



DHPS|NY

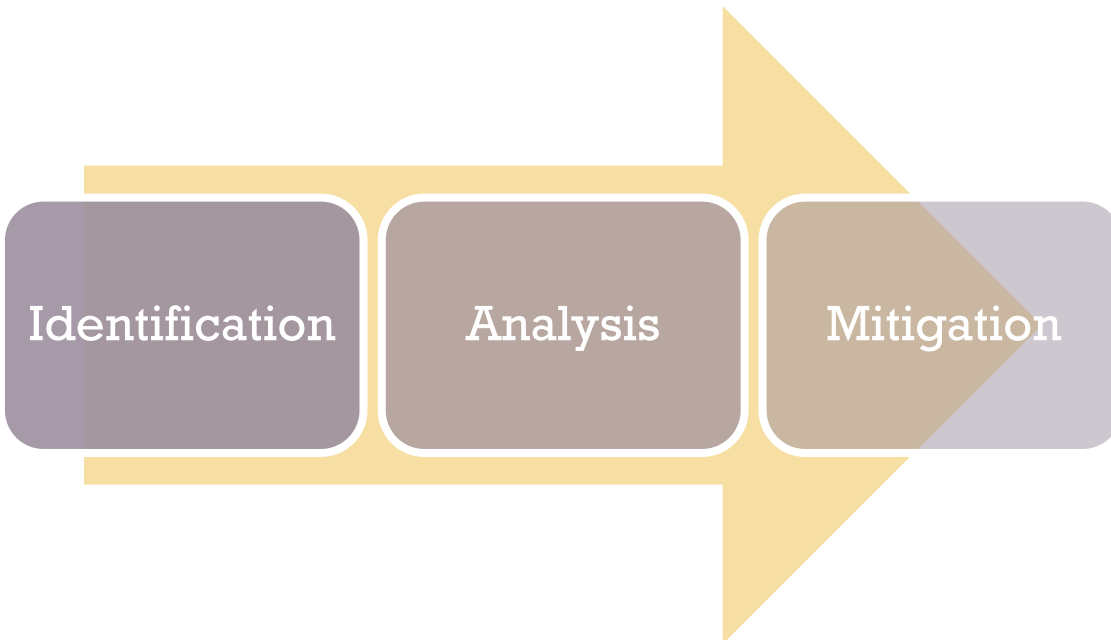
DOCUMENTARY HERITAGE
& PRESERVATION SERVICES
FOR NEW YORK

Risk Assessment for Collecting Institutions

Samantha Forsko, CCAHA, Preservation Specialist
December 2017

What is Risk Assessment?

Identification, evaluation, and estimation of the levels of risks at an institution, their comparison against benchmarks or standards, and determination of acceptable levels of risk and/or mitigation strategies.



PREPARE!



Disasters don't plan
ahead.

YOU CAN!

Components of a Risk Assessment

Risks

AND

Mitigation Strategies

Mitigation strategies

- Provide primary enclosures
- Raise objects off floors
- Install fire suppression systems
- Staff security guards
- Monitor the environment



