

## A Preservation Planning Tool: Table Top Planning Scenarios, Level of Collections Emergency

These narrative situations complement the potential level of emergency chart as tool for validating a collections emergency response plan against the many combinations of factors an emergency event might include. Because full-scale emergency response rehearsals are impractical for most institutions, these realistic scenarios are intended to be the basis for “table top” or “talk through” exercises to cross-check assumptions and response strategies. We recommend that you set aside a couple of hours for a group of staff who are responsible for emergency preparedness and response to review one or more scenarios together, in the context of your collections emergency plan. Notes of your discussion and the assumptions and gaps identified, and modification of your plan to confirm or address them, will strengthen your preparedness for a real event.

While institutions should pay priority planning attention to emergencies in direct proportion to the likelihood that they might occur, the unexpected is in the nature of emergencies. It can be useful to walk through even emergencies that are very unlikely for your context. That discussion can serve as a periodic staff reminder of your emergency plan contents, or as a “worst case” scenario to assess your plan’s capacity to cover a variety of emergencies.

Scenarios can’t provide all details for all institutions, emergencies, or collections. Feel free to make them more reflective of your institution and collections. Where a question about conditions arises, use your imagination to fill in missing information as your collections or staff might experience a similar event. In some cases alternate scenarios have been suggested to allow a wider range of institutions to see themselves for the purposes of this planning exercise. Questions in the right-hand column are intended to help start your conversations. Your discussion will (and should) raise more questions as you assess your plan against the situation described.

**Key** Symbols in the left-hand column indicate which factors are included in the emergency scenario.



**Water**

Uncontaminated sources include weather, spills, and infrastructure conduits, among others.



**Contamination**

May include accidental or intentional chemical, biological, or radiation hazards, in water, collections, vents, or other. Assume health risks to responders.



**Limited staff available**

Normal staffing is not available due to timing, evacuation, or health risk or other circumstances.



**COOP\* may be initiated**

A continuity of operations plan (COOP) provides procedures to continue essential functions in critical emergency. Consider differences with and without initiation.



**COOP initiated**

Assume scope and nature of the emergency requires COOP initiation.



**Electricity interrupted**

Range includes loss of HVAC, power outage in one area of a single building to area-wide blackout, with or without available emergency power.



**Building damaged**

Range includes disruption of a limited area of the building shell to extensive structural damage. Consider that collection furniture may be unstable, building entry prohibited, or building condemned.

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\* Continuity of operations planning may be unfamiliar to many libraries, archives, and museums. Briefly, a continuity of operations plan (COOP) describes which functions are critical for the continuing operation of an institution, organization, or business (e.g. payroll, accounts payable and receivable, communications, customer service), and what procedures the institution will use to maintain those functions at a basic level in the event of a disaster or a pandemic. Most institutions with a COOP identify an alternative location, phone and computer systems, staffing plan, and other infrastructure supports in the event that a disaster makes normal resources unavailable. It is a very good idea to create a basic plan for these purposes, since without it, you may lack the resources you need to salvage collections following a major emergency, or to recover sufficiently to continue your services.

If you don’t already have a COOP, don’t let that stop your emergency planning in general. Use a scenario exercise to start think about what is feasible for your institution if you have no access to your building or your normal operating infrastructure.

