RECORDS and DISASTERS

April 26, 2022

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Kentucky Department for Libraries and Archives



Disaster Plans, Templates, and Guidance are available from a variety of sources.

*Find a template that is usable and useful to your agency and start from there!

The 4 "Rs"





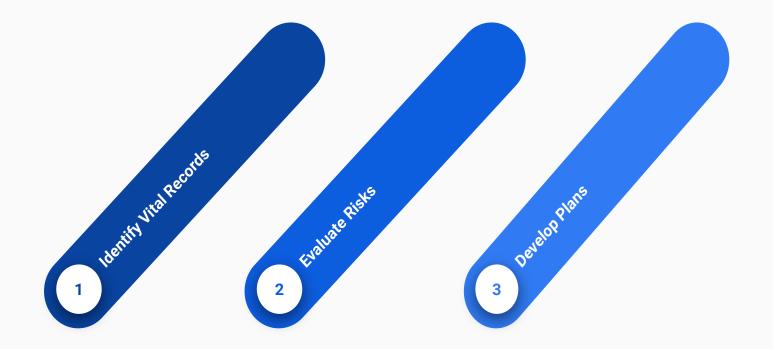


The four stages of emergency preparedness for records can be summed up as:

- → Risk
- → Readiness
- → Response
- → Recovery











Risk to Records Best Practices Checklist

- Determine agency's critical functions.
- Identify program staff who can help identify essential records for each function.
- Designate essential records.
- Prioritize essential records.
- Determine timeframes for accessing essential records during and after emergency.
- Identify and evaluate risks to essential records.
- Identify and evaluate preparedness and mitigation strategies to protect and ensure continued access to essential records in case of natural disasters or human-caused threats.



Disaster Preparedness: Disaster Preparation Checklist

Purpose: A checklist of steps to help state agencies and local government entities prepare for disaster.

	Check records/server storage areas for potential issues (such as water hazards) and ensure records are off the ground. Move to a safer area if necessary.
	Identify "Essential" records.
	Create procedures for accessing essential records during/after a disaster.
	Create/update disaster plan to include records protection strategies and disaster response for every possible scenario.
	Designate coordinators and response teams, and assign responsibilities (immediate response, assessment, salvage, etc.).
8	Form contingency services contracts with vendors.
	Identify and acquire supplies needed to salvage records/data.
	Train personnel on disaster response procedures in disaster plan.
	Test emergency procedures/systems.
2	Backup "Essential" records and store offsite.
	Schedule regular checks to ensure backups are readable and up to date.
Add	itional advice regarding the management of public records is available from Washington State Archives:
	www.sos.wa.gov/archives recordsmanagement@sos.wa.gov





