trade Center (top left), it survived the collapse of the neighboring Towers partially intact (top right). After cleaning, it was moved to Battery Park and rededicated in its damaged state as a memorial to the victims of the terrorist attack (bottom photos).

Credits:
Top left, courtesy the Port Authority of New York and New Jersey
Top right, photo by Bri Rodriguez/FEMA News Photo
Bottom photos by Kyra Skvir

Printed in the United States of America

Cataclysm and Challenge

Impact of September 11, 2001, on Our Nation's Cultural Heritage

A report by Heritage Preservation
on behalf of the Heritage Emergency National Task Force

Ruth Hargraves, Project Director

The Bay Foundation of New York City and the National Endowment for the Humanities generously provided funding for this report.

Acknowledgements

We wish to thank all those who so willingly shared their experiences of September 11 through interviews, written documentation, telephone conversations, and electronic narratives. We particularly applaud the staff members who responded to our survey while still coping with recovery after the tragedy. Although space does not permit the listing of individual names, their institutional affiliations are noted on page 23.

We are especially grateful to Barbara Roberts of the Frick Collection; Rae Zimmerman, Director of the Institute for Civil Infrastructure Systems, Robert F. Wagner Graduate School of Public Service, New York University; and Kyra Skvir of New York City for their unique contributions to the preparation of this report.

We appreciate the staff of the Federal Emergency Management Agency (FEMA), both in Washington and in Region II, who took time from their many pressing responsibilities in recent months to answer our questions and support this endeavor.

Thanks are also due to the many professionals in conservation and in disaster response who reviewed our survey and the final manuscript.

The staff of Heritage Preservation has provided extensive support and expertise to this project. Diane Mossholder ably designed and edited the report, Céline Guisset managed the survey data, and Lucy Kurtz helped track down survey respondents. The project was conducted under the general leadership of Jane Long, Director of the Heritage Emergency National Task Force, and Moira Egan, Vice President for External Relations.

Finally, we would like to thank the project director, Ruth Hargraves, whose tenacity and passion were essential in bringing this project to fruition.

Lawrence L. Reger
President
Heritage Preservation

Introduction

This report has been produced by the Heritage Emergency National Task Force, established in 1995 to help libraries, museums, archives, and historical sites protect cultural property from natural disasters and other emergencies. It addresses that goal by promoting emergency preparedness and mitigation and by providing expert information on response and salvage when disasters occur. Co-sponsored by the Federal Emergency Management Agency and Heritage Preservation, Inc., the Task Force is composed of more than 30 federal agencies and national service organizations.

With support from the National Endowment for the Humanities and the Bay Foundation, the Task Force has assessed the impact of the events of September 11 on cultural and historic resources in Lower Manhattan and at the Pentagon. Descriptions of that day and its aftermath are based on official reports, press accounts, interviews, surveys, public forum discussions, and written and oral statements. A list of sources is provided on page 22.

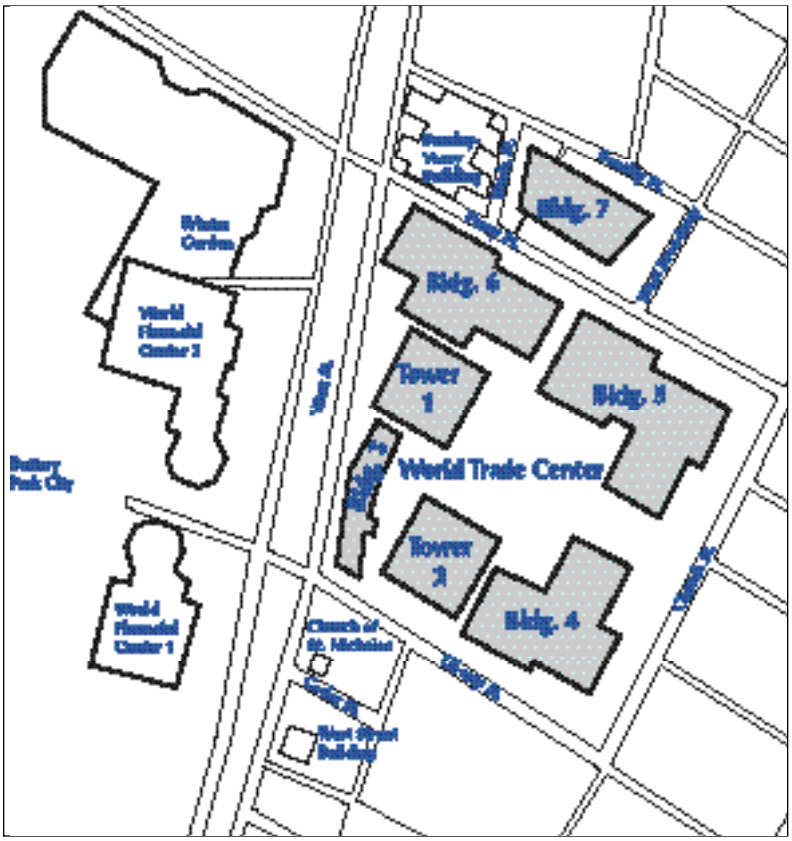
The report begins with a short overview of the diverse cultural property universe that existed in and around the World Trade Center before the attacks. It then describes the artworks, historic and archaeological artifacts, archives, and libraries that were destroyed or damaged, as well as the condition of those that survived. Outdoor sculpture and historic buildings are included in this summary.

An analysis of the results from a survey of Lower Manhattan collecting institutions during the winter of 2001-2002 is provided. The Task Force wanted not only to assess the condition of their collections following September 11, but also to evaluate how prepared the institutions had been to deal with any type of emergency. We hoped to document emergency management efforts that proved most beneficial as well as identify resources needed to cope more effectively with future disasters. Therefore, the survey concentrated primarily on conservation and emergency preparedness issues.

Survey results are discussed in separate sections related to physical damage and emergency preparedness, disruptions in operations, documentation of collections, and communications with the emergency management field.

The report concludes with a series of recommendations based on survey findings and extensive follow-up interviews (page 20). Although September 11 was caused by an act of terror, standard emergency plans and response proved the most effective way of coping with the resulting disaster. The recommendations, therefore, are designed to address any type of emergency, and we believe their adoption would benefit collecting institutions throughout the country.

For those unfamiliar with the geography of the World Trade Center, a short description might be helpful. The 16-acre site is in Lower Manhattan between Church and West Streets. Built by the Port Authority of New York and New Jersey, the complex was composed of seven buildings. One World Trade Center and Two World Trade Center each stood 110 stories high and were collectively known as the Twin Towers. In this report, we will refer to them as Tower One (the North Tower) and Tower Two (the South Tower.) An open plaza around the towers contained pieces of monumental outdoor sculpture. Three World Trade Center housed a hotel, while Four, Five, Six, and Seven World Trade Center were office buildings.



To the west of the Trade Center on the banks of the Hudson River is Battery Park City, an almost 30-acre complex of parks, gardens, plazas, residential apartments, and commercial buildings. The World Financial Center is part of Battery Park City and is composed of four high-rise office buildings and the Winter Garden atrium. The World Financial Center stood directly across West Street from the World Trade Center and suffered extensive damage on September 11.

Other properties discussed in the report include the Church of St. Nicholas, located across the street from Tower Two, and the 90 West Street Building, a block south of the Trade Center. To the north is the Barclay-Vesey Building, across the street from Six World Trade Center and next door to Seven World Trade Center. St. Paul's Chapel stands one block northeast of the Trade Center, facing Broadway (outside the scope of our map).

Cataclysm

On the morning of September 11, 2001, the buildings of the World Trade Center housed the records, archives, and libraries of at least 500 corporate and commercial firms, nonprofit organizations, and municipal, state, and federal departments or agencies.

Works of art with an estimated value of $100 million graced walls, corridors, and galleries. On the 105th floor of Tower One soared a "museum in the sky" owned by the brokerage firm Cantor Fitzgerald. According to press accounts, it housed nineteenth- and twentieth-century sculptures, paintings, and photographs, including drawings, casts, and sculptures by the great French artist Auguste Rodin.

In other parts of the buildings could be found the creations of Pablo Picasso, David Hockney, Roy Lichtenstein, and Ross Bleckner. Among the numerous corporate collections, Bank of America's holdings included over 100 contemporary works on paper, while the offices of investment firm Fred Alger Management displayed more than 45 pieces of photographic art. An art inventory for the Marriott Hotel in Three World Trade Center listed over 40 works by artists such as Le Corbusier and Paul Klee.

