

- (4) At this time some fragile or high risk collection items may be prepared for movement into the vaults for extra protection. These objects will be decided upon by the Collections Team Leader.
- (5) Any collection items that have been prepared for movement will be moved at this time.
 - Museum Team: Collection items will be moved into the Museum or Curatorial Vault under the discretion of the Collection Recovery Team Leaders.
 - THPO Team: Collection items will be moved into the THPO Vault under the direction of the Collection Recovery Team Leaders.

b. Wildfire Imminent

- In the event of a wildfire within less than 25 miles of the Museum, regardless of wind speed and direction, the following actions will take place:
 - (1) The Collection Recovery Team Leaders will be asked to stay on watch for any developments.
 - (2) Collection Recovery Team Members will be kept aware of all information via the notification process and assembled.
 - (5) Team Members will locate and confirm that all supplies used for recovery operations are on site and prepared for possible use.
 - Museum Team: Emergency De-installation Packets will be located.
 - THPO Team: Emergency Object Relocation Packets will be distributed to the THPO Team
 - (6) All Collection items will be moved to their designated secured areas.
 - Museum Team: Per Emergency De-installation Packets, galleries will be emptied of all collection items. All items will be placed in the Museum or Curatorial Vault under the direction of the Collection Recovery Team Leaders.
 - THPO Team: Per Emergency Object Relocation Packets, the laboratory will be emptied of all collection items. All items will be placed in the THPO Vault under the direction of the Collection Recovery Team Leaders.
 - (3) Once the wildfire has passed and it is deemed safe to enter the Museum grounds again the Collection Recovery Team will re-enter the Museum and assess the situation.
 - (4) If no damage has occurred all collection items will be moved back to their original location.
 - (5) If any damage has occurred please see the Artifact Salvage/Recovery Section of this document.

C. ARTIFACT SALVAGE/RECOVERY PROCEDURES

1. Initial Response/Prior to Entry

a. Initial Response

- Upon initial discovery of a threat to the collection, its components, or critical systems:
 - (1) Notify the Head of Security, Conservator, and Collections Officer (or their designees).
 - (2) The Collection Recovery Team Leader will assemble and direct the Collections Recovery Team in the implementation of the appropriate salvage / recovery actions.

- (3) Try to control or eliminate the source of the problem.
- (4) Establish a perimeter around the affected area.

b. Prior to Entry

- Prior to entry of the buildings the following actions may take place. The Collections Recovery Team will not be allowed to enter the Museum structure until allowed to do so by the proper authorities.
 - (1) Repairs and rebuilding will be guided by the THRO's mission essential functions.
 - (2) Repairs can be either temporary or permanent. Temporary repairs are usually intended to prevent further damage or to enable the completion of mission essential functions.
 - (3) Sampling for contaminants may be necessary prior to engagement in permanent work. Sample measures could include: air, dust, dirt, water, and mud.
 - (4) Specialists may be needed to carry out tasks not routinely performed by Museum personnel. Specialists could include: chemists, conservators, adjustors, engineers, animal control, and others.
 - (5) The Historic Resources Officer will appoint a Recovery Coordinator to supervise and coordinate artifact recovery matters with EMD or the Purchasing Department. This individual will also collect and compile Project Worksheets and maintain financial and budgetary controls related to the recovery efforts.

2. Artifact Procedures

a. General Procedures

- (1) Turn off electricity if there is the potential for electrocution. Block building access until this is done.
- (2) Protect objects by covering, lifting, or moving. This should be done if staff is available and capable.
- (3) Inform the Risk Management Department of the STOF of any initial damage.
- (4) Diminish mold growth by taking measures to reduce temperature and humidity and promoting air circulation.
- (5) If necessary, identify an alternate temporary storage location (e.g., other Museum or Tribal buildings).
- (6) Obtain containers and supports for moving and handling objects: plastic crates, polyethylene sheeting, plywood, saw horses, rubber gloves, dollies, carts.
- (7) Locate and retrieve Collection Salvage Recovery Carts. There are two located on property:
 - a. Curatorial Building-Isolation Room
 - b. Main Museum Building-Back of the Library near vault door
- (8) If necessary, locate cold storage or freezing facilities.
- (9) Set up work areas for items that need to be packed or air dried.
- (10) Prioritize collections, from most important to least important.
- (11) Handle objects with rubber gloves, contaminated objects may pose a health hazard.

b. Initial Assessment Procedures

- (1) If time and conditions permit, record objects and their initial destination location with film, video, or pencil and paper.