TITLET	SERIES	VITAL	DATBEG	DATEN	VOLUM	MEDIUM	VOL	FORM	DAMAGE	MF	Need	PERM	LOCATION	ORIG	Digital	Accession#	Grant#	COMMENTS	SURVEYED
Fiscel Court Minute	L1217		1982		11	Paper	1	в				P	AVIS film, Ordinances Desk.	0				1/2 size, sewn bound, typewritten, pages not numbered. Indexed on page 357. STILL IN USE.	06/04/2003
Flacel Court Minute	11217		1931	1935		peper	1	// e ⁽⁾		2			State Rords Only or destroyed.	0				127 pages used, handwritten, sewn bound, no Index. [This volume is one of more than 200 1 brought to the State Records Center In March 1993. It may have damage from water, vermin, ack, mold, use and/or human abuse.]	06/04/2005
Flacel Court Minute	L1218	-	1978	1982	1	Paper	1	8	U/H				Deed Rm, Atty's Brich 3, fting E.	0				Post binding, typewritten, with index, 476 pages, damaged spine-too many pages and inserts.	
Fiscal Court Minute	L1218		1886	2961	1-20	Paper	20	5					Deed Rm, Atty's Brich 2, R. 1-3.	0		1		Al have indexes. 41, 1883-1889; 42, 1888-1894; 43, 1802-1910; 44, 1911-1910; 45, 1916-1971; 46, 1921-1925; 47, 1925-1971; 46, 1926-1931; 45, 1931-1944; 410, 1934-1931; 411, 1938-1941; 412, 1941-1946; 413, 1946-1920; 424, 1950-1953; 415, 1953-1957; 416, 1957-1961; 417, 1961- 1965; 413, 1965-1970; 419, 1970-1974; 4020, 195-1961.	10000000
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Fiscal Court Minute	L1218	6	1895	1901	2	Paper	1	8				P	5.7.	0				volumes for this series numbered #2.	06/04/2003
Fiscal Court Minute	L1218		1983	1988	2	Paper	1	в		~		P.	Deed Rm, Atty's Birch 3, fong E.	0		1		Post binding, typewritten, with index, 501 pages.	06/04/2003
Flacal Court Minute	L1218		1988	1993	3	Paper	1	8					Deed Rm, Alty's Bnch 3, fong E.	0				Post bound, typewritten, with index, 499 pages.	06/04/2003
Fiscal Court Minute	L1218		1993	1995	- 4	Paper	1	5				P	Deed Rm, Atty's Brich 3, fong E.	0				Post bound, typewritten, with index, 413 pages.	06/04/2003
Flacal Court Minute	L1218		1995	1998	5	Paper	1	8				P	Deed Rm, Atty's Brich 3, fting E.	0				Post bound, typewritten, with index, 413 pages.	06/04/2003
Flacal Court Minute	L1218		1998	2000	6	Paper	1	5				P	Deed Rm, Atty's Boch #3.	0				Post bound, typewritten, with index, 230 pages.	06/04/2003
Fiscal Court Minute	L1218		2000		7	Paper	1	5		ō		P	Judge/Executive's Office.	0				Post bound, typewritten, with index, STILL IN USE.	06/04/2003
County Ordinances	L1219		1989		1	Paper	1	8		$\overline{\Box}$			AVIS Rm, Co Ordinances Desk.	0				1/2 size, post bound, typewritten, indexed. Still in use.	06/04/2003
Poorhouse Keeper's		-	1894	1939		Paper	0.1				0		Graves Co. Public Library In acd free	0				Two Items arranged chronologically. Loaned to the Grave Co. Public Library, 515 N 17TH Street	
Report	L1221	-	+0.04	1015		Laber	-	20			U	P	Hing box		-			by the County Clerk. Delivered in summer of 1994.	06/04/2003
List of Claims Allowed	11222		1555	1920		Paper	0.3	L				NP	Graves Co. Public Ubrary, Hilriger Box.	0				Sewn binding, handwritten, no index, only two pages for five days work used, spine and headings say List of Deeds and Mortgages. DO NOT FILM! Will destroy-5 year record.	08/09/1991
Road Orders	L1226		1585	1940		Paper	0.1	1				Р.	Graves Co. Public Library, in acd free Hilngr box	٥				Arranged chronologically. Loaned to the Graves County Public Library, by the County Clerk, Delivered in summer of 1994.	05/04/2003
Report of Bridge Letting - Monthly	L1251		1939	1939		Paper	0.1	L				NP	Graves Co. Public Library in add free Hilingr box.	0				Arranged chronologically, DO NOT FILM.	06/04/2003
Marriage Book	L1234		1919	1919	20	Paper	1	5		\sim		P	Deed Rm, Alty's Brich 5< #9.	0				1/2 size, sewn binding, handwritten, no index, 119 double pages, new canves cover.	06/04/2003
Marriage Book	L1234		1919	1920	11	Paper	1	8	н/ш	\sim		P	Deed Rm, Atty's Brich #5, #10.	0				1/2 size sewn binding, handwritten, indexed, 120 pages, new canvas cover.	06/04/2003
Marriage Book	L1254		1920	1920	12	Paper	1	в	H/U	~		P	Deed Rm, Atty's Brich #5, #11.	0				1/2 size, sewn binding ,handwritten, indexed, 119 pages, new canvas cover.	06/04/2003
Marriage Book	11234		1921	1921	54	Paper	1	8					Deed Rm, Atty's Brich 45, #13.	0				1/2 size, sewn binding ,handwritten, indexed, 120 pages, new carwas cover. #13 was a Marriage Bond Book (1.1566).	06/04/2001
Marriage Book	L1234		1921	1921	15	Paper	1	Ð		\sim		p	Deed Rm, Atty's Brich #5, #14.	0				1/2 size, sewn binding ,handwritten, indexed, 119 pages, new canvas cover.	06/04/2003
Marriage Book	L1234		1921	1922	16	Paper	1	8		\sim		P	Deed Rm, Atty's Brich #5, #15.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new canvas cover.	06/04/2003
Marriage Book	L1234		1922	1922	17	Paper	1	в		\sim		P.	Deed Rm, Atty's Brich #5, #16.	0				1/2 size, sewn binding ,handwritten, indexed, 119 pages, new canvas cover.	06/04/2003
Marriage Book	L1234		1922	1923	18	Paper	1	8		~		. P	Deed Rm, Atty's Brich #5, R. 4, #3.	0				1/2 size, sewn binding ,handwritten, indexed, 119 pages, new canvas cover.	06/04/2003
Marriage Book	11234		1925	1924	19	Paper	1	5		~		p.	Deed Rm, Atty's Brich #5, R. #4, #5.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new carwas cover.	06/04/2003
Marriage Book	11234		1923	1924	19	Paper	1	8		~		р.	Deed Rm, Atty's Brich 5, R. 4, 44.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new carves cover.	06/04/2003
Marriage Book	L1234		1924	2924	20	Paper	1	в		~		P	Deed Rm, Atty's Brich #5, R. 4, #6.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new canvas cover.	06/04/2003
Marriage Book	L1234		1924	1925	21	Paper	1	B				P	Deed Rm, Atty's Brich #5, R. 4, #7.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new carves cover.	06/04/2003
Marriage Book	L1234		1925	1926	22	Paper	1	8			ă	P	Deed Rm, Atty's Brich #5, R. 4, #8.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new canves cover.	06/04/2003
Marriage Book	L1254		1926	1926	23	Paper	1	в		•	ō	P	Deed Rm, Atty's Brich #5, R. #4, #9.	0	Ō			1/2 size, sewn binding, handwritten, indexed, 120 pages, new carves cover.	06/04/2003
Marriage Book	L1254	Ö	1926	1927	24	Paper	1	8		2			Deed Rm, Atty's Boch #5, R. 4, #10.	0	Ō			1/2 size, sewn binding, handwritten, indexed, 120 pages, new cerves cover.	06/04/2003
Marriage Book	L1234		1927	1928	25	Paper	1	5			Ō	р.	Deed Rm, Atty's Brich #5, R. 4, #11.	0				1/2 size, sewn binding, handwritten, indexed, 120 pages, new cerwas cover.	06/04/2003
Marriage Book	11234	Π	1928	1929	26	Paper	1	8			ō	P .	Deed Rm, Atty's Brich #5, R. #4, #12.	0	ō			1/2 size, seven binding, handwritten, indexed, 120 pages, new carves cover.	06/04/2003
Marriage Book	L1234	ō	1928	2929	27	Paper	1	8			Ō	P	Deed Rm, Atty's Brich #5, R. #4, #13.	0	ō			1/2 size, sewn binding, handwritten, indexed, 120 pages, new carves cover.	06/04/2003
Marriage Book	L1254	n	1929	1930	28	Paper	1	5		•	0		Deed Rm, Atty's Brich #5, R. #4, #14.	0	ŭ			1/2 size, sewn binding, handwritten, indexed, 119 pages, new carves cover.	06/04/2001



Mitigation Strategies:

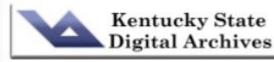
- Organization of Records
- Paper duplicates
- Climate Control
- Microfilm
- Digital Images
- Retention and Destruction of Records