The vast public spaces of the complex held over 100 pieces of art, many specially commissioned for the site. With works by such renowned contemporary artists as Alexander Calder, Louise Nevelson, Joan Miro, and Masayuki Nagare, this public art collection owned by the Port Authority of New York and New Jersey was estimated to be worth between $8 and $10 million. The monumental outdoor sculptures in the plaza around the Twin Towers, such as the rotating *Sphere for Plaza Fountain* by Fritz Koenig and *Ideogram* by James Rosati, had become recognized symbols of the Trade Center itself.

Five World Trade Center was home to the Lower Manhattan Cultural Council, one of the largest and oldest such organizations in the city. Its art collection, records, and archives documented the council's 30-year history of support for the performing, visual, and media arts, as well as its commitment to individual artists. Through the appropriately named World View and Studioscape programs, the council provided artists with workspace on the 91st and 92nd floors of Tower One. On the morning of September 11, these two studios contained over 400 pieces of art, the work of 27 artists-in-residence supported by the council.

While new art was created in studios in the sky, subterranean rooms beneath Six World Trade Center held objects crafted centuries earlier. Thousands of artifacts from an eighteenth-century African Burial Ground and millions of objects from a nineteenth-century working class neighborhood were stored and catalogued, along with photographic and computer records documenting their excavation. Discovered in 1991 during construction of a new federal courthouse and office building, the burial ground, together with the remains of the community known as Five Points, represented one of the most important archaeological finds in the history of Lower Manhattan. Under the direction of the U.S. General Services Administration (GSA), a special program had been established to provide the public with information about the cultural and historical significance of the site.

Across the street from the northwest corner of the Trade Center was the landmark Barclay-Vesey Building, one of the city's first and finest Art Deco skyscrapers. Built in the mid 1920s to house the New York Telephone Company, it now served as headquarters for Verizon Communications. Its exterior façade, inspired by Mayan architecture, was decorated in intricate designs of stone, copper, brass, and bronze. Interior marble walls and floors were ornamented with bronze medallions, and a vaulted ceiling displayed murals tracing the evolution of human communications from Aztec runners to the first telephones.

One block northeast of the Trade Center was St. Paul's Chapel, the oldest public building in

continuous use on the island of Manhattan and its only surviving colonial church. George Washington had prayed there, and above his pew hung an oil painting of the Great Seal of the United States—the first such rendition of the seal in America's history. Over the altar was an ornamental design by Pierre L'Enfant, who later planned the city of Washington, D.C., and in the churchyard could be found gravestones carved in the early eighteenth century.

At 90 West Street, just south of the Trade Center, stood an elegant building whose granite and terra cotta façade was topped with a sloping green roof. Completed in 1907 as a headquarters for shipping and railroad industries, the West Street Building had been designated both a city and national landmark. An extensive renovation of the memorable structure, designed by Cass Gilbert, one of the most prominent American architects of the first decade of the twentieth century, was due to be completed in 2001. Gilbert's work on 90 West Street, followed by his design of the Woolworth Building and other early skyscrapers, would lead in time to the transformation of the entire Manhattan skyline, culminating in the 1973 opening of the Twin Towers themselves.

Housed in the West Street Building were the global headquarters of the nonprofit Helen Keller International Foundation. Its archives contained extensive scientific and medical texts on the treatment and causes of preventable blindness, as well as photographs, historical files, letters, and mementos belonging to the organization's namesake.

The tiny 35-foot-high Church of St. Nicholas stood at 155 Cedar Street between the West Street Building and Tower Two. Serving the Greek Orthodox community in Lower Manhattan for over 80 years, the church's most valued possessions were relics of fourth- and sixth-century saints, including St. Nicholas and St. Katherine. It also held finely crafted ecclesiastical artifacts such as chalices, candelabra, crosses, and icons. Several of the icons had been a gift from the Russian Tsar Nicholas II.

In contrast to the little church was the 45,000-square-foot Winter Garden, located between the Trade Center and the Hudson River. This enormous atrium, centerpiece of the World Financial Center, hosted approximately 70 public art performances each year, plus numerous cultural exhibitions. Its glass and steel dome enclosed a grove of palm trees almost five stories high. With its polished tricolor marble floors and distinctive staircase, the Winter Garden had been called one of the most beautiful public spaces in the city of New York.

On the morning of September 11, the area of the World Trade Center was a diverse mosaic of

Historic Fireboats

Two national historic landmark fireboats, the *John J. Harvey* and the *Fire Fighter*, played critical roles during the World Trade Center disaster, showing that preservation efforts may have unforeseen practical benefits.

Built in 1931, the *Harvey* had a distinguished career as part of the New York City Fire Department until its retirement in 1994. The boat underwent a complete restoration after being purchased in 1999 by a nonprofit organization and returned to full operation in 2000. On the morning of September 11, the boat and its all-volunteer crew rescued 150 people stranded near Battery Park and carried them to safety. At the request of the Fire Department, it returned to join the *Fire Fighter* in pumping the only water then available to combat the World Trade Center fires.

The *Fire Fighter*, built in 1938, is still in the service of the New York City Fire Department. In addition to supplying water to the Trade Center site on a round-the-clock basis, both fireboats also served as a base of operations for search and rescue teams.

The *Fire Fighter* was designated a National Historic Landmark in 1989, and the *John J. Harvey* was placed on the State and National Register of Historic Places in 2001.

things historic and contemporary, sacred and secular, massive and fragile. That mosaic would begin to shatter at exactly 8:46 a.m. when the first of two jetliners struck the Twin Towers.

Lost Art

In the end, it took less than a morning to destroy what had taken decades to build, years to create, and generations to preserve. Just before 10 a.m. Tower Two collapsed, followed at 10:28 a.m. by Tower One. When the fires first ignited by the planes were finally extinguished, none of the Center's other five buildings had escaped ruin, and uncounted works of art, historic artifacts, archives, and libraries were lost forever.

The almost 3,000 people who died that day included three librarians and artist Michael Richards. In his studio on the 92nd floor of Tower One, Richards was at work on an addition to his series of sculptures commemorating the famous World War II Tuskegee Airmen. Those who saw his final creation describe a life-size figure of the artist, dressed in the airmen's uniform, astride a falling meteor ablaze with flames.

Credit: Fred R. Conrad/NYT Pictures

This piece of a Rodin sculpture bearing his signature was found at the World Trade Center site.

The offices, records, and archives of Richards' sponsor, the Lower Manhattan Cultural Council, were totally demolished, along with 150 artworks in its collection. Valued at $650,000, all 424 pieces of art in the Council's tower studios vanished when the buildings collapsed.

A complete inventory of the numerous corporate art collections lost on September 11 may be impossible to compile because it is believed many art inventories were destroyed along with the Trade Center itself. AXA Art Insurance Corporation has estimated the value of artwork lost at $100 million. (AXA has estimated that it will itself pay out $17.2 million for the loss of three corporate collections.) But a reliable listing of either the number or titles of the works themselves, beyond a few examples in news accounts, does not seem to exist.

Of the public art, only Koenig's 45,000-pound *Sphere for Plaza Fountain* survived somewhat intact, its bronze globe battered, ripped open, and filled with debris from the falling buildings. Portions of Calder's *World Trade Center Stabile*, also known as Three Wings or Bent Propeller, have been recovered, but at this writing it is not known whether the sculpture can be restored.

Along with Nagare's black granite *World Trade Center Sculpture*, Nevelson's *Skygate-New York*, and Miro's *World Trade Center Tapestry*, the poignant *World Trade Center Memorial* created by Elyn Zimmerman was destroyed. This commemorative fountain had been built to honor the six victims of the 1993 attack on the complex and stood over the site where the bomb exploded. Shattered too was an informal memorial constructed in a basement by union workers

who shared the same professions as the 1993 victims.

The losses of September 11 also included a portion of the Broadway Theatre Archive's 35,000 photographs that captured great moments of the American stage and approximately 40,000 negatives of photographs by Jacques Lowe documenting the presidency of John F. Kennedy. The negatives had been stored in a bank safe-deposit vault in Five World Trade Center, also the headquarters of the Lower Manhattan Cultural Council.

Another vault in Tower Two contained a rare collection of antique rugs valued at over $500,000. These 25 hand-woven kilims had been passed as heirlooms through generations of Muslim families from the Middle East, North Africa, and Southeast Asia. Their owner believed them so secure in their special climate-controlled vault that he had not insured them.