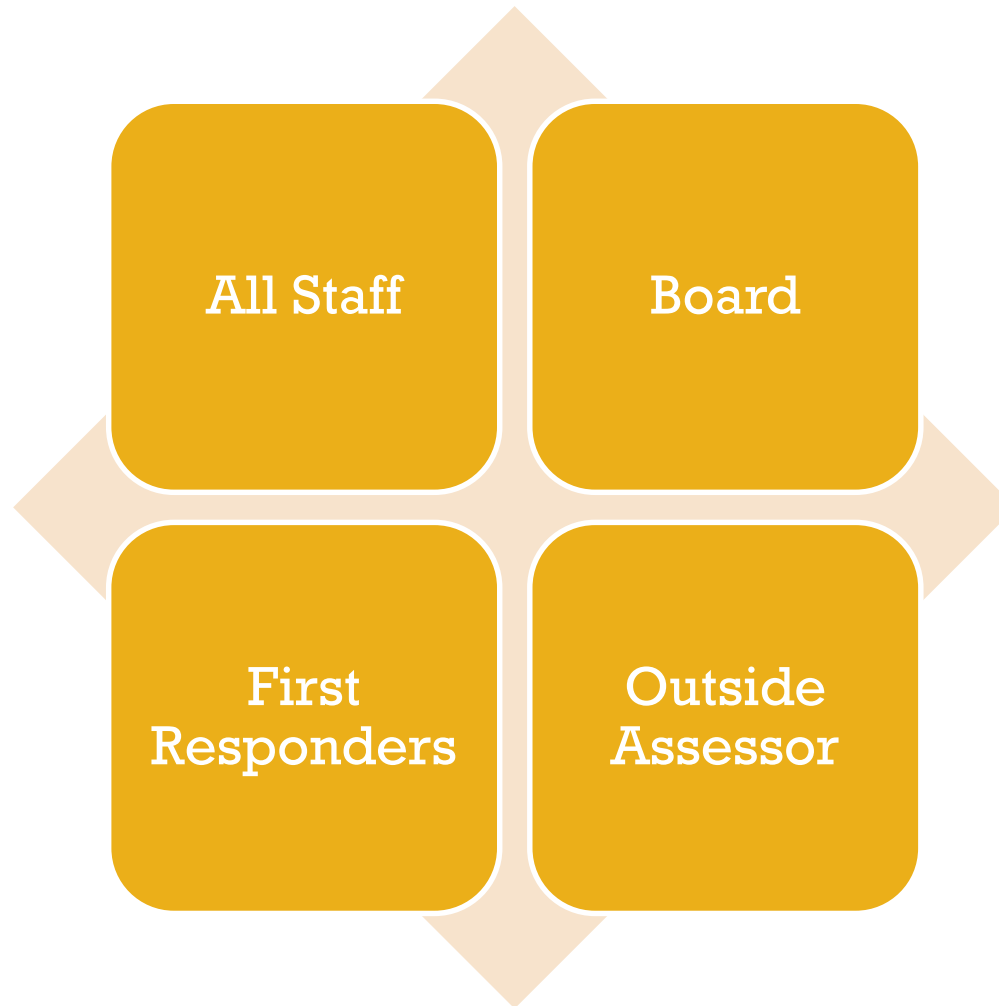
University of British Columbia Museum of Anthropology

*photo from Stephanie Johnson <https://stephaniegj.wordpress.com>

Components of a Risk Assessment

- Collections Management
 - Policies, procedures, plans
 - Staffing
 - Budgets
 - Institutional support
 - Intellectual control
- Building and Facilities
 - Construction materials
 - Maintenance and repairs
 - Structural integrity
- Storage and Housing
 - Primary enclosures
 - Storage furniture
 - Space
- Exhibition
 - Type of collection on display
 - Visitor safety
- Environment
 - Temperature and humidity
 - Light
 - Pests and Mold
 - Housekeeping
- Security
 - Buildings
 - Collections
- Emergency Planning
 - Weather and geography
 - Fire safety
 - Power systems and back ups
 - Relationship with first responders
 - Staff training
 - Supplies

Who Should Be Involved in the Risk Assessment?



Staff and Board

- People familiar with the collections and their needs
 - Archivist, curator, collections manager, technicians, volunteers
- People familiar with the buildings and security needs
 - Facilities personnel, security staff, housekeeping staff
- People who hold the purse strings
 - Executive Director, board members





First Responders

- Fire department
- Police department
- Hospitals/Ambulances
- Department of Emergency Services/Office of Emergency Management



Outside Assessor

Advantages

- Aware of the outside world
- Specialized
- Removed from internal politics
- Carry more weight
- Will not take time away from other necessary tasks