- Offsite storage
- Cloud storage





PRIORITY FOR SALVAGE	ESSENTIAL RECORDS ARE RECORDS THAT:	Examples include:			
Priority 1: First 1–12 hours	Are necessary for emergency response	 Copy of emergency and/or Continuity of Operations (COOP) Plan Infrastructure and utility plans Maps and building plans Emergency contact information 			
	Are necessary to resume or continue operations	 Delegations of authority Contracts and leases Payroll Prison, jail, and parole records Insurance records 			
Priority 2: First 12–72 hours	Protect the health, safety, property, and rights of residents	 Deeds, mortgages, land records Birth and marriage records Medical records Active court proceedings Education and military service records Voting records Professional licenses 			
	Would require massive resources to reconstruct	Geographic information systems data Tax records			
V Priority 3: After first 72 hours	Document the history of communities and families	 Historical documents Photographs Identity records 			
 Value dur record es As disrup become estimation 	tion time increases, more records	ALL OTHER BECORDS			

Image from IPER Essential Records course:

https://www.statearchivists.org/research-r esources/emergency-preparedness/repr

"The development of the IPER Essential Records course was supported by Cooperative Agreement Number 2007-GT-T7-K022, U.S. Department of Homeland Security, Federal Emergency Management Agency, National Preparedness Directorate. Points of view or opinions in this program are those of the author(s) and do not represent the position or policies of the U.S. Department of Homeland Security."

1. General Preparedness	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
Records Disaster Plan written and updated			
Emergency Instructions posted at all staff phones			
Disaster supply kit(s) created and inventoried on schedule	8		
All shut-off valves, breaker switches, etc. properly labeled			

2. Plumbing	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
Pipes and plumbing well-supported			
Pipes and plumbing free of leaks	6.	9	2
Staff know location of water main and have appropriate tools (if needed) for shut-off			ŝ.

Records Risk Assessment Inspection Checklist Template - "Essential Records Manual - Security Backup, Disaster Preparedness Response, and Recovery" Office of the Secretary of State, Division of Archives and Records and Management, Washington State

3. Fire Safety	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
Appliance cords in good condition			
Appliances turned off and unplugged nightly	90	2	8
Schedule visits with the Fire Marshal to follow- up on observed code violations			
Floor plans identifying location of essential records given to Fire Department	3)	5 F	
Detection systems:	90 	0.2	10
appropriate type(s) present			
wired to 24-hour monitoring station	10		25 25
tested regularly			
Fire extinguishers present, inspected regularly and re-charged if necessary	20 20		
Automatic suppression system (e.g., sprinklers, halon) present and operating Fire drill conducted twice per year			
Staff trained in:		5 *	
sounding alarms	23	2	1
interpreting enunciator panels (if present)	30	3 (·	
notifying Fire Department and others as called for	-0 -5	0 / -	
using extinguishers	945	2	÷
turning off power, HVAC, sprinklers, gas main	99	5	
closing fire doors	10		10

4. Housekeeping	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
Cleaning supplies and other flammables stored safely	69		
Trash removed nightly	09		

5. Files and Records Storage Areas	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
Shelves well-braced			
Items shelved snugly			
Shelving 4-6" off floor	1	80	
No materials stored on floor	30	9) 2	a ti
No essential records or valuable materials in basement		3	
Exits unobstructed			
Important materials away from windows		845	
Flashlights kept in windowless and dark areas, and batteries checked			

6. Protection from Water Damage	OK?	Needs Action (Describe)	Action Complete (Date & Initial)
No water sources located above records			
Water detectors present			80
Storage areas checked daily for leaks, seepage, etc. Sump pumps and backups present where needed			
Dehumidifiers available			70
No leakage/seepage through walls			
Valuable materials stored above ground level			20
Valuable and fragile media stored in protective enclosures		5	22
Staff have keys to mechanical rooms and janitorial closets			00 20





Develop plans, policies, and procedures

Identify and Store Emergency Supplies and Equipment

Identify Support and Contacts (Response Teams)

Training

Test Procedures and Plans

Readiness



Management Approval and Support

Records Disaster Coordinator and Records Preparedness and Response Team

Training

Support and Communication

Essential Records Protection Procedures

Preparedness and Prevention Procedures

Response and Recovery Procedures

Develop Plans, Policies and Procedures

- Risk Mitigation
- Preparedness
- Response
- Recovery

Template for Pocket Response Plan (PReP)**

SIDE A (Communications). Use this side to collect phone numbers for the individuals and organizations you are most likely to need to talk to in the first minutes and hours after an emergency occurs: staff, emergency responders, facility managers, utilities, vendors, and assistance organizations.

[Government Agencies] Pocket Response Plan	STATE GOVT OFFICIALS	FIRST RESPONDERS	FACILITIES MANAGEMENT	EMERGENCY SERVICE PROVIDERS	OTHER CONTACTS
	Chief Information Officer/17 Dept	Police Department	Building Mgr	Conservator	State historical records advisory board
(PReP ***)	Inamel	Iphonel	Inamal	Inartal	[name of designated contact]
	Iphonel		[office phone] / [home phone] / [cell]	Iphonel	Iphonel
INSTITUTIONAL CONTACTS	Burnet	Fire Department	for the back and a formula back and a formul	general	Descend
Harristing Contine 13	Risk Manager	[phone]	Building Staff	Data Recovery Service	Local government records commission
Annual Manual	Instal	Descent	Inamel	(name)	Inamel
Agency Head Iname]	phonel	Emergency medical/ambulance service	[office phone] / [home phone] / [cell]	phonel	Iphonel
(office phone) / [home phone] / [cell]		Ishovel	fearers becaulty formers becaulty front	Proved and a second sec	Descend
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Deputy Director	Intonel	Security	UTILITIES	Inamel	Iphonel
[rums]	Barrent	Iphonel	100000000	Iphonel	Descend
[office phone] / [home phone] / [cell]	Purchasing Agent	factor and	Dechicity		National Archives regional office
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DISASTER TEAM		lahonel	Iphonel	(heuse drying)	(process)
DIGAGIER TEAM		Provide State	and a second	inamel	FEMA regional office
Team Leader	STATE ARCHIVES & RECORDS	Local EMA	Gas	Iphonel	Iphonel
Inomel	MANAGEMENT CONTACTS	Iphonel	Inamel	Bernard	(beened)
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https://www.statearchivists.org/research-resources/emergency-preparedness/pocket-responce-templates