Libraries, Archives, and Records

A review of the 2001-2002 edition of the American Library Directory and the Special Libraries Association's membership list indicates the Trade Center held at least 21 libraries, the majority related to law or financial investment. However, it is believed many more corporate libraries

The Seamen's Church Institute

Located just 851 yards east of the Trade Center at 241 Water Street at Peck Slip, the Seamen's Church Institute of New York and New Jersey (SCI) has served the needs of merchant mariners since 1834. It also houses a unique collection of maritime art and artifacts, such as nautical instruments, carved ship figureheads, marine paintings, and antique ship models. (A replica of Henry Hudson's flagship *Half Moon* commands pride of place over the Institute's main staircase.) Other holdings include prints of steamships by Currier and Ives and a collection of memorabilia relating to writer/shipmaster Joseph Conrad, along with letters in the author's own hand.

Although covered by dust when the Twin Towers fell, the collection was otherwise undamaged. Staff immediately and unanimously voted to keep SCI open as a refuge—first for stranded evacuees trying to leave Manhattan and then for thousands of rescue workers. By the evening of September 12, over 600 firefighters, police, and other relief personnel were being fed hot meals.

When electricity failed, food was cooked on SCI's charcoal grills on the patio of its Seafarers' Club restaurant. Food was supplied by neighbors, including seafood companies from the nearby Fulton Fish Market. When neighborhood supplies were exhausted, vans of food and volunteers coordinated by the the General Theological Seminary of the Episcopal Church began arriving from all over New York, including some of its finest restaurants.

Lining the street in front of SCI's building were hundreds of boxes of bottled water, flashlights, work gloves, and hard hats. The lobby became a makeshift pharmacy and clean clothing supply area for rescue workers. Maritime education classrooms were used by podiatrists and chiropractors to tend to physical strains. Other rooms were made into quiet areas where exhausted workers could rest. Grief counselors were available 24 hours a day.

SCI also played a key role in setting up and supplying relief centers at St. Paul's Chapel and at the Trade Center site itself. For the next 12 days, volunteers provided food, comfort, and safety round-the-clock to countless weary rescue workers at SCI and Ground Zero.

A special exhibition entitled DAZZLE & DRAB: Ocean Liners at War had been scheduled to open September 19 in SCI's public gallery. The exhibit's archival photographs and nautical artifacts had already been uncrated before the World Trade Center tragedy. Among the memorabilia was an autograph by Winston Churchill, whose words about the people of another country under attack might well be said of SCI's staff and volunteers on and after September 11: "This was their finest hour."

Credit: Photo by SFC Thomas R. Roberts/NGB-PASE

The Winter Garden on September 27.

were destroyed, given the number of law and investment firms in the complex.

Lost as well was the U.S. Customs Service Regional Library in Six World Trade Center and almost the complete archives of the Port Authority of New York and New Jersey, housed in Tower One.

A total of 60 nonprofit organizations, along with their records and archives, had offices in the Trade Center. Primarily family foundations and charitable trusts, their interests ranged from mountaineering to early childhood development to support for the Brooklyn Botanic Garden.

Also buried in the debris were the archives and computer records of the United Seamen's Service, a nonprofit agency that provides educational, health, legal, and communications services for American and international seafarers. The affiliated American Marine Library Association, the only public library in the country chartered to provide library services to merchant ships, lost an entire storeroom of books destined for mariners throughout the world.

The library of the National Developmental Research Institutes (NDRI), housed in Tower Two, was another victim of the devastation. The nonprofit NDRI was founded to advance scientific knowledge in the areas of drug abuse, HIV, AIDS, and related areas of mental and public health.

In addition, 22 federal government departments and agencies had offices in the Trade Center complex. Included were the Secret Service, the Department of Transportation (Coast Guard), the Department of Defense, the Peace Corps, the Department of Labor, the Federal Maritime Commission, the Treasury Department, and the Department of Housing and Urban Development. All official records and office documents, together with computer hard drives, were destroyed. Although certain revenue collection agencies, such as the Internal Revenue Service and the Customs Service, are required to have back-up documentation stored off-site, the National Archives and Records Administration presumes vast numbers of other federal records were simply lost. (The U.S. Attorney's Office at 100 Church Street and the Department of Education offices at 75 Park Place were also damaged, but most of their documents have survived.)

Damage to Landmark Buildings

When the massive towers fell, fire and debris shattered the glass atrium of the beautiful Winter Garden and destroyed its eastern façade. As Tower Two collapsed, steel beams ripped numerous holes in the roof of the historic West Street Building and opened pathways for flaming debris. Fires burned on at least 14 floors with such intensity it took a day and a half to bring them under control.

Credit: Photo by Bri Rodriguez/FEMA News Photo

The top of 90 West Street, a 1907 building designed by Cass Gilbert, on September 27.

Credit: Photo by Andrea Booher/FEMA News Photo

A firefighter walks among the historic headstones covered in debris at Trinity Church Cemetery on September 19.

It took only minutes for the inferno to consume the archives and records of the Helen Keller International Foundation. An estimated $4 million in equipment, records, and historical data was lost, including first editions of Keller's works, priceless photographs, and many of her own letters.

On the north side of the Trade Center complex, falling steel beams smashed the front of the landmark Barclay-Vesey Building and penetrated an underground vault containing nearly 4 million data and telephone lines. Communications throughout Lower Manhattan were brought to a standstill. Another hole, eight stories high, was also ripped into the building's façade. Later that day, the Barclay-Vesey's east side was crushed by the collapse of the neighboring 47-story Seven World Trade Center. According to press reports, as much as 42,000 gallons of diesel fuel were stored in the Trade Center structure, creating a fire so intense it raged for seven hours before the building's collapse.

With buildings falling in flames around it, the little Church of St. Nicholas was crushed into ruins only a few feet high. Amazingly, St. Paul's Chapel, less than 100 yards northeast of the Trade Center, remained standing, although encrusted with layers of dust.

Clouds of debris and smoke also covered nearby historic Trinity Church. Vibrations from the falling towers literally sheared façades from sandstone grave markers in the churchyard. Inches of powdery ash then rained down on the graves and memorials of such historic figures as Alexander Hamilton, William Bradford, and Robert Fulton.

Vibrations from the collapse of the towers also shook the foundations of nearby Federal Hall National Memorial, built on the site of Washington's inaugural as the first President of the United States and meeting place of the new nation's first Congress.

As a great gray cloud filled Lower Manhattan that morning, it was feared many of the area's cultural and historical institutions were damaged beyond repair.

Aftermath

When the Heritage Emergency National Task Force began assessing the impact of September 11, we soon realized it would take years to compile a complete inventory of losses at the World Trade Center. In great part, this is due to missing knowledge about the contents of corporate art collections.

A complete evaluation is also impossible because the rubble at the Trade Center continues to yield discoveries. Immediately following September 11, for example, it was assumed Calder's 15-ton stabile Bent Propeller had been destroyed. But thanks to efforts of the artist's grandson, rescue workers were able to identify and recover pieces of the red steel sculpture that once stood 25 feet high. Similarly, boxes containing artifacts from the African Burial Ground have been unearthed beneath the debris, giving hope more may appear. (To date, there has been no sign of the archaeological collection from the Five Points settlement, which included fragile ceramics and glassware.)

Even months after the disaster, a historic photographic archive owned by the Port Authority of New York and New Jersey was miraculously recovered. Up to 100,000 negatives dating back to the 1920s were found under the debris of Tower One in conditions ranging from ruined to pristine. This pictorial history of the entire metropolitan transportation system included documentation of the building of the George Washington Bridge, the Holland and Lincoln tunnels, and the World Trade Center itself.

Unearthed safe-deposit boxes have yielded personal property such as a First Communion medal and a pocket watch handed down through four generations of the same family. Several small historic items have been retrieved from the Helen Keller International Foundation, including a charred, water-soaked 1905 edition of Keller's autobiography. Two icons, one of wood and another of paper, have been recovered from the ruins of St. Nicholas Church, along with twisted pieces of a candelabra and several wax candles that had not completely melted in the searing heat. Until all debris from the site is removed and examined, we cannot know for certain what else may have survived.

Beyond the Trade Center area, damage to cultural property in Lower Manhattan proved to be much less than originally feared, although one insurance adjustor believes thousands of art

The New York Public Library's New Amsterdam Branch

The New York Public Library has initiated an innovative project called the "Custodial Academy" to teach custodian trainees how to clean everything in a library from lights to desks to the books themselves. Little did recent academy graduates realize how thoroughly their new knowledge would be tested.

The Library's New Amsterdam Branch, three blocks north of the World Trade Center, was closed to staff for weeks following September 11 as rescue teams worked in the area. After a structural inspection of the building and air quality testing, staff finally returned in mid-November to find layers of dust covering every surface.