Level	Scenario	Sample talk-through questions: How urgent is this situation, and what are the institution's best responses?
<p><b>1</b></p> 	<p><b>Water damage inside working hours</b></p> <p>Identify a specific space in your building and a time of year to use for your chosen scenario.</p> <p>Within 15 minutes of the event, staff have alerted the emergency response coordinator (incident commander) that a sprinkler head accidentally discharged during a test of the fire suppression system. Water has penetrated a collections space during normal working hours on a Wednesday. The water contains a small amount of rust and particles of pipe debris, but is otherwise uncontaminated. Four open shelf ranges flanking the sprinkler head were doused before the water supply was shut down, and approximately 800 bound volumes range from damp to soaked.</p> <p><i>Alternative:</i> If your building has no sprinkler system, assume that a pipe seal has failed in a pipe running through the ceiling over a collection space, causing similar damage.</p>	<ul style="list-style-type: none"> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What is the flooring (tile, concrete, carpet, wood, other)?</li> <li>• Is there standing water, has flooring absorbed water, or is the remaining water contained entirely in the bound volumes and/or on their shelves?</li> <li>• What is the relative value of the affected materials likely to be in your collection?</li> <li>• What special circumstances might impact your response (for example, do affected collections include parchment or vellum, clay-coated paper, or other high-risk materials)?</li> <li>• What does your emergency response plan call for?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process damaged collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What will you need to do first? Second? Third?</li> </ul>
<p><b>2</b></p>  	<p><b>Water damage outside working hours</b></p> <p>Identify a specific space in your building to use for this scenario. At 11:00 pm on Saturday in mid-July, facilities staff have alerted the emergency response coordinator (incident commander) that water has penetrated a closed collections space after hours. A bathroom sink on the top floor of the building was plugged and the faucet was opened. By the time the problem was recognized, water had flowed through ceilings into six spaces on two floors. Water has dissolved and carried components from building materials, but is not believed to be toxic or otherwise contaminated. About 200 ranges of storage furniture have been affected. These include bound volumes, document boxes, and photographs. About 25% of material is soaked. The balance of the affected collection ranges from damp to wet at the edges.</p>	<ul style="list-style-type: none"> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What is the flooring (tile, concrete, carpet, wood, other)?</li> <li>• Is there standing water, has flooring absorbed water, or is the remaining water contained entirely in the collections and storage furniture?</li> <li>• What is the relative value of the affected materials likely to be in your collection?</li> <li>• What special circumstances might impact your response (for example, do affected collections include parchment or vellum, clay-coated paper, or other high-risk materials besides photographs)?</li> <li>• What does your emergency response plan call for?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process damaged collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What will you need to do first? Second? Third?</li> </ul>
<p><b>3</b></p>   	<p><b>Unknown contaminant, building evacuated</b></p> <p>Identify a specific space in your building and a time of year to use for this scenario. Staff have alerted the emergency response coordinator (assigned incident commander) that a white powder appears on the surface of scattered document boxes in one room holding the institution's manuscript collection. These are in shelving (and other furniture) not normally accessed by researchers, but visitors have occasionally been found in closed storage areas, and the institution has recently received media attention for holdings pertaining to a controversial topic. There is no obvious, innocent explanation for the powder. The building has</p>	<ul style="list-style-type: none"> <li>• Are there potential risks to your collections in these circumstances? What are they?</li> <li>• What strategy does your emergency response plan call for in a situation like this?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What considerations might lead to implementation of a COOP (continuity of operations plan) in this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>

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	<p>been evacuated until the powder can be identified and inspections can rule out the presence of powder in additional spaces.</p>	
<p><b>4</b></p> 	<p><b>Power outage</b></p> <p>It is Saturday afternoon in mid-August. Four hours ago your region experienced a major power outage. The region is experiencing record-setting heat and humidity—overnight temperatures for the next week will be in the low 90s. The best estimate for power restoration is Wednesday or later. With no power, all systems, including computer systems, are down. Non-emergency staff are barred from the building, which will be closed to the public until power is restored and all systems reviewed.</p> <p><i>Alternate:</i> Choose a time of year to use in this scenario. It is mid-day Monday. One hour ago your building power was disrupted by unknown causes. With no power, all systems, including computer systems, are down. Severe weather is forecast for the next few days (choose a condition realistic for your location). Your building has been closed, and all staff have been sent home. Electricians are working to resolve the problem, but the cause is not obvious, and the best estimate for power restoration is 24 hours or more.</p>	<ul style="list-style-type: none"> <li>• Are there potential risks to your collections in these circumstances? What are they?</li> <li>• What does your emergency response plan call for in a situation like this?</li> <li>• What supplies or equipment might response require?</li> <li>• Where will these come from?</li> <li>• Where will you process any collections affected?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What considerations might lead to implementation of a COOP (continuity of operations plan) in this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>
<p><b>5</b></p> 	<p><b>Local flooding</b></p> <p>Choose a time of year to use in this scenario. At 7:00 pm on Tuesday night a major water main break caused localized flooding in your area (standing water is 1 ft. above ground level at your building). It is now 7:00 am on Wednesday. Power has been disrupted and area restoration is estimated to take 2-3 days. Even emergency staff are barred from the building until flood water recedes, and water has certainly penetrated your building. The building will be closed until water has been pumped out or receded, power is restored, and all systems reviewed by emergency personnel.</p> <p><i>Alternate:</i> Choose a time of year to use in this scenario. At 6:00 am on Wednesday morning your director has learned that localized overnight flooding has made it necessary to close your building (standing water is 1 ft. above ground level at your location). Additional rain is forecast through Friday. Power has been disrupted by weather events and restoration to the area is estimated to take 2-3 days. Even emergency staff are barred from the building until flood water recedes, and water has certainly penetrated your building. The building will be closed until water has receded, power is restored, and all systems reviewed by emergency personnel.</p>	<ul style="list-style-type: none"> <li>• What does your emergency response plan call for?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, do affected collections include parchment or vellum, clay-coated paper, photographs, or other high-risk materials)?</li> <li>• What is the temperature in the storage space(s)? Relative humidity? What collection risks might this create?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process damaged collections?</li> <li>• What considerations might lead to implementation of a COOP (continuity of operations plan) in this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>