Disadvantages

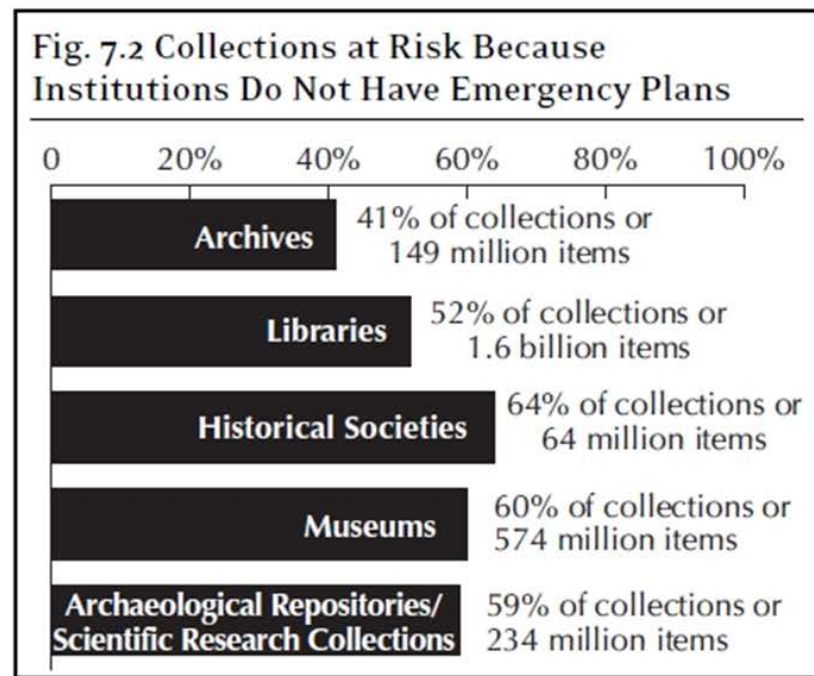
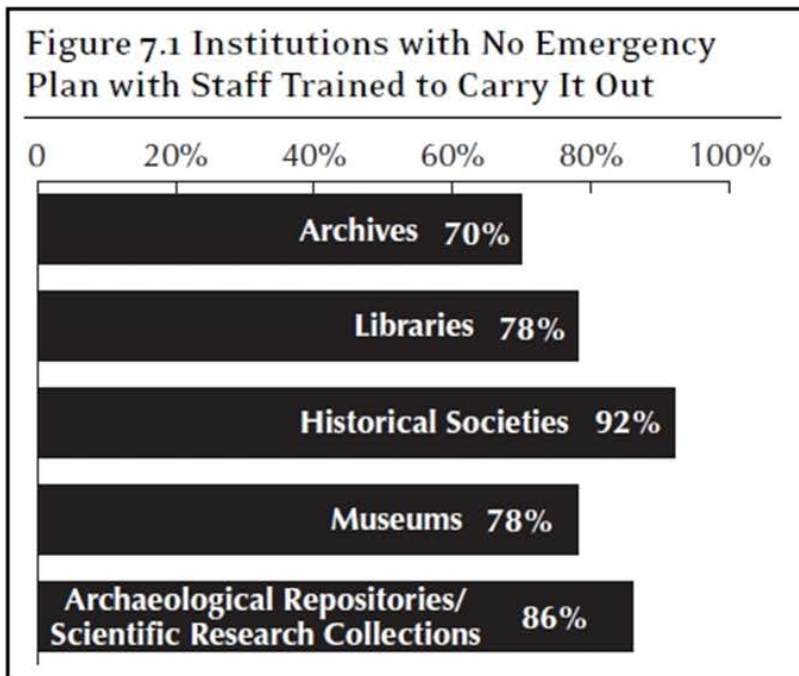
- No institutional history
- Upfront costs

Tools for Risk Assessment

- FAIC's Risk Evaluation and Planning Program:
 - <http://www.conservation-us.org/emergencies/risk-evaluation-and-planning-program>
- University of California's Library Risk Management Tool:
 - <http://www.ucop.edu/enterprise-risk-management/>
- Nonprofit Risk Management Center:
 - <http://nonprofitrisk.org/tools/basic-risk/1.shtml>