A group of Custodial Academy graduates was sent to clean and reshelve individually each of the estimated 40,000 items in the library's collection, including books, videocassettes, magazines, and compact discs. In addition, floors were stripped and waxed, carpets steamed, windows and walls washed, shelves, desks, and equipment cleaned, and the building's air duct system flushed. The custodians also tackled 65 lighting fixtures, removing, wiping, and replacing each bulb by hand.

On top of the daunting cleanup, the branch lost its telecommunications system, whose circuits fed into the network running under the historic building that housed Verizon Communications. Telephone, fax, and Internet services were disrupted from September 11 until November 26.

Thanks in large part to the work of the Custodial Academy graduates, the New Amsterdam Branch Library was reopened to the public on December 3, less than three months after the disaster.

objects in neighboring buildings were affected by debris. In one example, a staff of 10 was needed to repair 289 artworks in a studio where a single window was left open on September 11. However, many of the corporate collections in the World Financial Center, just west of the Trade Center, either survived undamaged or have been cleaned or restored. Museums, libraries, and archives also escaped serious harm, although many collections required extensive cleaning.

The World Trade Center Documentation Task Force, composed of over 20 New York organizations, determined there were 72 historical records repositories, 21 libraries, 5 state agencies, and 10 municipal government agencies located south of 14th Street. Except for records repositories and libraries in the Trade Center itself, damage to collections in the surrounding area was not widespread. The most frequently reported problem was soot or dust covering collections.

Records in several government offices also suffered water damage. This most commonly resulted from the runoff of fire hoses or basement flooding when sump pumps failed due to the lack of electrical power. In many cases, access to these records was limited for several weeks following September 11 because of recovery efforts at the Trade Center or structural damage to buildings housing the records. As a result, wet documents were subject to considerable mold damage.

Only a few blocks south of the Trade Center, the extensive archives of Trinity Church were unharmed. It is worth noting this repository is a unique resource on the history of New York City. It includes not only traditional parish records of baptisms (from 1749), marriages (from 1750), and burials (from 1777), but also important corporate and real estate records. The royal charter establishing the parish in 1697 granted the church a significant amount of land that now comprises the city's chief financial district. Records of the subsequent sale and development of parts of the original land grant provide an unequaled perspective on the growth and transformation of Lower Manhattan.

Credit: Photo by SFC Thomas R. Roberts/NGB-PASE

A rescue worker in the rubble near St. Paul's Chapel on September 14.

Some documents dating back to the parish's founding in the late seventeenth century were composed on fragile parchment that could have been seriously damaged. Fortunately, due to lack of shelving space, much of the archives' collection was inside boxes on September 11. The black dust and ash that seeped through windows and vents covered the storage containers but left their precious contents relatively untouched.

Outdoor Sculpture

As part of its assessment, the Task Force undertook an evaluation of nearly 200 pieces of outdoor sculpture located south of 14th Street to Battery Park at the island's southern tip. We have already discussed the destruction and damage to pieces at the Trade Center itself. Beyond its perimeter, however, there was remarkably little damage to outdoor artwork.

Over 90 pieces owned by the City of New York were reported in good condition, and although those in the vicinity of the Trade Center needed a thorough cleaning, no other problems were reported. The U.S. General Services Administration (GSA) found that works owned

by the federal government also suffered no major damage.

Most important among these are sculptures decorating the 1907 U.S. Custom House at the foot of Broadway. Designed by sculptor Daniel Chester French, allegorical statues representing the continents of Asia, America, Europe, and Africa adorn the building façade. Twelve smaller figures by various sculptors depicting the great shipping powers of the ancient and modern world stretch along the upper cornice. Each of the building's 44 Corinthian columns is topped with a maritime symbol of a dolphin or seashell, and figures representing the god Mercury and War and Peace stand atop the roof. GSA conducted an immediate assessment of the landmark building and determined that all sculptures had survived in good condition. The agency decided to delay a final cleaning of the works and other GSA sculptures in the area until demolition work at the Trade Center site is completed.

Overlooking Wall Street, a heroic-sized statue of George Washington stands on the front steps of Federal Hall. Dedicated in 1883, the statue is said to mark the exact spot where Washington took his oath of office as President. Just before September 11, National Park Service custodians had cleaned and waxed the sculpture, which helped protect it when dust, soot, and debris exploded across the Financial District. Although the statue had to be cleaned and waxed again in the following weeks, it suffered no damage.

Similarly, no major problems affected privately owned sculpture in the area. This is even more remarkable when the wide range of materials involved in these works is considered—bronze, copper, marble, sandstone, granite, rock, wood, brick, aluminum, steel, glass, concrete, neon, and tile. It remains to be seen whether contaminants in the dust and air will cause long-term problems, but almost all the outdoor artwork in the area has been cleaned.

Museum of Jewish Heritage—A Living Memorial to the Holocaust

Just south of the World Trade Center in Battery Park City is the Museum of Jewish Heritage—A Living Memorial to the Holocaust. Opened in 1997, the core exhibition includes more than 2,000 photographs, 800 artifacts, and 24 original documentary films. Its mission is to educate the public about the twentieth-century Jewish experience before, during, and after the Holocaust.

On the morning of September 11, the second hijacked plane flew directly over the museum before hitting Tower Two just blocks away. Sensing smoke from the burning towers, the building's automatic fire alarm system began a computerized shutdown of outside air vents and other critical systems. But the entire automated circuit panel failed when all electrical power was cut off to the area.

With the Twin Towers ablaze in the background, museum engineers climbed to the roof and hand cranked the remaining vents closed. Even as police warned of the towers' collapse and ordered the area evacuated, the engineers stayed to finish the job, turning off water valves as they left.

Because police and other rescue workers used the museum grounds as a staging area following the attack, only a few staff members were allowed to return for a brief inspection on September 13. They found no damage to the building or its fragile collection—not even a trace of dust inside.

After covering the skylight and other window openings to lower the heat load and prevent damage from sunlight, staff was again forced to leave the area until electrical power was restored two weeks later. Although the climate control system was unable to operate, humidity inside the museum never fluctuated more than two or three degrees the entire time the power was off. This was primarily due to insulation provided by a moisture barrier of plywood and rubber sealant installed between the building's interior and exterior walls.

Even before September 11, museum staff had devoted considerable attention to emergency planning and had conducted regular emergency drills. This, coupled with the building's design, helped keep it safe from a disaster they could never have imagined.

Workers at Battery Park City, wearing HAZMAT suits, began their cleanup the morning of September 12. Although encrusted with debris, all 14 outdoor pieces owned by the Battery Park City Authority survived undamaged. But perhaps their most remarkable find was a temporary installation that stood just west of the Twin Towers. The 30-foot blue-painted steel sculpture by Roy Lichtenstein, entitled *Modern Head*, had come through explosions, fire, flying projectiles, and shattered glass without a trace of harm. Ironically, the piece suffered minor damage in the following days when used as a bulletin board by recovery teams and an inadvertent parking place for a piece of rescue equipment.

Koenig's *Sphere*, perhaps now the area's most famous outdoor sculpture, has been cleaned and reinstalled in Battery Park. On March 11, 2002, it was rededicated in its damaged state as a memorial to the victims of September 11.

Historic Buildings

One hundred seven individual properties south of Canal Street have landmark status from the New York City Landmarks Commission. Of these, 65 are in the 1.5 square mile area at the southern tip of Manhattan in the vicinity of the Trade Center. Twenty-three are also listed on the National Register of Historic Places. On September 11, only two historic structures suffered major damage: the West Street Building at 90 West Street and the Barclay-Vesey Building at 140 West Street.

We have already discussed the devastation sustained by these landmarks that stood on either side of the Twin Towers. Work on the Barclay-Vesey Building began immediately after September 11 because it housed the major telephone communications system for the city. However, another two years of effort will be needed before the landmark Art Deco skyscraper is returned to its former glory.

A $25 million restoration of the West Street Building was nearing completion in September 2001. As a result of the tragedy, the landmark will now require between $50 million and $100 million in estimated repairs.

St. Paul's Chapel. In 1776 when a great fire swept New York and destroyed 500 houses, St. Paul's Chapel was one of the few buildings saved. It became a refuge for city residents made homeless by that tragedy. History seemed to repeat itself 225 years later when the building, located less than 100 yards from the Trade Center, remained standing amid the devastation of September 11.

At noon on September 14, churches throughout New York tolled their bells in memory of those who had died three days earlier. Inside the restricted access zone and without electricity, St. Paul's was not expected to participate in the memorial. But two church property managers climbed the wooden tower overlooking the smoldering ruins. While one held a flashlight, the other struck the bells 12 times with a steel pipe. Below them, rescue workers turned toward the steeple and placed their hard hats over their hearts.