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<p><b>6</b></p>    	<p><b>Toxic spill</b></p> <p>Identify a time of year to use for this scenario. A freight train derailed within a mile of your building, and a tank car carrying toxic hydrochloric acid has leaked. At 4:00 on Thursday afternoon your building neighborhood was suddenly evacuated, since wind was expected to carry fumes in that direction. Building HVAC systems were inadvertently left running, and air handlers brought an unknown quantity of accident-related fumes into the building before a related electrical malfunction fortunately shut them down. It is now 9:00 Thursday night, and your director has learned that it will be possible to re-enter the building on Friday morning at 7:00 am.</p> <p><b>Regional wildfire (smoke)</b></p> <p><i>Alternative:</i> Identify a time of year to use for this scenario. Wildfires and heavy smoke have impacted your region for several days. While your building did not burn, on Thursday afternoon it was suddenly ordered evacuated. It is now Saturday morning. The fires are under control, and key staff have arrived at the building to discover that building HVAC systems were inadvertently left running, and air handlers brought an unknown amount of smoke into the building before the fire detection system fortunately shut them down without deploying sprinklers. The smoke contained chemicals from building insulation, plastics, and furnishings.</p>	<ul style="list-style-type: none"> <li>• What does your emergency response plan call for?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What is the temperature in the storage space(s)? Relative humidity? What collection risks might this create?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process any affected collections?</li> <li>• What considerations might lead to implementation of a COOP (continuity of operations plan) in this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>
<p><b>7</b></p>     	<p><b>Small explosion</b></p> <p>Identify a specific space in your building and a time of year to use for the scenario. At 10:00 pm on Monday your director was notified that a collections area accessible to the public was damaged by a fire after hours on Monday, thought have been caused by an explosive device. The space is structurally intact, but 100 shelf ranges and other storage furniture, and the collections they held, are extensively affected. Bound volumes, document boxes, and photographs are included. The 25% of material closest to the device has been severely damaged. Most boxed collections have been protected to some extent, but about 35% of boxes have been damaged by flying materials. All sprinklers in this space deployed for about 30 minutes. The affected collections area is covered with plaster dust, insulation materials, and other debris of unknown nature (all wet by the sprinklers). The content of some shelves has swollen significantly, warping wooden furniture. Fire officials are checking all spaces for additional explosives and police are investigating. Until officials declare the building safe, staff are barred. Electricity has been interrupted and will require new wiring for restoration.</p> <p><i>Alternative:</i> If your building is not protected by sprinklers, use the same scenario, but assume that water from firefighting efforts has produced similar (or greater) damage.</p>	<ul style="list-style-type: none"> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What is the flooring (tile, concrete, carpet, wood, other)?</li> <li>• Is there standing water, has flooring absorbed water, or is the remaining water contained entirely in the collections and storage furniture?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What does your emergency response plan call for?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process affected collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What considerations might lead to implementation of a COOP (continuity of operations plan) in this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>

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<p><b>8</b></p> 	<p><b>Earthquake</b></p> <p>Identify a time of year to use for this scenario. On Monday morning your area experienced an earthquake measuring 5.8 on the Richter scale. It is now 10:00 pm on Monday, and immediate human emergencies are under control. Assume that your building has suffered moderate damage (cracks to interior and exterior walls, shelf contents thrown to the floor, a few warped shelves, exhibits damaged). Structural damage is unknown. Until officials declare the building safe, staff are barred. Electricity has been interrupted, and the cause may be outside or inside your building, or both, since it cannot be immediately identified. The building should be assessed and cleared for entry by Friday morning. You do not expect water damage from any source, and you do not have reason to think there is toxic contamination, although there may be dust and debris. Your COOP plan will be implemented.</p> <p><b>Civil unrest</b></p> <p><i>Alternate:</i> Identify a time of year to use for this scenario. It is Monday morning. Civil unrest has caused three days of rioting that includes your neighborhood. Numerous windows in your building have been broken, but no fires appear to have been set there. Police are using the building as a staging area. They are working with your director, who has limited building access, and have been provided with keys and alarm codes. Electricity has been interrupted, and the police are using a generator truck. The city has instituted a 48-hour curfew for non-emergency workers, and no staff, other than your director, can enter the building until the civil emergency is declared over. That may happen sometime on Wednesday morning. Your COOP plan has been implemented.</p> <p><b>Ice storm</b></p> <p><i>Alternate:</i> Identify a month of the year to use for this scenario. It is Monday morning. A regional ice storm brought down a tree that damaged your building roof. No collections are directly affected yet, but staff cannot reach the building, and electricity has been interrupted region-wide. The best estimate for its restoration is the following Monday or later. Your COOP plan has been implemented.</p>	<ul style="list-style-type: none"> <li>• Are there potential risks to your collections in these circumstances? What are they?</li> <li>• What is the temperature in the storage space(s)? Relative humidity? What collection risks might this create?</li> <li>• What is the flooring (tile, concrete, carpet, wood, other)?</li> <li>• Is there standing water, has flooring absorbed water, or is the remaining water contained entirely in the collections and storage furniture?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What does your emergency response plan call for?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process affected collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What impact will implementation of your COOP (continuity of operations plan) have on this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>