CCAHA's Methodology

- Heritage Health Index Report
- Expansion of Preservation Needs Assessment Program



CCAHA's Methodology

- Heritage Preservation's prioritization worksheet
- Robert Waller's 1994 paper *Conservation Risk Assessment: A Strategy for Managing Resources for Preventive Conservation*

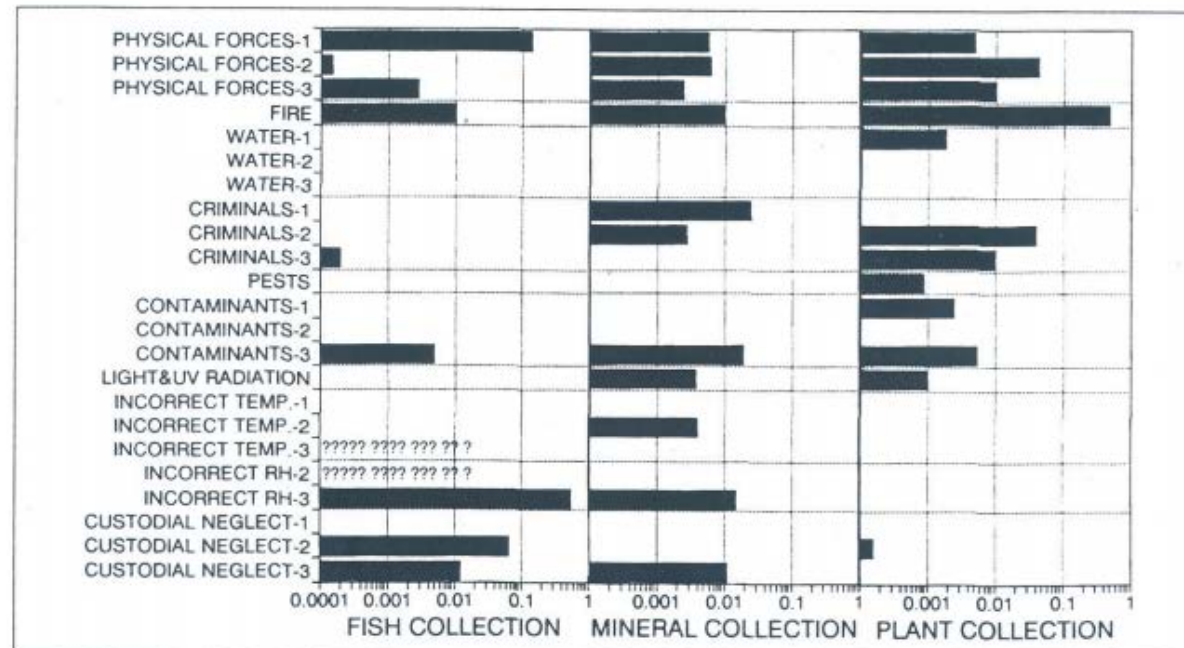


Fig. 4 Estimated magnitudes of risks affecting fish, mineral and plant collections. Risks are expressed in terms of anticipated loss in value, as a fraction of total value, to the existing collection over a 100-year period, assuming current conditions persist.

The Assessment

Pre-survey questionnaire

- Completed prior to the site visit
- Self-assessment
- Sample on FAIC's Risk Evaluation and Planning site:
 - <http://www.conservation-us.org/emergencies/risk-evaluation-and-planning-program>

Walk-through checklist

- Take a look with fresh eyes
- Carry a physical check list to guide
- Sample on FAIC's website

Risk Rating

Risk Potential	Risk Impact	Risk Rating
1 – Not Likely	1 - No damage would occur to the collections as a result of the risk	A score of 16 to 25 is considered a high risk
2 – Possible	2 - Slight damage would occur to the collections as a result of the risk (operations continue to function, small monetary investment)	A score of 6 to 15 is considered a moderate risk
3 – Quite Possible	3 - Moderate damage would occur to the collections as a result of the risk (damage requiring extra labor, operations may need to be suspended, moderate monetary investment)	A score of 1 to 5 is considered a minor risk
4 – Likely	4 - Severe damage would occur to the collections as a result of the risk (damage requiring outside services and vendors, temporary suspension of operations, significant monetary investment)	
5 – Very Likely	5 - Very severe damage would occur to the collections as a result of the risk (damage resulting in total loss, indefinite closure of the institution)	