From September 11 to this writing, St. Paul's has served as a refuge for rescue and cleanup workers. Until their work is finished, complete repair of the building will be postponed. However, the oil painting of the Great Seal of the United States has been sent away for cleaning and repair, and the 14 Waterford crystal chandeliers in the nave and galleries have been dusted and polished. Ash and debris, including pieces of twisted metal 12 feet long, have been removed from the historic churchyard, and stone conservators have assessed and cleaned gravestones and monuments that date back to 1704.

Trinity Church. St. Paul's is part of historic Trinity Parish, whose headquarters is a few blocks south of the Trade Center. The present Trinity Church is the third structure built on the site. (The first church was destroyed in the great fire of 1776.) Consecrated in 1846, the

The Pentagon

Library

At 9:38 a.m. on September 11, 2001, an American Airlines 757 crashed onto a helicopter landing pad on the west side of the Pentagon. The disintegrating jet then plowed through the building's outer three rings of offices, killing 189 people and setting off a fireball that rose 50 feet in the air. When the plane finally halted, its nose rested on one of the back walls of the Pentagon library. Chief Army Librarian Ann Parham suffered facial burns when fire exploded behind her, but she and all other library personnel managed to escape the inferno.

The library contained more than 500,000 books and documents, and its historical collections dated back to army regulations and general orders issued in the early 1800s. The original War Department library had been established in Philadelphia in 1795 and was later moved to Washington. As years passed, its collection was dispersed among approximately 23 other institutions before the Pentagon library opened in 1944. Over the next 50 years, staff had managed to obtain copies of almost all documents in the original collection.

Used primarily by Pentagon policymakers and historians, the library's current holdings include military and other government documents and records. Because new documents and regulations are constantly being issued, much of this part of the collection was not fully catalogued. Adding to the librarians' anxiety after September 11 was the knowledge that as part of the federal government, the collection was not insured.

Credit: Courtesy Jennifer Castro, Marine Corps Museums Branch

Members of the Department of Defense Joint Recovery Team taking historical property out of the Pentagon.

Fed by jet fuel, the fire at the Pentagon burned for almost a week. Recovery efforts could not be completed until the flames were extinguished, delaying assessment of the library's condition. The area was then declared a crime scene, furthering the delay. When library personnel were finally allowed entry, they had to wear HAZMAT suits for protection against contaminants.

Because the ventilation system had been shut down to contain the fire, the library had been without air conditioning for several weeks. The librarians found green, black, pink, and red mold growing in large areas. It had eaten through walls, spread inside walls, and snaked around ceiling tiles, doors, and windowsills. Because of the dangerous pink and red molds, the whole library area was considered toxic.

In addition to the mold, soot covering large areas was found to contain hydrochloric acid. It damaged computers, printers, and servers and ate into the wood of the circulation desk and other furniture. Built 50 years ago, the Pentagon roof contained asbestos that fell onto parts of the collection when part of the ceiling collapsed. Numerous books covered with asbestos had to be discarded, although it proved possible to decontaminate other parts of the collection.

Credit: Courtesy Jennifer Castro, Marine Corps Museums Branch

Left, mildew on walls. Right, some of the danger ous mold in a Navy office.

Credit: Courtesy Jennifer Castro, Marine Corps Museums Branch

Jennifer Castro of the U.S. Marine Corps Museums Branch examines a print in the damaged area of the Pentagon.

Located on the first floor, the library also suffered water damage as the runoff from fire hoses seeped from the floors above. Water filled the microfiche area and caused numerous filmstrips to stick together. The library's compact shelving could not be used because electricity had been cut off, and electrical connections had shorted out. Smoke damage was also widespread.

A private disaster recovery company was contracted to help stabilize the collections. An estimated 82 boxes of books were saved by freeze-drying, but other volumes had to be destroyed. These restoration efforts, which cost $500,000, were ultimately successful in saving about 99 percent of the book collection. Fortunately, no historical materials housed in the library were harmed.

Access to the library's holdings was severely restricted during the recovery efforts. This proved problematic because the Department of Defense was planning military operations for Afghanistan, and the library contained much information related to the Soviet invasion in the 1980s, which was important to military planners. Use of the collection, however, was hampered due to damage.

Although reconstruction of the Pentagon is proceeding ahead of schedule, the library is not expected to return to permanent quarters for several years. In the meantime, the collection has been moved to a temporary site and staff has resumed limited service to Pentagon personnel.

Artwork

In addition to the library wreckage, 24 works in the art collections of the Army, Navy, Air Force, and Marine Corps were destroyed. Another 40 pieces sustained substantial damage. Because none of the works were insured, there is no estimate of their total value. But as Army art curator Renee Klish pointed out in an interview with the *Los AngelesTimes*, the importance of the military collections is historic, not monetary.

Eight paintings owned by the Army's Center for Military History were lost. They included a 1967 work entitled *O.D. One Each* that depicted a U.S. soldier in Viet Nam with duffel bag, helmet, sleeping bag, and the rest of his kit, all painted in olive drab brushstrokes. (The O.D. of the title refers to olive drab in the painting and soldier's equipment.) Another painting, *The Knucklebusters*, showed the struggle of three soldiers in camouflage repairing an M-1 tank.

Of the approximately 200 works in the Navy's collection at the Pentagon, one suffered major smoke damage, about 40 had minor smoke damage, and two are unaccounted for.

Ten Air Force paintings, all of aircraft, were completely burned.

Seven pieces in the Marine Corps collection, including lithographs, paintings, and a print, were destroyed. Seven other works were damaged. Marine art curator Jack Dyer has aptly described all the artwork lost on September 11 as "cultural casualties."

Neo-Gothic building is on the National Register of Historic Places and houses a museum displaying the original royal charter that created the parish in 1697.

The church's nave windows contain some of the oldest stained glass in the United States, and its spire once dominated the skyline of Lower Manhattan. On September 11, vibrations from the collapse of the Twin Towers shattered windowpanes and damaged gravestones in the historic churchyard. A thick layer of dust and debris covered the church, both inside and out.

A cleaning crew of 200 worked an estimated 2,000 hours to scrub, sometimes twice, every inch of the interior with chemically treated sponges. Stone conservators labored on the sandstone exterior as well as grave markers and monuments in the churchyard. By November 4, the church was ready to reopen.

But Trinity's organ, one of the largest in New York, remains silent. It was in use when the planes hit the Trade Center and its pipes absorbed pulverized concrete and steel when the buildings collapsed. According to Trinity's organist, in the ensuing bedlam "the last thing anyone thought was to turn off the organ." He cited a *Boston Globe* article describing some of the dust as "caustic as drain cleaner, because of the high concentration of cement dust, an alkaline substance." The instrument, originally built in 1846, sustained extensive damage and a decision is pending on whether to repair or rebuild it. Proper cleaning would require pipes to be individually removed, washed, and air-dried, no small task since the largest pipe is 32 feet long.

Federal Hall National Memorial. A block east of Trinity Church, the Federal Hall National Memorial stands on the site of the nation's first Capitol building. The current building was constructed from 1834-1842 as a customs house, and it was here the Federal Reserve System was established in 1913. An example of Greek Revival architecture popular in the mid-nineteenth century, the solid marble and granite building was declared a National Monument in 1939.

In 1930, one of its walls was underpinned to accommodate construction of a subway line. Ten years later, structural settlement was first noticed. By the 1980s, a lateral crack in the solid marble stonework began to appear on the floors and walls on the west side of the building's interior. Vibrations on September 11 substantially widened this crack and caused additional damage throughout the building.

Seismic monitoring registered the Twin Towers' collapse as a significant seismic event with an epicenter about two blocks from Federal Hall. It also showed that energy waves during the collapse lasted much longer than a normal earthquake. Unlike newer buildings constructed to sway during a quake, the solid marble and granite of Federal Hall remained rigid, resulting in considerable structural cracking.

Repair of the foundation and correction of structural problems will require the partial dismantling of the steps and colonnade facing Wall Street. The National Park Service, which maintains the building, recently received $16.5 million in federal aid for the necessary repairs. Although the building is in no danger of immediate collapse, the Park Service hopes to begin extensive renovation efforts within a year.

Buildings spared damage. Except for needing cleaning and minor repairs, other landmark structures in Lower Manhattan were undamaged. These include Fraunces Tavern, where in 1783 Washington bid farewell to his troops; Castle Clinton, first built in 1807 as a fort to protect New York during the Napoleonic wars; and the U.S. Custom House, described as one of the most splendid Beaux Arts buildings in New York.