- (2) Collection Recovery Team Leader will be required to complete the Field Guide Assessment Form (Attachment ??)
- (3) All Collection Recovery Team Members will be issued a Rite-in-Rain Notebook to record condition of collection items. The following information must be recorded for each object assessed:
 - a. Accession #
 - b. Object Name
 - c. Type of Damage
 - d. Treatment Needed
 - e. Location (Moved To)
- (4) Assemble collections records: shelf lists, inventory, registrar's logs, etc.
- (5) Label object containers.
- (6) Make a thorough photographic and written record of artifact conditions and salvage activities.
- (7) Accompany the insurance adjuster and all investigating persons and contractors, plus take extensive notes of all conversations.

4. Water Damage

a. General Instructions

- (1) Shut off, divert, or otherwise contain the water source.
- (2) Seal places where water is entering.
- (3) Elevate or move collections if water is rising.
- (4) Use pump or wet vacuums to remove water and use fans to promote air circulation.
- (5) Plan for mud removal, remembering that it may be contaminated.
- (6) Secure floating objects.
- (7) Modify the environment in the damaged area. Attempt to lower the temperature and relative humidity of the affected area (pump out the water, use dehumidifiers) and provide adequate air circulation.
- (8) Provide adequate support, lifting objects carefully during transport and treatment.
- (9) Use containers to facilitate object transportation and freezing.
 - Choose strong packing containers. Use cardboard boxes that are small enough to easily handle a heavy, wet load. They should be made from standard 200 pound test cardboard. Poke air holes in each box before filling. Use the same type and size container, if possible, to facilitate stacking and palleting.
 - When stacking and temporarily storing containers, allow room for air flow around all sides.
- (10) All labels should be kept with the objects.
- (11) Protect broken edges of objects during transport and treatment.
- (12) Cover flat drying surfaces, such as tables and floors, with polyethylene sheeting. Wipe surfaces dry after each use, and cover them with a layer of clean blotting materials.
- (13) Lay objects on clean blotting materials. Do not overlap objects or allow them to touch other objects. See material-specific sections for instructions on how to layout specific objects.
- (14) If the surface is stable, carefully blot all standing water from the object with available absorbent materials. Change blotting material frequently.

- (15) Air dry objects slowly, ensuring good air circulation around objects. Air flow can be increased by placing fans around objects, but not directly blowing on objects.
- (16) If possible, use direct sunlight to dry objects and prevent mold growth. Regularly monitor objects for mold growth, checking at least daily.
- (17) Ensure objects are completely dry before packing them for storage.

b. Basketry (see also Textiles)

- What to expect:
 - (1) Wet objects will be discolored (appear visibly wet) and will feel wet to the touch
 - (2) Wet objects will be heavy
 - (3) Deformation of objects could occur
 - (4) Basketry material may become separated from object
- Priority placed on:
 - (1) Wet
 - (2) Damp
- Drying Method:
 - (1) Ensure support from all angles, shape can easily be deformed
 - (2) Pad basketry with unprinted newsprint
 - (3) Keep lids on
 - (4) Dry slowly

c. Ceramics

- What to expect:
 - (1) Wet objects will be discolored (appear visibly wet) and will feel wet to the touch
- Priority placed on:
 - (1) Low-fired wares
 - (2) Objects with instabilities (friable surface or repairs)
- Drying Method (low-fire, unglazed, unpainted):
 - (1) Pat and blot dry. Rinse in clean water if muddy or contaminated.
 - (2) Air dry preferred. Blotting materials may be used to absorb moisture.
 - (3) Use a low temperature setting on hair dryer, heater, or oven to accelerate drying priority materials.
 - (4) Use fans to speed drying: set up so air flows above surface and not directly on objects.
 - (5) Soluble salts will leach and migrate back and forth as humidity changes; large swings in humidity are going to exacerbate the situation. Salt-containing objects may need to be soaked in distilled water before drying.
 - (6) Protect broken edges from further damage.
 - (7) If broken, keep all pieces together.
 - (8) Be sure objects are truly dry on interior before packing.
 - (9) Labels are extremely important, so keep them connected to the item.
 - (10) Check for mold growth daily.
- Drying Method (decorative, historic):
 - (1) Rinse with clear water to remove mud or dirt before drying
 - (2) Air dry. Use blotting material to absorb moisture. Change materials at least daily