SIDE B (Actions). Use this side to provide step-by-step instructions for state archives personnel who will respond to a disaster affecting your own institution, a state or local government agency, or another archivel repository or cubrual institution in your state. Ideally, steps should already be defined in the state archives disaster plan. This PReVTM document is NOT intended to be a substitute for a comprehensive emergency plan. Instead, it should distlib most important tasks to be taken in the first minutes and hours after an event occurs, sepecially those that occur when staff members are away from their offices.

Government Agencies] Packet Response Plan IIII Response checklist Response checklist	communication services containing services conta
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Print on 8 1/5" x 14" paper. Trim on outside lines. Fold on vertical lines like an accordion, then fold in half (bringing short sides together) so that final folded document measures 2¹/₆" x 3¹/₅". Insert in PRePTM Tyrek[®] envelope for protection. © 2008 Council of State Archivists (CoSA) May be customized and reproduced for distribution free of charge with credit to CoSA.

Readiness



Risk Mitigation

Essential Records

- Locate
- Keep separate from other records
- Keep close together
- Locate in area close to exit
- Store off floor
- Keep in fire-safe or archival storage
- Keep essential records off desks
- Specially label storage/folders

Facility and Storage

- Vaults, safes, fire-resistant storage
- Facility safety

Duplication and Security Copies

- Paper duplication
- Electronic Imaging
- Microfilm

Procure Emergency Equipment and Supplies

- Plastic sheeting
- ♦ Fans
- Dehumidifiers
- Water pumps/wet vacs

Generators

- Personal Safety equipment (masks, gloves, eye protection)
- Crates

NEEDED FOR IMMEDIATE RESPONSE	NEEDED FOR AIR DRYING	NEEDED FOR FREEZING FOR STABILIZATION	DISASTER RESPONSE SUPPLIES AND EQUIPMENT
x			33-gallon plastic trash can with wheels and lid (to store supplies)
x			1 roll 10' x 100' 2 mil plastic sheeting
x			1 roll masking/duct tape (to use with sheeting)
x			1 spool packing string (to hang sheeting)
x			10 large plastic trash bags (to fit can)
X			1 large sponge
x			1–5-gallon bucket
x			1 box disposable gloves
X			1 roll "Do not enter" barricade tape
x		-	2 rolls paper towels
X			1 pair scissors
X			1 dozen pencils (mechanical or sharpened)
x		-	2 black permanent marking pens
x			Lined paper pad
x			Flashlight (self-standing, extra batteries)
x			10 dust masks

Table 1: In-House Stash of Supplies for Immediate Response

NEEDED FOR MINIDIATE REEPONDE	NEADED FOR ARE DRIVE	NEEDED FOR PRESENCE FOR STARLEATION	DEALTER REPORT SUPPLIES AND EQUIPMENT
x	x	x	Camera, memory cards (in case a digital camera is not available, keep a disposable camera in emergency supply stash)
x	х	x	Video camera, memory cards
х	x	x	Laptop computer
х	х	x	Waterproof penalmarkers
х	x	x	Pencils (mechanical or sharpened)
x	x	x	Clipboards
x	x	x	Paper padalogs

Table 3	Personal	Safety	and	Protection

NEEDED FOR MINISTER RESPONSE	NEEDED FOR ARE DRITEND	NEEDED FOR FREEZEND FOR STARLEATION	Волатек Размонае Боличае Ако Боличае т	
x	х	x	First Aid kit (keep in mind treatment of paper cuts, staple pokes)	
х	x	x	Gloves (disposable, work)	
х	x	x	Hard hats (size adjustable)	
x	x	x	Masks and respirators (dust, mold)	
х	x	х	Rubber boots (non-skid), many sizes	
x	x	x	Safety goggles	
х	х	х	Eyewash kits	
х	х	x	Aprons (plastic, disposable)	
х	x	x	Overaits, jumpsuits	
х	х	x	Vest (or jacket) with pockets	
x	x	x	Antimicrobial scaplalochol hand wash	
х	х	x	Drinking water	
x	х	x	Portable toilet	
X	х	x	Identification badges	

Image from REPR Essential Records course: https://www.statearchivists.org/research-resource s/emergency-preparedness/repr

Table 4: Packing Supplies

NEEDED FOR MINEDLATE REEFONDE	NEEDED FOR AIR DRIVED	NEEDED FOR FREEZEND FOR STARLEATION	Disatis Report Survisiance Courses	
x		х	Self-adhesive labels, color-coded adhesive dots	
x		x	Hand trucks, dollies, book carts	
х	х	x	Plastic bags (garbage, zipper lock, assorted sizes)	
х		x	Corrugated cardboard boxes	
х		x	Tape (masking, packing, duct), tape dispensers	_
х		x	Scissors, utility knives (extra blades)	_
х		x	Plastic crates	
х		х	Rescubes® (see description on p. 4 of this handout)	
x		x	Pallets	

Table 5: Communication

Nested FOR MINIDUSTE Response	Needed Folk Are Derring	NEEDED FOR FREEZING FOR STABLEZATION	Вилатия Вазгония Surv. на лис Есличинт
x		_	Hand radio sets/Walkie-talkies
x			Portable radios
х			Cellular phones (with emergency numbers)
х			Ham radios
x			Megaphone

Table 6: Environmental Monitoring and Moisture Control

NEEDED FOR MINIDIATE RESPONSE	Needed For Art Drines	NEEDED FOR FREEZING FOR STARLETATION	Departure Residence Survival and Economics
х			Air conditioners (portable)
х	х		Dehumidifiers
х	х		Fans
х	x		Monitors (temperature, humidity)