Highlighting the vulnerability of the rich historic district of Lower Manhattan after September 11, the World Monuments Fund added the area to a list of the world's most endangered sites.

Challenge

In October 2001, the Heritage Emergency National Task Force began developing a survey of cultural property institutions in Lower Manhattan. We wanted not only to assess the condition of their collections after September 11 but also to evaluate how prepared the institutions had been to deal with any type of emergency. We hoped to document emergency management efforts that had proved most beneficial, as well as identify resources needed to cope more effectively with future disasters.

In designing a survey instrument, we decided to focus primarily on collections care and emergency preparedness issues. Not only is the expertise of the Task Force concentrated in these two areas, but other surveys of cultural institutions were in progress. We knew additional concerns, such as economic impact, were already being addressed, and we did not want to duplicate efforts.

We were also aware we were asking the cooperation of many organizations whose staffs had personally witnessed the tragedy and might be experiencing after-effects of the trauma. Therefore, we believed we would gain more useful information by limiting the number and scope of our questions.

Survey forms were sent to 122 museums, libraries, archives, and exhibit spaces south of 14th Street in Lower Manhattan. (We also included a handful of Staten Island institutions to determine whether the debris cloud had threatened any of their collections. We are pleased to report it did not.) Responses were received from 57 institutions, for an overall response rate of 46 percent.

Not every respondent answered every question. Unless otherwise noted, response rates for the questions discussed were 90 percent or better. Non-respondents were counted as such and not included as "yes" or "no," so percentages may not add up to 100 for some questions. For actual responses, see the complete survey results in the appendix.

Based on survey results, coupled with extensive follow-up interviews with institutions close to the Trade Center site, we have developed a series of recommendations that are listed separately on page 20. Before addressing them, however, an analysis of our findings is provided.

Physical Damage and Emergency Preparedness

The survey's most encouraging finding was a minimum of physical damage to collecting institutions surrounding the World Trade Center. Ninety-three percent of the respondents reported no structural damage to their buildings, and 80 percent reported their collections were neither damaged nor soiled.

Although most organizations escaped serious damage, *it is clear that less than half were minimally prepared for any type of emergency.* Only 46 percent had a written emergency response plan and just 47 percent had an emergency communications strategy. Even fewer institutions, 42 percent, had staff trained in disaster response procedures.

Sixty percent of institutions reported they had an emergency evacuation plan, a number that should have been much higher because such plans are required by all municipal fire codes. One respondent commented their organization followed the building management's evacuation directive. It is possible this explanation applied to other cases and would help clarify why more institutions did not report the most basic type of emergency plan.

Not surprisingly, an increased interest in emergency planning was reflected in survey responses from institutions most directly affected by the disaster. *Sixty-seven percent said they intended to create new emergency plans or revise existing ones in light of the events of September 11. Sixty-eight percent said their staffs would benefit from emergency management training.*

Several respondents commented that no plan would have been adequate for the circumstances of that day. Certainly, no amount of planning could have stopped a steel projectile from

smashing through windows and shattering an art object on a wall in the World Financial Center, as reportedly happened. But institutions just blocks away from the Trade Center escaped serious damage, in great part because certain basic responses were put into immediate action. *Despite the suddenness of the disaster, 40 percent of respondents said there was time to put at least part of their plans into effect.* (However, only 53 percent of total respondents answered this question.)

Fifty-six percent of respondents said their buildings were evacuated in an orderly way. Forty-six percent closed or sealed windows or other openings, and 33 percent were able to turn off air intake systems. These simple steps of sealing openings and turning off ventilation systems were the most important actions that could have been taken to protect collections from the catastrophe that followed. In most cases, these actions were probably initiated in response to smoke and fire when the planes first struck the Twin Towers. But such preventive measures proved invaluable when clouds of dust and debris spilled over Lower Manhattan.

Disruptions in Operations

Survey responses showed that institutions experienced far fewer problems protecting their collections than coping with the aftermath of the disaster

As events unfolded on September 11, the city ordered all businesses south of 14th Street closed for three days. Seventy-eight percent of survey respondents reported their institutions were shut down. In most cases, they reopened as soon as the city permitted. However, others remained closed for longer periods. As already shown, there was minimal damage to collections and the buildings that housed them. In the vast majority of cases, the closings were due to events outside the institutions themselves, primarily the rescue and recovery efforts that isolated much of Lower Manhattan and the failure of electrical and communications systems.

Eighty percent of respondents also reported interruptions in communications. A full 82 percent of these experienced problems with telephone/fax lines, and 71 percent had problems with e-mail. Immediately following the disaster, the disruption meant many institutions did not know the location of all their employees. This was further complicated by the fact that many home telephone or e-mail lists were in inaccessible buildings.

Disruptions or delays in postal service or other mail delivery services were reported by 77 percent of respondents. One of the main postal facilities in Lower Manhattan is located just north of the Trade Center and was within the restricted security perimeter immediately following the disaster. When mail-processing procedures were re-established, delivery was complicated by traffic restrictions throughout Lower Manhattan. Even trucks with proper credentials sometimes took half a day just to enter the area around the Trade Center.

The traffic problem further slowed certain recovery efforts for institutions in the area. For example, engineers at the Museum of Jewish Heritage had to clean existing charcoal filters before the ventilation system could be restarted. Normally, they would have just ordered new ones. But given the lengthy delivery delays, the engineers decided to clean the old filters rather than postpone the museum's reopening while waiting for replacements. The lesson learned, they said, was to keep more emergency supplies on hand.

This lesson would seem to apply to others in the survey as well. While 73 percent had first aid supplies, other kinds of emergency materials were sadly lacking. Forty-three percent reported they had emergency communications equipment, but a mere 16 percent had the necessary backup for damage assessment and only 14 percent had materials to stabilize the environment. Even fewer (10 percent) had supplies or equipment needed to salvage collections.

Thirty percent of respondents reported that staff had to be temporarily relocated following

the disaster. In almost all cases, this seemed related more to the shutdown of electrical power and telephone lines rather than to structural damage of buildings.

Sixty-seven percent reported public visitation decreased following September 11. In great part this was due to restricted access and traffic disruptions in Lower Manhattan. Concerns about safety and air quality probably contributed to the reduction in visits. But several respondents made a connection between disruption in communications and attendance. For example, if people could not reach a museum by telephone, they assumed it was closed.

Although the survey did not set out to examine economic impact, many comments from respondents showed it to be a primary concern. This issue is tied to the drop in public attendance because many organizations, such as museums, depend on admission fees. Throughout the city, attendance at cultural institutions declined as much as 60 percent in months immediately following the disaster. A citywide survey conducted by the New York City Arts Council estimated that losses to cultural organizations between September 11 and September 30, 2001, totaled $23 million.

Most emergency management resources for the cultural property field have concentrated on collections care. As the survey showed, collections in Lower Manhattan survived September 11 in fairly good condition, but institutions faced far greater challenges carrying out operations. Continuity of operations plans used by business and government are designed to address many of the issues just discussed. Our findings suggest the most effective emergency plans address both the needs of collections and operational disruptions common to any disaster.

Documenting Collections

One of the survey's most important findings was that only 60 percent of respondents had a current collections catalogue or inventory. Of those with current catalogues (less than five years old), only 41 percent described them as complete. Forty-six percent of the catalogues or inventories included photographic records, but only one contained photographs of the complete collection.

Of significant concern, the survey found more than half (53 percent) of the respondents kept no off-site record of their inventory. Had the destruction of September 11 spread more widely, many collecting institutions would have been left with no complete record of what had been lost.

Many survey respondents clearly recognized the danger they had escaped. When asked to describe the most important elements a post-September 11 emergency plan should include, respondents most commonly cited creating or updating their inventories and keeping copies in a secure, off-site location.

Several survey respondents said priority was not often given to inventories because there is insufficient funding for such efforts.

Communicating with Emergency Response Agencies

The survey revealed that most institutions lacked a clear understanding of how government disaster support is structured. Only 53 percent said they were familiar with any source of government financial assistance for recovery before September 11. Sources most often recognized were the Federal Emergency Management Agency (FEMA) and city or state government agencies. Only 30 percent of respondents cited the Small Business Administration (SBA).

Forty-four percent of the institutions said they were seeking government help for recovery following September 11. Sixty percent of those were turning to city or state government agencies, and 40 percent were seeking aid from FEMA. However, many institutions did not seem to understand that private nonprofits must apply for an SBA loan before approaching FEMA for the remainder of the damages.