- (3) Ensure air circulation from all angles
- (4) Use fan to keep air moving, without directly blowing on objects
- (5) Protect broken edges from further damage
- (6) If broken, keep all pieces together
- (7) Be sure objects are truly dry on interior before packing
- (8) Labels are extremely important, so keep them connected to the item

d. Glass

- What to expect:
 - (1) Sharp edges if objects are broken
 - (2) Very fragile
- Priority placed on:
 - (1) Objects with instabilities (friable surface) or repairs.
- Drying Method:
 - (1) Rinse in clean water if muddy or contaminated
 - (2) Protect broken edges from further damage
 - (3) If broken, keep all pieces together
 - (4) Pat and blot dry; air dry
 - (5) Labels are extremely important, so keep them connected to the item

e. Leather

- What to expect:
 - (1) Wet objects will be discolored (appear visibly wet) and will feel wet to the touch
 - (2) Fully tanned (vegetable or mineral tanning) leathers are fairly resistant to damage from water, unless already deteriorated or rotted
 - (3) Semi-tanned (oil, smoke, or alum) are less resistant to damage to water
 - (4) Un-tanned (rawhide, fur, vellum, parchment) will be heavily damaged by water
 - (5) Mold growth occurs quickly
- Priority placed on (in order):
- Parchment and Vellum
 - (1) Rawhide and Furs
 - (2) Alum-tawed
 - (3) Oil tanned
 - (4) Vegetable tanned
 - (5) Mineral tanned
- Drying Method:
 - (1) Pad out items to shape with light materials that promote air circulation
 - (2) Air drying is preferred
 - (3) Do not use heat
 - (4) Leather and vellum books can be freeze dried through a very specialized treatment that is difficult and risky

f. Metals

- What to expect:
 - (1) Wet objects may be discolored (appear visibly wet) and will feel wet to the touch
- Priority placed on:

- (1) Any iron objects or components
- (2) Archaeological metals, especially iron and copper alloys
- Drying Method:
 - (1) Rinse in clean water if muddy or contaminated
 - (2) Protect broken edges from further damage
 - (3) Pat and blot dry
 - (4) Air dry (special attention to archaeological metals)
 - (5) Use a low temperature setting on hair dryer, heater, or oven to accelerate drying priority materials. Be especially careful to not overheat the metal.
 - (6) Utilize sunlight if possible to hasten drying process
 - (7) Be sure objects are truly dry on interior before packing

e. Organics – ivory, bone, horn, feathers, shell

- What to expect:
 - (1) Wet objects may be discolored (appear visibly wet) and will feel wet to the touch, though some will not
 - (2) Deformation of wet objects may occur
- Priority placed on:
 - (1) Ivory and bone
- Drying Method:
 - (1) Always keep labels with specimens
 - (2) Air dry in place, within cabinets or within drawers, where possible, to lessen handling and potential for label loss
 - (3) Always use support to transport objects
 - (4) Dry materials slowly, allowing air circulation around but not directly on objects
 - (5) Dab to absorb excess water
 - (6) Unstable specimens that may suffer de-lamination or become separated from parts during drying should be secured with cloth tape or string, or contained in a tray, during drying
 - (7) Bone and ivory may be rinsed in can you say 70/30 ethanol to de-ionized water solution to promote drying. Be aware that the interior of bone and ivory may be damp when the exterior feels dry
 - (8) Do not freeze or freeze-dry fossils, minerals, bone or ivory
 - (9) If broken, keep all pieces together
 - (10) Pat and dry; air dry

f. Paintings (includes painted surfaces; painted wood, bone or stone; paint will be treated in a similar manner regardless of substrate)

- What to expect:
 - (1) Paintings are vulnerable to punctures and tears—even knuckles holding a canvas on a stretcher can push through weakened or wet canvas
 - (2) Be aware, that hanging hardware and wires can be handling issues—do not carry by the wire!
 - (3) Larger paintings will be very heavy when wet
 - (4) Canvas and wooden components expand and contract, often at different rates
 - (5) Wet canvas supports can become very taut
 - (6) Wood supports can warp and split