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<p><b>9</b></p> 	<p><b>Tornado</b></p> <p>Identify specific spaces in your building and a month of the year to use for this scenario. It is Wednesday morning. On Tuesday evening after hours, your building was in the path of an F2 tornado. There is damage throughout your area. Roads are blocked by tree branches and power lines. All staff are safe, but some staff homes and other businesses are damaged. Your building has multiple broken windows and significant roof damage, with additional damage to one side of your building. Power is interrupted and water has penetrated multiple collections spaces. Additional rain and wind is forecast for the next 24 hours. Staff cannot make the collections a priority until they have seen to personal and family property damage. Construction, plumbing, electrical, and other services will be under severe pressure for weeks or more. You do not know when power will be restored. Your building needs inspection before staff can safely enter. Your COOP plan has been implemented.</p>	<ul style="list-style-type: none"> <li>• What does your emergency response plan call for?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process affected collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What impact will implementation of your COOP (continuity of operations plan) have on this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>
<p><b>10</b></p> 	<p><b>Explosion, structural damage</b></p> <p>Identify a specific space in your building and a time of year to use for this scenario. A collections area accessible to the public has been damaged by an explosive device after hours on Monday night. An exterior wall in the space was severely damaged and additional structural damage is likely. 200 shelf ranges and other storage furniture, and the collections they held, are extensively affected. Bound volumes, document boxes, and photographs are included. The 25% of material closest to the device has been severely damaged. Most boxed collections were protected to some extent, but about 35% of boxes were damaged by flying materials. The affected collections area is covered with plaster dust, insulation materials, and other debris of unknown nature. Fortunately no fire resulted from the explosion, and fire suppression was not triggered. Neighbors reported the explosion to fire and police officials, who are checking all spaces for additional explosives. Until police finish their investigation and officials declare the building safe, staff are barred. Power has been interrupted and will require new wiring for restoration. Structural damage will require significant rebuilding. It is now 12 am on Tuesday morning. Your COOP plan has been implemented.</p>	<ul style="list-style-type: none"> <li>• What does your emergency response plan call for?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process affected collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What impact will implementation of your COOP (continuity of operations plan) have on this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>

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<p><b>11</b></p> 	<p><b>Hurricane</b></p> <p>Identify a specific month of the year for to use for this scenario. On Tuesday your region was hit by a category 3-4 hurricane. It is now 3:00 pm Wednesday afternoon. There has been extensive storm damage—wind, storm surge, flooding. Many of your staff have lost homes and workplaces. The region's infrastructure has been compromised. This includes roads, power, drinkable water, sewage and other basics. It will likely take 4-5 weeks before significant progress in recovery is made. Your building is well constructed, and it was possible to relocate special collections and most exhibits to higher floors, and to board over windows and doors in advance of the storm. Electricity, water, and other building systems were shut down to prepare for the storm. Despite this good preparedness, TV coverage has shown extensive roof damage to your building, and flood waters rose to 6 feet above ground level during the storm. Water was contaminated with sewage, animal material, and agricultural and chemical toxins. There may be other hazards, and there is a very strong likelihood of extensive mold growth inside the building. Your director will be permitted to accompany safety officials for a brief assessment of the building once roads can be used by all-terrain vehicles, possibly on the Friday following the storm. It is now 3:00 pm Wednesday afternoon. Your COOP plan will be implemented.</p>	<ul style="list-style-type: none"> <li>• What does your emergency response plan call for?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What is the relative value in your collection of the materials likely to be affected?</li> <li>• What special circumstances might impact your response (for example, what high-risk materials are affected)?</li> <li>• What is the temperature in the storage space? Relative humidity? What collection risks might this create?</li> <li>• What supplies or equipment will response require?</li> <li>• Where will these come from?</li> <li>• Where will you process affected collections?</li> <li>• What challenges can be expected in applying your emergency response plan in these circumstances?</li> <li>• What impact will implementation of your COOP (continuity of operations plan) have on this situation, and what impact would that have on collections risk or emergency response?</li> <li>• What will you need to do first? Second? Third?</li> </ul>