Only 12 percent of respondents had approached SBA. We initially attributed this

response to the fact that few institutions reported physical damage to their property and to confusion about Economic Injury Disaster Loans (EIDLs) designed to help small companies pay bills or meet normal operating expenses. In follow-up interviews, *a number of institutions said they believed they were ineligible for SBA aid because they were nonprofit organizations.* In fact, SBA Physical Disaster Loans are available for museums, libraries, historical societies, churches, and private universities of any size, and EIDLs have now been expanded to help certain nonprofits in New York and Virginia affected by the events of September 11.

Dialogue between the emergency management and cultural heritage fields needs to be increased. Collaborative efforts at the federal level have begun to produce results that should be more widely duplicated at the state and local levels. One example of a successful cooperative project is *Resources for Recovery: Post-Disaster Aid for Cultural Institutions,* produced by the Task Force with the support of FEMA, SBA, and the National Endowment for the Arts. This booklet outlines the kinds of disaster assistance available to cultural institutions and how to apply for aid.

Increased communications between the emergency management and cultural property fields can also lead to a clearer understanding of their respective priorities in a disaster. For this reason, the Task Force strongly encourages the establishment of dialogue and affiliations before an emergency occurs.

Even after a disaster, communication between the two communities can have a profound impact, as evidenced by the story of the recovery of parts of the Calder stabile Bent Propeller. At first assumed totally destroyed when the Trade Center towers collapsed, over 35 percent of the steel structure has been found. Shortly after September 11, the artist's grandson, Alexander Rower, began distributing fliers with a picture of the stabile and a short written description to recovery workers. Once the workers knew what to look for, they started to find pieces. But it is not known how much of Calder's work may have been hauled away as scrap metal before his grandson arrived.

Recommendations

The following recommendations are made in light of the findings just described. Although the events of September 11 were caused by an unprecedented act of terror, we found that standard, proven emergency management plans and responses turned out to be the most effective way of dealing with the disaster.

In terms of emergency management capabilities, we believe the survey results from Lower Manhattan to be fairly representative of the collections field as a whole. Therefore, the following recommendations can be applied to a variety of institutions and emergencies.

The Task Force recognizes that protecting human life is the most important responsibility of collecting institutions and must be given the highest priority in emergency plans, training, and dialogue with emergency management agencies.

- **Collecting institutions should integrate emergency management into all parts of their planning, budget, and operations.**
- **Emergency management plans should address both protection of collections and continuity of operations.**
- **Emergency management training should be provided to all staff of collecting institutions, not just those charged with specific responsibilities such as security or engineering.**
- **Priority should be given to maintaining complete and updated collections inventories and to placing such records in off-site storage. These efforts should be incorporated into emergency plans and should be considered essential to disaster mitigation.**
- **Emergency management agencies and collecting institutions should maintain an ongoing dialogue aimed at strengthening affiliations between the two communities.**

We believe implementation of these recommendations does not rest solely with institutions. Professional associations, government agencies, and private foundations that serve the collections field have a special responsibility to ensure these organizations are better prepared to face any type of disaster.

Epilogue

This report began with a description of things lost at the World Trade Center on September 11. In concluding, we would like to briefly describe the cultural property universe that survives. It ranges in size from the Smithsonian's National Museum of the American Indian's 20,000 square-foot exhibit space to the Archive of Black American Cultural History, operated out of its founder's loft apartment.

Surviving collections include sailing ships, musical instruments, antique furniture, modern art, traditional crafts, historic documents, classic films, instruments of finance, legal records, and recordings of contemporary music, to list only some. Subjects encompass religion, real estate transactions, folklore, installation and performance art, firefighting, dance, the immigrant experience in America, monetary policy, poetry, genealogy, and the prevention of cruelty to children, to name only a sampling.

Because their names are just as varied as the collections, it is worth listing some of the institutions: the Asian American Arts Center, the National Museum of the American Indian, the Skyscraper Museum, the Museum for African Art, the Museum of Jewish Heritage, the New World Art Center, the Museum of American Financial History, the Museum of Chinese in the Americas, the New Amsterdam Branch of the New York Public Library, the Ukrainian Museum, and the Ellis Island Museum of Immigration.

These names should help us remember that although the World Trade Center was destroyed on September 11, 2001, the nation that built it was not. America's aspirations and achievements are reflected and preserved in collections held in public trust by museums, libraries, archives, and similar organizations. That alone is reason to ensure the institutions caring for those collections are prepared to face the next disaster, whenever and however it may come.

A List of Sources

Interviews (by telephone or in person)

Broadway Theatre Archive

CityLore

Greek Orthodox Archdiocese of America

Historic House Trust of New York City

Hugh L. Carey Battery Park City Authority

Institute for Civil Infrastructure Systems/Robert F. Wagner Graduate School of Public Service/ New York University

Lower Manhattan Cultural Council

Museum of Jewish Heritage—A Living Memorial to the Holocaust

National Archives and Records Administration

National Park Service

National Trust for Historic Preservation

New York City Art Commission

New York City Fire Museum

New York City Landmarks Commission

New York State Office of Parks, Recreation & Historic Preservation

Port Authority of New York and New Jersey

Seamen's Church Institute

Silverstein Properties

Society for Historical Archaeology

Trinity Church Archives

Trinity Church Wall Street

U.S. Army Center for Military History

U.S. Department of Defense/Pentagon Library

U.S. Department of the Navy/Naval Historical Center

U.S. General Services Administration

U.S. Marine Corps Museums Branch

Public Forum Discussions

Dean McKinney, BMS Catastrophe, Inc. (DC/Special Libraries Association Seminar; Computers in Libraries 2002 03/14/02)

Dietrich von Frank, President & CEO, AXA Art Insurance Corporation (International Foundation for Art Research Seminar 2/28/02)

Gregory Smith, Director, Cunningham Lindsey International (IFAR Seminar)

Jerri Knihnicki, Chief, Research & Information Services, Pentagon Library (DC/SLA Seminar 03/14/02)

Saul Wenegrat, Former Director, Art Program, Port Authority of New York and New Jersey (IFAR Seminar)

Other Sources

American Association of Museums

artnewsonline

BMS Catastrophe, Inc.

Federal Emergency Management Agency

The Guardian

iCan News Service

The Los AngelesTimes

Museum of the City of New York

National Public Radio

New York Historical Records Advisory Board

The New York Public Library

New York State Archives

New York State Library

The NewYork Times

New York *Daily News*

PhiladelphiaWeekly.com

Protect & Preserve Web site

Rebuilding Wall Street (Web newsletter)

Reuter

Smithsonian American Art Museum/Inventory of American Sculpture

Special Libraries Association

Trinity News

USA TODAY

U.S. Small Business Administration

The Wall Street Journal

The Washington Post

Institutions Responding to the Sur vey

Alice Austen House Museum
American Craft Council
American International Group Archives
Anthology Film Archives
Archive of Contemporary Music
Art in General
Artists Space
Asian American Arts Center
Audrey Cohen College Library
Castle Clinton National Monument
Chaim Gross Studio Museum
Children's Museum of the Arts
College of Insurance Library
Cunningham Dance Foundation Archives
Dia Center for the Arts
Dieu Donné Papermill
Eldridge Street Project
Federal Hall National Memorial
Federal Reserve Bank of New York Archives
Franklin Furnace Archive
Fraunces Tavern Museum
Hatch-Billops Collection/Archive of Black American Cultural History
Hebrew Union College Library
Helen Keller International
Henry Street Settlement/Louis Abrons Arts Center
Historic Richmond Town
J.P. Morgan Chase Archives
Jacques Marchais Museum of Tibetan Art
Lower Manhattan Cultural Council
Merchant's House Museum
Museum of African Art
Museum of American Financial History
Museum of Chinese in the Americas
Museum of Jewish Heritage—A Living Memorial to the Holocaust
Museum of the American Piano
National Archives and Records Administration/Northeast Region
National Museum of the American Indian/Smithsonian Institution
New Museum of Contemporary Art
New York City Department of Records & Information Services
New York City Fire Museum
New York City Municipal Reference & Research Center
New York Legislative Service, Inc. Library
New York Public Library—New Amsterdam Branch
New York Society for the Prevention of Cruelty to Children Archives
New York University Elmer Holmes Bobst Library
Parsons School of Design Archives
Poetry Project
Seamen's Church Institute of New York & New Jersey
Skyscraper Museum
Snug Harbour Cultural Center
South Street Seaport Museum
Staten Island Children's Museum
Staten Island Institute of Arts & Sciences
Statue of Liberty National Monument/ Ellis Island Museum of Immigration
Trinity Church Archives
Trinity Church Museum
Ukrainian Museum