- (7) Frames, whether simple or ornately carved and gilded, can be as important as the paintings, so treat them just as carefully
- (8) Paintings are composite objects – support layer, glue and/or priming layer, design layers, and surface coatings/varnishes
- (9) A variety of media can be present on any given artwork
- (10) Composite objects may de-laminate
- (11) Glue and priming layers will be unstable, and are likely to be water soluble
- (12) Varnishes will be sensitive to abrasion
- (13) Mold growth
- (14) Damp environments can be very damaging
- Priority placed on (in order):
 - (1) Mostly highly valued (curatorial and monetary)
 - (2) Least damaged
 - (3) Slightly damaged
 - (4) Severely damaged
- Drying Method:
 - (1) NEVER FREEZE PAINTINGS
 - (2) If surface is insecure, lay paintings face up
 - (3) Air dry slowly, with as much control as possible (consider tenting under plastic)
 - (4) Raise up on blocks to improve air circulation around object
 - (5) If paint is stable, place face down on clean surface and gently blot the back
 - (6) Blotter strips can be gently inserted between stretcher bars and canvas
 - (7) If frame was water-gilded, handling with wet hands can destroy the finish/surface
- Packing Method (for dry paintings only):
 - (1) Wrap paintings in glassine, clean newsprint, or clean plastic sheeting
 - (2) Sandwich between two pieces of cardboard, slightly larger than frame
 - (3) Tape cardboard edges together
 - (4) Write “Face” on front of package with brief description

g. Paper

- What to expect:
 - (1) Cockling
 - (2) Wet objects will be discolored (appear visibly wet) and will feel wet to touch
- Priority placed on (in order):
 - (1) Materials with water-soluble media, example: watercolor paint
 - (2) Bleeding inks
 - (3) Materials with water-sensitive media, example: Hand-written (iron-gall inks)
 - (4) Coated papers (slick or glossy surface)
 - (5) Historic or rare bound books
 - (6) Moldy materials
- Drying Method:
 - (1) Artwork: Air dry by spreading out without overlapping; no piece should touch another
 - (2) Papers: Air dry by spreading out, or interleave in piles no thicker than 1/8” inch
 - (3) Books: Air dry by standing up, fanned open if the book binding can handle this position; insert interleaving in the wettest areas
 - (4) Wet paper is extremely weak. Be gentle if picking up or when separating sheets

- (5) Air dry using circulating fans, not blowing directly on materials
- (6) Use blotting materials to absorb as much liquid as possible
- (7) Change interleaving materials every four hours or so
- (8) Maintain organization and intellectual control of groupings
- (9) If framed, un-frame objects as soon as possible – be careful of glass
- (10) May freeze or vacuum freeze-dry if paper is not painted
- (11) Watch for rusting fasteners, clips and staples; if possible, remove immediately
- (12) Place in milk crates if packing is needed

h. Photographs

- What to expect:
 - (1) Recovery rate is poor for fully wet items
 - (2) Very fragile surfaces
 - (3) Image loss is common: dyes and pigments solubilize and meld
 - (4) Photos can stick to each other, permanently
 - (5) Some objects have glass supports - be aware of broken glass
 - (6) Insect and rodents (gelatin layers attract pests)
 - (7) Some binder layers will swell
 - (8) Mold will grow
- Priority placed on:
 - (1) Partially wet photos that are touching other photographs
- Drying Method:
 - (1) Do not touch emulsion layer (image surface)
 - (2) Separate or interleave each photo
 - (3) Air-dry or freeze within 48 hours
 - (4) Order of preference:
 - a. Air Dry
 - b. Freeze, thaw, and air dry
 - c. Freeze dry
 - (5) Air-drying methods have significantly less loss than freeze-drying methods
 - (6) Do not vacuum freeze-dry
- Important exceptions:
 - (1) If you cannot air-dry and must freeze: keep photos wet; pack immediately in plastic bags with interleaving between images; place bags inside boxes so they are supported but not tight
 - (2) Never freeze Cased Photographs: Ambrotypes, Daguerreotypes, Tintypes or Leather postcards.
 - (3) When packing Collotypes: photomechanical prints: Interleave every 2” and pack in boxes or crates
 - (4) Salted Paper/Calotype/Talbot prints are light sensitive; keep in darkest area possible