NEEDED FOR MEEDEATE RESPONSE	MINIDIATE FOR ARE FREEZING FOR		DENSITER REPORTS SUPPLIES AND EQUIPMENT			
х		2	Acrylic sheets (Plexiglas™)			
	x	(Blotting paper (white)			
х	x	x	Brooms, dustpans, shovels, mops, buckets			
х	х	х	Bubble pack			
х			Cleaning products, disinfectant			
x	x		Cloths: cotton rags, dust cloths, lint-free cloths, nonwoven polyester web, cheesecloth			
x	х		Clothesline, rope, string (heavy packing on spool)			
	X	San Cal	Clothespins (rust proof)			
	x		Dish-drying racks (plastic-covered)			
х			Dry ice			
x	х	х	Flashlights (self-standing), headlamps, extra batteries, chemica light sticks			
х	х	х	Generator (portable, fuel supply)			
х		х	Ladders and kick stands			
х	х		Mat board			
х	x	0	Moisture meter			
х	x		Newsprint (un-inked, blank), butcher paper			
x	x	x	Office supplies (paper pads, pencils, waterproof pensimarkers, flipcharts, large self-adhesive labels)			
x	x		Photo Fio, wetting agent (Kodak)			
х	х		Plastic clips/clothespins			
х	х	х	Plastic garbage cans, washtubs			
x			Plastic sheeting (polyethylene) rolls			
х	C - 2	1	Plywood or masonite board			

Table 7: Other Supplies and Equipment

Table 8: Other Supplies and Equipment (cont'd.)

NEEDED FOR IMMEDIATE Reaf-Once	IMMIDIATE FOR ARE FREEZAND FOR		Полатон Павтоная Болиция мно Боличинит
x	x	\$	Polyester film (Mylar), 3 to 5 mil
	x	x	Polyester, spunbond (Reemay, Hollytex)
x		0	Pump (portable)
x	x		Screen (nylon), screen or bakery drying racks
		х	Shrink wrap
x	х	1	Signs: "Caution Wet Floor"
	x	х	Silicone release paper
x	x	٥	Sponges (cellulose, chemical)
х	x		Surge protectors, extension cords (50+ ft., heavy-duty, grounded
x	x	x	Tables (portable, folding)
x	x	х	Tool kit (crowbar, hammer, wrenches, pliers, screwdriver)
x	x		Towels (absorbent cloth, paper)
x	х	1	Trays (deep, for rinsing)
x		-	Water hoses, adjustable spray nozzles
x	o - o	о. 	Wet vacuum (10-gallon industrial)

Image from REPR Essential Records course:

https://www.statearchivists.org/research-resources/emergency-preparedness/repr



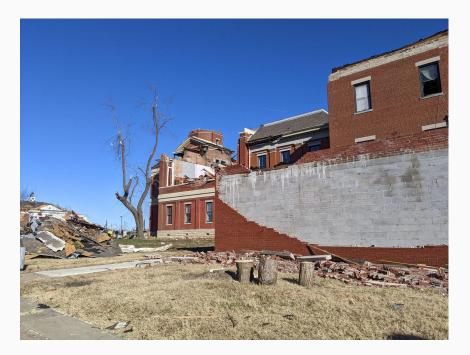
Readiness Best Practices Checklist

- Develop disaster plan for records and include records protection in all disaster plans and emergency action plans
- Designate personnel and assign responsibilities for immediate response, assessment and salvage
- Determine procedures for accessing essential records during and after emergency.
- Identify and procure supplies and contingency service contracts
- Train all personnel on the plans
- Test procedures for emergency plans and systems



Response is immediate and short-term actions during and directly after a disaster or emergency. It is meant to assess damage and minimize additional damage. The disaster plan should be implemented and response team assembled.

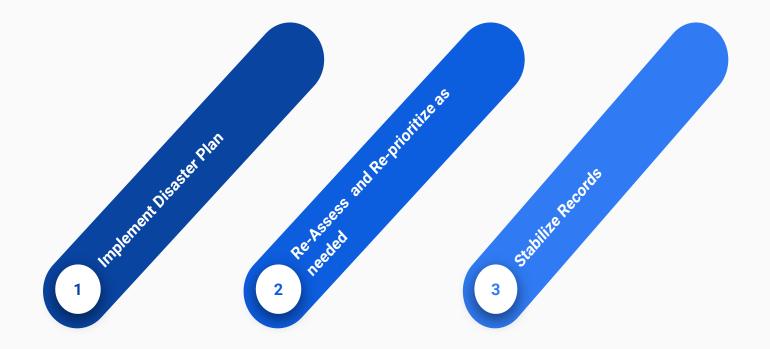
- Initial collections damage assessment; identify immediate needs (removal, freezing, etc.);
- 2. Initial facility damage assessment;
- 3. Determine needs and additional support













Records Emergency Planning and Response Webinar Session 3

Emergency Response Checklist: First 48 Hours Handout 3.4

Handout 3.4—Emergency Response Checklist: First 48 Hours

Records Emergency Response Team Leader

G Finalize response plan.

- Set up staging area that is safe and secure from the effects of the emergency.
- □ If necessary, set up a secure area for handling confidential records.
- Set up drying area for in-house recovery, if applicable.
- Deploy environmental monitoring equipment.
- Gather sufficient staff/experts, contractors, and other personnel necessary to carry out the recovery.
- Decide on recovery techniques and procedures.
- Decide who will perform the work, and where.
- Assign recorder to document damage (in writing, dictated orally, photographed, or taped) and track the movement of materials.
- Decide on pack-out procedures.
- Provide on-site training of personnel.
- Implement tracking system.
- Communicate with Action Team Leader and recovery personnel.
- Activate delivery of more supplies.
- Arrange for food, water, and services for personnel carrying out the response.