Appendix: The Survey

Total number of surveys sent: 122
Total number of respondents: 57 (not all respondents answered every question)

Part I: Institutional Information

1. How would you best describe your institution?

10 archive	9 historic site	25 museum
0 historical society	9 library	12 other

2. What type of organization are you?

3 municipal	43 nonprofit 501(c)(3)	4 university
0 state	6 federal	2 corporate

3. What was your institution's annual operating budget for fiscal year 2000?

17 under $500,000 15 $500,000 - $2M 22 Over $2M

4. Do you have staff responsible for the preservation/conservation of your collection? 32 Yes 21 No

If yes, please indicate status 22 full time 10 part time 1 FTE

Part II: Impact of Events of September 11, 2001

1. Was there structural damage to your building? 4 Yes 53 No

2. Was there damage to your structure's historic features? 7 Yes 50 No

3. Was there damage to building systems? 15 Yes 42 No

If yes, please check systems that sustained damage:

7 electrical	8 climate control	3 plumbing
5 lighting	5 other: air intakes, roof, phones	

4. Were communications interrupted? 45 Yes 11 No

If yes, please check communications method & length of interruption:

37 telephone/fax	for how long
32 E-mail/Internet	for how long
35 postal service/delivery services	for how long

5. Were portions of your collection destroyed? 2 Yes 55 No

If yes, list number of items or approximate percentage of total collection

6. Were portions of your collection damaged or soiled? 11 Yes 46 No

If yes, list number of items or approximate percentage of total collection

7. Was damage/soiling due to (please check all that are appropriate):

4 falling debris	12 dust	1 fire
4 smoke	0 moisture	0 hazardous materials
3 soot	2 vibrations	2 other: gases, all of the above

8. Were there subsequent problems resulting from 9/11 events that have affected the condition of your collection? 16 Yes 39 No

If yes, please check all that are appropriate:

10 air quality	14 dust/debris	0 water/flooding
0 mold/mildew	1 insects/rodents	0 theft/vandalism
0 structural damage	3 other: gases, filter	

9. Did the events of 9/11/01 force your institution to close? 44 Yes 12 No
If yes, how long before staff could return? from 1 day to 3 months

10. Were any of your staff temporarily relocated? 17 Yes 39 No

11. Were all or parts of your collection relocated? 3 Yes 54 No

12. Since 9/11/01, has public visitation to your institution decreased? 38 Yes 15 No

Part III: Emergency Preparedness, Response, and Recovery

1. Before 9/11/01, did your institution have an emergency evacuation plan? 34 Yes 22 No

2. Before 9/11/01, did your institution have a written emergency response plan? 26 Yes 29 No

3. Before 9/11/01, were any of your staff trained in disaster response procedures? 24 Yes 30 No

4. Before 9/11/01, did your institution have a communications strategy to coordinate response in the event of an emergency? 27 Yes 28 No

5. On 9/11/01, was there time to implement your institution's response plans? 23 Yes 7 No
   a) Was the building evacuated in an orderly way? 32 Yes 5 No
   b) Were air intake systems turned off? 19 Yes 16 No
   c) Were building systems shut down? 17 Yes 18 No
   d) Were collections covered or otherwise protected ? 13 Yes 25 No
   e) Were doors, windows and other openings closed or sealed ? 26 Yes 12 No
   f) Were articles from your collection removed to a safer location? 3 Yes 35 No
   g) Were local emergency services involved? 10 Yes 29 No

6. Please check emergency supplies and equipment on hand on 9/11 to meet the following needs:
   42 first aid 8 stabilization of environment 9 damage assessment
   23 communication 17 documentation for insurance 6 salvage of collection
   10 protection of collection

7. Did your institution have a current collection catalogue (5 years or less)? 34 Yes 20 No
   If yes, was catalogue 14 complete 16 partial

8. Did your catalogue include a photographic record? 24 Yes 28 No
   If yes, was photographic record 1 complete 22 partial

9. Were copies of the catalogue stored off-site? 18 Yes 30 No
   11 on computerized disk 5 on hard copy

10. Did your institution have insurance coverage? 41 Yes 7 No
    If yes, was it 11 total loss 12 partial coverage 3 difference in value

11. Did coverage include repair of damaged items to pre-September 11 state? 13 Yes 19 No

12. Has your insurance company been notified that a claim will be filed? 10 Yes 28 No

13. Was a damage assessment of your institution's structure conducted? 23 Yes 25 No

14. Was a damage assessment of all or part of your collection conducted? 20 Yes 25 No

15. Was the damage documented? 11 Yes 20 No
    a) was a photographic record made? 5 Yes 10 No
    b) were notes and/or voice recordings made? 9 Yes 7 No
    c) were records kept of contacts with insurance and other investigators? 6 Yes 9 No
    d) were records kept of staff decisions on retrieval/salvage/disposal, etc.? 6 Yes 8 No

16. Did you seek advice to help evaluate the condition of your collection? 9 Yes 43 No
    If yes, where did you obtain such advice?

4 staff conservator/collections professional	0 conservator on contract
1other institution	1 insurance company
4 government agency	3 preservation/conservation center
1 professional association(s)	1 Internet
0 published resource	2 other: landlord

    Please take a moment to list particularly helpful information resources for assessments:

17. Did you seek advice on how to clean and/or repair your collection? 8 Yes 41 No
    If yes, where did you obtain such advice?

4 staff conservator/collections professional	2 conservator on contract
1 other institution	0 insurance company
1 government agency	3 preservation/conservation center
0 professional association(s)	0 commercial cleaning firm
0 Internet	1 published resource
1 other	

    Please list particularly helpful information resources on cleaning and repair:

18. Were you familiar with sources of government financial assistance for recovery? 30 Yes 18 No
    If yes, please check type of assistance:

9 Small Business Administration	6 other federal agency
17 Federal Emergency Management Agency (FEMA)	13 city or state government agencies

19. Is your institution seeking government disaster or other financial assistance? 25 Yes 27 No
    If yes, please check source of assistance:

3 Small Business Administration	6 other federal agency
10 Federal Emergency Management Agency (FEMA)	15 city or state government agencies

20. In light of 9/11/01, should your institution's emergency plans be revised? 38 Yes 14 No
    If yes, briefly describe the most important elements a new plan should include:

21. Would emergency management training for your institution's staff be of value? 37 Yes 17 No

22. Are there plans to document your institution's 9/11/01 experience? 25 Yes 29 No
    If yes, please describe

23. We would welcome any comments. *Your experience and perspective will be helpful to our report, as will descriptive information on collections damaged or lost. Please use this space and additional sheets if necessary. Thank you.*

The Heritage Emergency National Task Force

An Initiative of
Federal Emergency Management Agency
Heritage Preservation
and

Advisory Council on Historic Preservation
American Association of Museums
American Association for State and Local History
American Institute of Architects
American Institute for Conservation of Historic and Artistic Works
American Library Association
Association of Art Museum Directors
Association of Regional Conservation Centers
Council on Library and Information Resources
Department of the Army
General Services Administration, Public Buildings Service
The Getty Conservation Institute
Institute of Museum and Library Services
International Association of Emergency Managers
Library of Congress
National Archives and Records Administration
National Association of Government Archives and Records Administrators
National Conference of State Historic Preservation Officers
National Emergency Management Association
National Endowment for the Arts
National Endowment for the Humanities
National Park Service
National Science Foundation
National Trust for Historic Preservation
OCLC Online Computer Library Center, Inc.
Regional Alliance for Preservation
Small Business Administration
Smithsonian Institution
Society of American Archivists
Society for Historical Archaeology
Society for the Preservation of Natural History Collections
US/International Council on Monuments and Sites

The Heritage Emergency National Task Force, formerly known as the National Task Force on Emergency Response, was formed in 1995 to help libraries and archives, museums, historical societies, and historic sites better protect their cultural and historic resources from natural disasters and other emergencies. The Task Force promotes preparedness and mitigation measures and provides expert information on response and salvage. Its members also work together to bring their professional expertise to the public.

For more information, contact the Heritage Emergency National Task Force, 1730 K St. NW, Suite 566, Washington, DC 20006, phone 202-634-1422 or 888-979-2233, e-mail TaskForce@heritagepreservation.org, Web site www.heritageemergency.org.

Heritage Preservation is a national nonprofit organization working to preserve America's collective heritage by gathering and sharing information from respected preservation professionals on caring for photographs, historic documents, books, works of art, buildings, natural science specimens, and family heirlooms. Visit www.heritagepreservation.org to learn more.

Heritage Preservation

www.heritagepreservation.org

www.heritageemergency.org