Feasibility/Impact Rating

Feasibility	Preservation Impact	Feasibility/Impact Rating
1 – Requires a drastic change in institution operations, funding, and/or staffing for implementation	1 - Strategy would have minor impact on the long-term preservation of collections	A strategy with a score of 1 to 5 is considered to require large financial/staff investment with limited long-term impact
2 – Requires outside funding support, outside consultants, and/or additional support staffing for implementation	2 - Implementation of strategy would have slight change in the long-term preservation of collections	A strategy with a score of 6 to 15 is considered to require a moderate financial/staff investment and have a moderate long-term impact
3 – Requires limited outside funding support and limited additional support staff	3 - Implementation of strategy would have moderate impact on the long-term preservation of the collections	A strategy with a score of 16 to 25 is considered to require minor financial/staff investment and provides a significant long-term impact
4 – Requires minor financial investment on the part of the institution and dedication of staff time	4 - Implementation of strategy would greatly impact the long-term preservation of the collections	
5 – Requires little to no financial investment and limited staff time	5 - Implementation of the strategy would drastically improve the long-term preservation of the collections	



Identifying Risks and Mitigation Strategies

The Risks



LOCATION

Vulnerability
based on
physical location



FACILITIES

Common
problem areas
that can increase
vulnerability

The Risks: Location

Weather Events

- Fire/wildfires
- Smoke/ash
- Earthquake
- Flood/rain storms
- Tornado/high winds
- Tsunami
- Volcano

Physical Location

- Floodplain
- Steep Slope/Valley
- Wooded area
- Urban vs. rural setting
- Road conditions
- Train tracks
- Highways
- Factories

Mitigation: Flood



Ice House Museum, Cedar Falls, IA
Flood, 2008

*photo from <https://www.planning.org>

- Buildings properly anchored
- Ensure proper drainage
- Raise things off floor
- No basement collections storage
- Sump pumps
- Sandbags/barrier gates

Mitigation: Tornado/High Winds



Holly Lawn, Richmond, VA
Storm with High Winds, 2016

*photo from <http://Richmond.com>

- Annual tree maintenance
- Protect doors and windows
- Secure siding and roofing
- Secure outdoor objects
- Store collections away from windows

Mitigation: Hurricane



Beauvoir, Biloxi, MS
Hurricane Katrina, 2005

*photo from <http://www.misspreservation.com>

- Same flooding and wind protections
- Reinforcing door hardware
- Applying wood adhesive to roof
- Hurricane straps
- Have an evacuation plan/re-entry plan

Mitigation: Wildfire



- Create a “safety zone”
- Cover exterior openings (vents, air intakes, etc.)
- Keep combustibles away from windows
- Ensure HVAC will shut off or reverse fans

Dyer House, San Diego, CA
Wildfire, 2003

*photo from <http://www.gettyimages.com>

Mitigation: Earthquakes



Museo de Bellas Artes, Talca, Chile
Earthquake, 2010

*photo from <http://www.blogs.getty.edu>

- Bolted foundation
- Reinforce windows, doors, walls, and other openings
- Flexible connections on gas and water lines
- Anchor shelving, equipment, and artifacts

Mitigation: Winter Weather



- Pay attention to weather reports
- Remove snow when safe to do so
- Wrap pipes in rags

Historic Sugartown Inc., Malvern, PA
Winterstorm Jonas, 2016

*photo from <http://www.historicsugartown.org>

The Risks: Location

Man-Made Disasters

- Arson
- Vandalism
- Terrorism
- Explosions

Mitigation: Arson



San Diego Air & Space Museum, San Diego, CA
Arson, 1978

*photo from <http://sandiegoairandspace.org>

- Ensure electricity is working properly
- Fire detection system in place
- Fire suppression system/fire extinguishers in place
- Security systems