Records Emergency Response Team

- Check every shelf and drawer, and surrounding floors and areas.
- Label materials for recovery efforts as dry, damp, or wet.
- Remove dry materials from the affected areas.
- Remove wet and/or damp materials to appropriately labeled containers.
- Move containers to air-drying, freezing, or further tracking/sorting areas.
- Document response and recovery.
- Record information in tracking system.

Final, July 2010

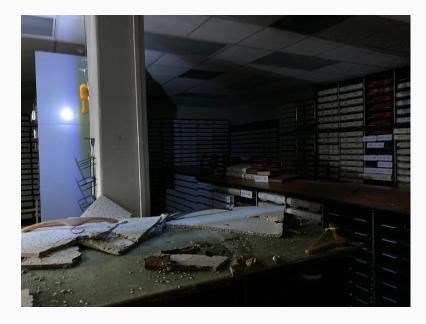
1



Date	Timeam	pm
Assessor's Name		Other Participants
Phone	E-nal	
Page (s) 1 of Attachments: USketches UDocume	nts Olimages Olither	
Assessment Location		
Department/Agency	County (if applicable)	Agency/bldg contact
Building	Floor Room	Phone
Bulding	CtyStaw/2p	Email Is it still happening? Yes No
Steet Address Initial Situation Survey Type of energiency Matter of damage: ISsufficialities area Orierson IPar Extent of damage: ISsufficialities area Orierson IPar Can the staff hande the situation initiality? IIYes II No Who i bill safe to enter? IIYes IINo If no, what needs to be dane to	ChysiotenZp Cortainsution OBroken Windows Poor dans of Floor OEnter Floor Multiple Floors O in charge?	Is it still happening? I Yes I No inge Structural () Other (describe)
Steet Address Initial Situation Survey Type of energency	Chystoter/2p Contamination DiBroken Windows DiRoof dama of Roor DiBroken Windows DiRoof dama of Roor DiBroken Roor DiMatigle Roos D in drage? How long have the record How long have the record	Is it still happening? Yes Nes nge Structural Char (describe) Entire building b been damagen?
Steef Address Intol Stution Survey Type of energency Maker of damagan: DRaft Distillated area D Genroom DPar Can the staff hande the situation initiality? Dires: D No. Who i Is it safe to enter? Dires: DNo. If no, what needs to be dane to	ChysDate/2p Contamination Distroken Windows DiRoof dams of Poor DiEntie Poor DMultiple Pioon D in charge?	Email Is it still happening? Yes IN sgeStouttural Other (dexcibe) Entite building Is been damaged?

Adapted with permission by the Intergovernmental Proparedoess for Essential Records ((PER) Project, Council of State Archeests From the Hardage Prosecution Assessment Formin the Field Guide to Emergency Response

Photocopy this form before using





Record Type	Record Series/ID	# Items Demaged	Nature/Severity (use key below)	Treat (circle		Needed		iority icte)		Secu Prive (circ)		Notes
Example: Gound volumos	23 190	1,500	A1, B3, G2	0	No	(tryant)	0	2	3	jus	0	Need to be Ironen
Essential records	-			Yes	No	Urgent	1	2	3	y95	10	
Books		_		Yes	No	Urgent	1	2	3	yes	no	
Bound volumes				Yes	No	Urgent	\mathbb{R}^{2}	2	3	yes	10	
Unbound records				Yes	No	Urgent	1	2	3	yes	80	_
Maps, plans oversize	2	-		Yes	No	Urgent	.1	2	3	y05	no	-
Photos, negatives				Yes	No	Urgent	1	2	3	yos	10	
Microforms	-			Yes	No	Urgent	1	2	3	yes	10	
Audio/video media	2			Yes	No	Urgent	1	2	3	yes	10	5
Magnetio/diectronic me	da			Yes	No	Urgent	1	2	3	y05	no	
CDs/DVDs				Yes	No	Urgent	1	2	3	yes	RO	
Artifacts	-			Yes	No.	Urgent	1	2	3	yes	10	a
Other				Yes	No	Urgent	1	2	3	y95	10	
A) 9 B) M	f Damage: Valer damage Idid Inuctural Damage	D) Running Inks E) Fire Damage F) Teens G) Loose Pieces									2	Sevenity of Damage: 1) Severe 2) Moderate 3) Minor

Adapted with permission by the intergovernmental Preparedness for Essential Records (IPER) Project, Council of State Archivists From the Hentage Preservation Assessment Form in the Field Guide to Emergency: Response

Photocopy this form before using

NOTE: A copy of this form is available at the IPER Resource Center so it can be downloaded and duplicated easily. URL: <u>http://www.statearchivists.org/resource-center</u>

Incident Information

DESCRIPTION OF INCIDE	ENT		
LOCATION OF INCIDENT Building:	Floor		Room:
CAN INCIDENT BE HAN	1.	Yes	No (See Staff and Contractor Information section below.)

Records Information

RECORDS AFFECTED (List all affected records. Add rows as necessary.)	RECORD FORMAT/MEDIA	RECOVERY TECHNIQUE FOR EACH RECORD	IS THE RECORD CONFIDENTIAL?
PRIORITIES FOR RESPONSE (List in order, from first priority to last. Add rows as necessary.)	1. 2. 3. 4. 5.	1	
INSTRUCTIONS FOR HANDLING CONFIDENTIAL RECORDS			

Image from REPR Essential Records course:

https://www.statearchivists.org/research-resources/ /emergency-preparedness/repr

Record Tracking

PROCEDURE FOR TRACKING RECORDS

Staff and Contractor Information

(Add rows as new		STAFF			
Name		Co	ntact Information		
STAFF ROLES ANI		ES			
Staff Name		Role		Resp	onsibility
REQUIRED CONTR (Add rows as new		15			UA
Name	Conta	ct Information	Service(s) Requ	ired	Contract in Place?

Supply and Equipment Information

 1	recovery area, etc.)
-	

Emergency Operations Center and Staging and Recovery Areas

EMERGENCY O	PERATIONS CENTER	
Location:		
Necessary equ	uipment/supplies	
(Add rows as i	tecessary.)	