Glass plate negatives/Lantern slides

- What to expect:
 - (1) They are fragile, as they are glass
 - (2) Many plates will have broken bits
 - (3) Some binder layers will swell
- Priority placed on:

- (1) Unbroken Objects
- (2) Cracked Objects
- (3) Broken Objects
- (4) Damp objects have higher priority than dry objects
- Drying Method:
 - (1) Handle with care
 - (2) Do Not Freeze
 - (3) Keep all broken pieces together
 - (4) When Packing: Keep wet. Pack in plastic bags, vertically in a padded container.

i. Plaster

- What to expect:
 - (1) Wet objects will be discolored (appear visibly wet), and wet to the touch
 - (2) Crumbling and loose plaster
 - (3) Extreme fragility
- Priority placed on:
 - (1) Cracked objects
 - (2) Objects with loose plaster, especially those objects which plaster may fall off of
- Drying Method:
 - (1) Use extreme care and caution when dealing with decorative features and damaged elements
 - (2) Stabilize loose elements, or carefully remove extremely loose ones and document their removal. Keep pieces together
 - (3) Support and secure loose plaster by using padding and wood supports
 - (4) Gently rinse with freshwater if dirty, do not use high pressure
 - (5) Drying too quickly with heaters or dehumidifiers draws moisture through the plaster and results in excessive expansion, crackling and powdering of the finished surfaces.

j. Stone

- What to expect:
 - (1) Wet objects may be discolored (appear visibly wet)
 - (2) Wet objects will be wet to the touch
 - (3) Stability of objects varies tremendously
- Priority placed on:
 - (1) More porous objects
 - (2) Objects exposed to salt, as they may easily shatter
 - (3) Cracked, broken objects
- Drying Method:
 - (1) Can rinse with clear water to remove mud or dirt before drying
 - (2) Air dry. Blotting materials may be used to absorb moisture. Change materials daily or more frequently.
 - (3) Ensure air circulation from all angles
 - (4) Use fans to keep air moving, without directly blowing on objects
 - (5) Protect broken edges from further damage
 - (6) If broken, keep all pieces together
 - (7) Be sure objects are completely dry on interior before packing

- (8) Labels are extremely important, so keep them connected to the item
- (9) Check for mold growth daily

k. Textiles

- What to expect:
 - (1) Different fibers will react differently to water:
 - a. Cellulose (cotton, linen, rayon, cedar bark, etc.) can tolerate water better
 - b. Protein (wool, silk, horsehair, etc.) can be weakened in water
 - (2) Textiles are often composite objects, with embellishments of many different materials (leather, ivory, mother of pearl, metal, etc.)
 - (3) Old textiles are fragile-and even more fragile when wet
 - (4) Textiles are not self-supporting – and are heavy when wet. Always carry with full support – board or towel
 - (5) Colors may not be stable in water
 - (6) Wet objects will be wet to the touch, and may be heavy
 - (7) Check for mold growth daily
- Priority placed on:
 - (1) Fragile textiles
 - (2) Composite constructions
 - (3) Bleeding dyes
 - (4) Textiles with water-soluble, ivory, baleen, bone or iron components
- Drying Method:
 - (1) Always use supports, even if just shifting
 - (2) Ensure good overall support during drying
 - (3) If object is partially wet, briefly submerge it in clean water, blot and air dry
 - (4) Pad out shaped items (hats and shoes) to correct form with absorbent materials. Do not undo buttons or any fasteners.
 - (5) Prevent adjacent materials from being damaged by running dyes. If dyes on part of a textile are bleeding onto other areas, cover with a cloth or blotter to draw dye out and away
 - (6) Isolate fasteners or embellishments made of metal, bone, leather, feathers, etc., to prevent them from rusting or absorbing/releasing dyes. Use blotter or Mylar.
 - (7) Blot off excess water; OK to roll up in toweling to remove excess water. Do not twist.
 - (8) Air drying is best. Dry in a single layer, or stuff out layers with light material, try to allow air circulation inside, if possible.
 - (9) Quickly drying pieces is best for survival rates
 - (10) Freeze to buy time only if necessary; vacuum freeze –drying can cause damage.