Mitigation: Vandalism



Museum of Fine Arts, Boston, MA
Graffiti, 2014

*photo from <http://www.bostonmagazine.com>

- Security cameras
- Security patrols
- Keep areas well lit
- Make objects difficult to reach

The Risks: Facilities

Building Issues

- Architecture
- Drainage
- Wiring systems
- Plumbing
- Construction projects
- HVAC systems
- Security
- Housekeeping

Collections Risks

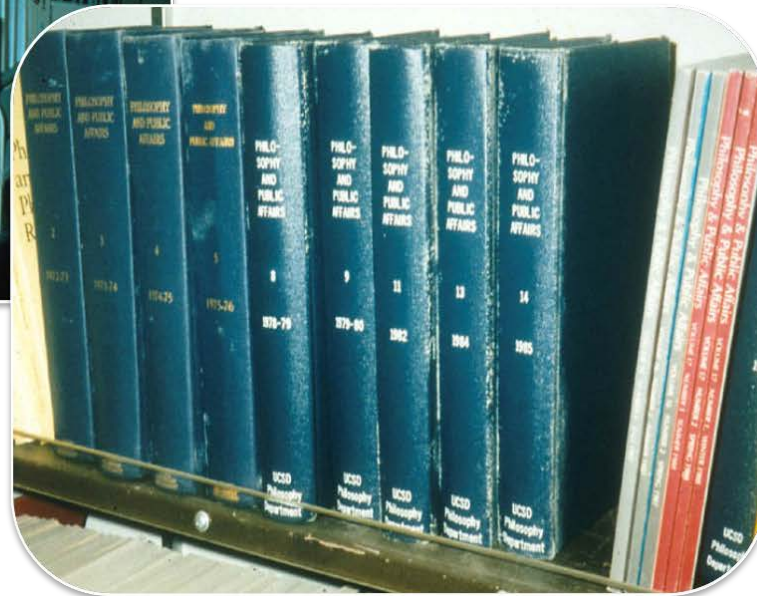
- Handling
- Housing and Storage
- Exhibition
- Security
- Inherent Vice

Mitigation: Leaks



- Know vulnerabilities
- Keep leak supplies handy and stocked
- Move artifacts from leak areas

Mitigation: HVAC Malfunctions



- Maintain proper levels using supplementary equipment
- Maintain good air circulation
- Remove moldy items from collections

Mitigation: Construction Projects



Yawkey House Museum, Wausau, WI
Fire, 2008

- Aware of tools and equipment being used
- Special policies and procedures, such as daily walk throughs of site
- Securing collections away from construction activities

Mitigation: Storage



Mitigation: Exhibition Safety



- Policies and Procedures
- Security protocols
- Barriers (stanchions, vitrines, cases)
- Tripping hazards

Fitzwilliam Museum, Cambridge, England
Accident, 2006

*photo from <http://content.time.com>

Emergency Event History Log

Emergency Event

- Type of event
- Cause
- Resulting damage
- When it happened
- Duration

Example

- March 2012, water leak
- Leaky roof in NE corner of building
- 3 boxes of collections slightly damp
- Noticed within 12 hours and collections air dried

From Risk Assessment to Emergency Plan

Your To Do List:

- ✓ Complete mitigation strategies that will eliminate some risks
- ✓ Risks that cannot be eliminated must be planned for



**KEEP
CALM
AND FOLLOW THE
EMERGENCY
PLAN**



DHPS | NY

DOCUMENTARY HERITAGE
& PRESERVATION SERVICES


FOR NEW YORK


Questions?

DHPSNY staff is available to answer your questions.
Contact us at info@dhpsny.org or (215) 545-0613.

Connect with us!

 facebook.com/dhpsny

 [@dhpsny](https://www.instagram.com/dhpsny)

 [@dhpsny](https://twitter.com/dhpsny)