STAGING AREA			
Location:			
Necessary eq	uipment/supplies		
Add rows as	necessary.)		

RECOVERY A	EA
Location:	
Necessary er (Add rows as	uipment/supplies necessary.)

Image from REPR Essential Records course:

https://www.statearchivists.org/research-resources/eme rgency-preparedness/repr

Handout 3.3—Personal Health and Safety During Response

Personal protection equipment:

- · Steel-toed boots, preferably water-proofed
- · Heavy-duty and water-proof (e.g., latex or nitrile) work gloves
- Something to cover your nose and mouth if there is a potential for splashes or airborne particulates (dust)
- · Goggles/safety glasses with side shields
- · Long-sleeve shirts and long pants, or coveralls
- · An ANSI-approved hard hat if there's a danger of falling debris
- Hearing protection such as ear plugs or landscaper's ear muffs, if you are in an area where you must shout to be heard
- Mosquito repellent in tropical areas
- · If there is a risk of contaminants, including mold, a fit-tested respirator¹:
 - With HEPA filtration for mold or biological hazards
 - With N95 filtration (activated charcoal), if advised to minimize unpleasant odors

Personal hygiene rules:

- Do not, under any circumstances, put your hands in your mouth or on objects that could go into your mouth, such as water bottles or food.
- Wash your hands and body with soap and warm, drinkable water. Do not scrub too hard
 or rub overly hard on your skin, which needs to remain intact.
- Clean cuts and abrasions thoroughly with soap and water and apply antibiotic ointment.

Prevention of dehydration and exhaustion and injury:

- Drink lots of water (or a 50:50 mix of sports drink and water), and drink at least every half-hour. Avoid soda, alcohol, coffee, and tea, as they can dehydrate your body.
- · Take frequent rest breaks and rotate physical tasks.
- · Eat light meals.
- Avoid direct sunlight and wear a hat, sunscreen, and loose-fitting clothes if you have to work in the sun.
- If possible, do the heaviest work early in the morning from 6:00 a.m. to 11:00 a.m. and late in the afternoon from 3:00 p.m. to 7:30 p.m.
- Notify your supervisor if you or any of the Response Team members have health or medical conditions, such as high blood pressure, a heart condition, or allergies.
- · If you or a team member begins to feel unwell, stop physical tasks and let someone know.

Decontamination of equipment and clothing:

- · Wash gear with warm, soapy water and/or bleach.
- · Clothing can be washed normally in a household washer.

Image from REPR Essential Records course:

https://www.statearchivists.org/research-resources/ emergency-preparedness/repr

¹ The use of respirators in the workplace is governed by the Respiratory Protection Standard 29 (CFR1910.134) adopted by OSHA in 1998. Before an employee can use a negative pressure respirator, he/she must be fit-tested annually with the same make, model, style, and size of respirator as the one that will be used. Individuals with facial hair or conditions that may impede formation of a tight seal may not be able to wear a respirator. The Fit Test must be carried out by a trained individual, and requires following OSHA-developed protocols to evaluate the fit of the respirator qualitatively or quantitatively. For a more detailed description, see http://www.asha.gov



Complete damage assessment and address repair needs

Insurance claims

Resume operations at original or temporary location

Stabilization and/or salvage records :

- Immediate records needs (drying, freezing, etc.)
- Long-term conservation needs
- Return records to location and accessibility







Handout 4.1—Response and Recovery Procedures

Table 1: Special Procedures for Specific Types of Damage

TYPE OF DAMAGE	PROCEDURE
Fire-Damaged Records	If a fire has occurred, the records will be both wet and brittle. Support can be provided by placing pieces of paper toweling or unprinted newsprint under charred materials before they are moved.
Muddy Records	Do not attempt more than a minimal cleaning of wet records that are also muddy, unless there is a large quantity of clean running water and you have the time. Attempting to remove mud from wet paper records may force dirt farther into the paper if a rubbing action is used. Mud may be easier to remove when dry. Some tightly wound tapes may be able to be rinsed, as only the edges will be exposed to additional water. It may be possible to rinse mud off boxes or enclosures to make the drying
	process faster.
Contaminated Records	If records are contaminated, or you suspect that they may be, make sure all staff members use proper protective equipment and clean-up procedures. It is often best to leave this to trained operators under your supervision.
	A contractor who specializes in treatment of contaminated materials should always be consulted, as these records require special handling and treatment.
Wet Records	Should Records Be Kept Wet and Recovered by a Specialized Contractor?
	Some materials should be kept wet until they can be recovered by a contractor who specializes in the recovery of those materials. Some examples include microfilm, motion picture film, and hard drives from computers.
	With film-based media in particular—because there are so many photographic processes—unless you are sufficiently knowledgeable about photographic process identification, it is important to receive expert advice from a photographic conservator as soon as possible before determining how to proceed with the response.
	If the determination is made that the photographic process is stable enough:
	 Place wet microfilm or motion picture film in plastic bags to keep it from drying before it can be handled by an experienced conservator or specialized contractor.
	 With guidance from a conservator, it may be possible to wash off mud or dirt under cold, clean, running water, and then seal the items in bags.
	There are some photographic processes and other media that should never be exposed to water. Special care should be taken to keep them dry if they are important to the agency. Boxes with water-proof coating would be best for storing these records.