l. Wooden Objects

- What to expect:
 - (1) Wood is porous and not dimensionally stable
 - (2) Wet objects will be discolored (appear visibly wet) and will feel wet to the touch
 - (3) Crackling, splitting, warping is likely
 - (4) Joints may separate
 - (5) Old repairs may come apart

- (6) Even though wood may be the primary material, there could be many different materials in one object: mother of pearl, ivory, bone, metal, gilding (chalk mixed with glue, with gold leaf on top), textiles, horsehair or leather
- (7) There may be surface coatings of paint, shellac, wax or other finishes
- (8) Varnish/paint may soften; abrasion and blanching is possible
- (9) Finished (inlays or veneers) may lift
- (10) Metal attachments could rust or corrode
- (11) Mold growth can occur
- Priority placed on:
 - (1) Composite objects
 - (2) Veneered objects
- Drying Method:
 - (1) Remove or isolate iron or copper alloy attachments
 - (2) If wood is fully wet and muddy, consider rinsing clean
 - (3) Pat dry, don't wipe
 - (4) Dry slowly, possibly under a plastic tent for even drying; Do NOT use heat to dry

5. Mold

a. General Instructions

- (1) Stabilize wet objects that have mold. Active mold growth is slimy or fuzzy, and is usually green, black, orange, or purple. Inactive mold is dry and powdery and may be white.
- (2) Assess the condition, the type of materials, and special characteristics of each object.
- (3) Handle moldy objects carefully, as mold spores can become airborne and cause health problems. (Mold spores can lodge in lungs, causing severe infections. Spores can also be extremely dangerous to persons with allergies or respiratory problems. Sensitivity to mold spores can increase with exposure.)
- (4) Minimize handling to lessen the possibility of ingraining mold spores into objects.
- (5) Wear plastic or rubber gloves. Tyvek suits are available if necessary.
- (6) Wear appropriate personal protective equipment (at minimum, use a toxic dust respirator with N95 rating for mold spores and approved by the NIOSH). Consult OESO.
- (7) Use appropriate tools and methods to remove mold.
- (8) Vacuum objects outside so spores do not resettle on objects or enter the Museum ventilation system. If vacuuming inside is necessary, vacuum the objects in a non-Museum building or isolated area, away from collections. Vent vacuum exhaust, which may carry spores, outside the building.
- (9) Vacuum objects gently with a low-suction vacuum and a HEPA Type-A filter. Place 6a plastic mesh screen over objects to prevent lifting off flakes during vacuuming. Make sure the nozzle does not touch the object. Use a soft, clean, light-colored, natural bristle paintbrush and gently push fine particles into the nozzle of the vacuum. Do not brush or press mold spores into objects. Clean soiled brushes often in a fungicidal detergent. Rinse them thoroughly.
- (10) Save any loosened pieces from the objects. Bag and label them.
- (11) Clean the area and tools thoroughly.
- (12) Wash all cleaning surfaces and tools (table tops, vacuum nozzles, plastic screens) in

- a fungicidal detergent. Rinse with clean water.
- (13) Seal all contaminated materials (gloves, acid-free storage boxes, vacuum bags, clothing) in plastic bags. Dispose of contaminated materials in an outside trash receptacle (contaminated clothing may be laundered with a fungicidal detergent).

6. Fire Damage

a. General Instructions

- (1) Stabilize wet objects that are soot, smoke, and/or fire damaged.
- (2) Do not move soot, smoke, and/or fire damaged objects, unless absolutely necessary (danger of roof collapse, lack of security).
- (3) Handle soot, smoke, and/or fire-damaged objects carefully.
- (4) Wear plastic or rubber gloves to handle objects. Wear a disposable dust or particle mask.
- (5) Do not reuse masks or gloves.
- (6) Examine objects carefully for loose parts, cracks, breaks, old repairs, and unstable surfaces before picking them up.
- (7) Do not touch painted, gilded or finished surfaces.
- (8) Make sure metal and stone objects are not hot when picking them up. Collect all pieces of an object. Bag and label them.
- (9) In addition to fire damage, objects may also suffer from water damage resulting from sprinkler release or fire fighting efforts. For wet objects, see guidelines for Water.
- (10) Do not clean soot, smoke, or fire-damaged objects. Leave these objects for the conservator.