TYPE OF DAMAGE	PROCEDURE
Mold	Small Outbreaks
	Quarantine moldy records from unaffected records. They will need to be dried in a location that vents to the outside. The area where the moldy records were found will need to be thoroughly dried and cleaned to ensure that mold does not germinate elsewhere.
	Mold cannot be removed from wet or damp collections. Items must be completely dry before any attempt is made to remove mold. If using fans to dry the records, make sure the fans are not blowing directly on the materials or you will spread the mold spores. Point the fans at the ceiling.
	Records will have to be cleaned once the mold has dried. A HEPA-filtered vacuum and micro-hose kit may be used, but this is very labor-intensive and should be carried out in a fume hood to avoid exposing others to the fumes produced by the cleaning step. This works better than brushing records clean and keeps the mold spores from returning to the air. Vacuum through a screen if the item is fragile.
	Larger Outbreaks
	Quarantine and freeze the records. Placing the moldy items in an environment with a temperature below freezing will halt growth, but will not kill spores.
	The preferred method of drying is vacuum freeze drying, so as not to spread the dry mold spores.
	If the outbreak is too large for local staff to handle, call a contractor that specializes in mold remediation. Vacuum freeze drying, while expensive, is an effective method for eliminating most molds, and may be considered for records which have special value or are irreplaceable.
	Cleaning the Location Where Moldy Records Were Found
	Begin by cleaning the area with a high-efficiency particulate air (HEPA)-filtered vacuum. Then clean all surfaces—shelves, floors, walls, ceilings, and windows— with an anti-fungal or anti-bacterial solution, including bleach.
	Ducts for air circulation and air conditioning will also need to be assessed and monitored for the presence of mold. If molds persist, the ducts may need to be

replaced.

Table 2: Special Procedures for Specific Types of Records

TYPE OF RECORD	PROCEDURE
Paper—Large or Oversized Paper (Maps, Architectural	 Large or oversized paper records often require two people to safely handle and transport them, and will require a secondary support (the original drawer, a tray, or spun-bond polyester).
or Engineering Drawings)	 If the record is rolled or folded, make sure there is enough space on the table to accommodate the record when it is unrolled or unfolded.
-	 Rolled paper can be vacuum freeze dried successfully.
Paper—Coated Papers	 Coated paper such as magazines or journals stick together, or "block," and must be dried immediately to prevent damage. They must not be allowed to have their surfaces in contact with one another during drying. Architectural linen is coated with starch which acts as an adhesive when wet.
	 If the pages are stuck together, or "blocked," place the record in a freezer and vacuum freeze dry.
	 If the pages are not stuck or blocked, gently place pre-cut pleces of spun- bond polyester fabric between the pages.
	 Allow air to circulate, and wait until record is completely dry to remove interleaving material (the absorbent material placed between leaves of paper to hasten drying; interleaving material should be thin, absorbent, ink-free, and acid-free).
Paper— Encapsulated and Shrink-Wrapped Records	Although exterior housings such as encapsulation and shrink-wrap do slow the intrusion of water, encapsulated or shrink-wrapped records are not protected from water damage. If the records do become wet, it is possible to successfully vacuum freeze dry the encapsulation record.
	If you are planning to air dry the records, the exterior housing must be removed:
	 Using scissors, cut through the encapsulation bond or weld on all sides of the record. If the plastic sheet is clean, it can be re-used to support the wet record while it is carried to the drying site.
Paper—Loose Paper or Paper Held	Steps to take when handling loose pages or paper held together with fasteners:
Together with Fasteners	 Remove outer paper or paperboard folders and/or record jackets. If they contain valuable identification information, place the folders near their contents to dry.
	 In some cases, it may not be prudent or possible to remove fasteners, but when it is possible, removing them will hasten drying and prevent corrosive rust from forming on the records.

TYPE OF RECORD	PROCEDURE
Paper—Loose Paper or Paper Held Together with Fasteners (continued)	 To prevent tearing when moving older and fragile paper, use supports such as sheets of polyester film, nylon screening, or spun-bond polyester. Modern printer papers contain fillers which give the paper wet-strength even when they are wet or saturated with water. It is important to recognize the difference and act according to the paper's needs for support. Arrange paper records individually, if possible, or in small stacks of 1–5 records each. Turn records over frequently to increase exposure to the air. Do not re-box records until they are completely dry.
Paper—Bound Volumes	It is preferable to freeze and vacuum freeze dry bound volumes quickly because this will help minimize the danger of distortion. Bound volumes can also be successfully air dried, but will require attention to ensure that the spine area of the book is completely dry before the book is returned to a location without air circulation and with high humidity; book spines and covers are highly susceptible to mold.
	Small Bound Volumes
	Small bound volumes with rigid covers which are only partially wet can be dried by standing them upright:
	 Place the book upright and hold it open with blotter pieces to allow increased air circulation and to expose the tightly bound spine to air.
	 If the book covers are sturdy enough, fan the pages open and interleave with small pieces of pre-cut blotter paper placed close to the spine.
	 Invert books to even the stress on the binding, rotating books upside-down to right-side-up while drying.
	 Remove the blotters when the book is dry.
	Large or Ledger-Bound Volumes
	Large or ledger volumes may need to be dried flat and open if their weight does not allow them to stand upright and open. This includes bound volumes with soft covers that are not sturdy enough to stand upright.
	· If the pages are damp but not totally wet, fan them open.
	 Otherwise, interleave pages with blotter paper, clean newsprint, or spun- bond polyester to wick moisture away from the paper.
	Turn the pages frequently and change the absorbent paper.
	 Spun-bond polyester does not absorb water, and does not need to be changed if it is clean. It can be re-used.

TYPE OF RECORD	PROCEDURE	TYPE OF RECORD	PROCEDURE
Photographs	 Photographs, both negatives and prints, involve such a wide variety of material types, and such a long history of technological innovation, that it is difficult to give general advice on the recovery of photographic materials. If the photographs in your office are valuable to your agency, it is best to have the advice of a conservator or expert, because they have the requisite knowledge of photographic history and preservation. Photographs, just like coated paper will stick together, or "block," and therefore must be dried immediately to prevent damage. Do not allow their surfaces to come in contact with one another during drying. If the photos are stuck together or blocked, do not try to separate them. Contact a conservator for advice. Photographs can normally be successfully vacuum freeze dried. Do not vacuum freeze dry glass plate and cased photographs. When air drying, photographs must be dried under restraint or they will curl and distort. Photographs are made up of more than one layer, and each layer dries at a different speed. This causes them to curl as they dry, which is why you need to apply pressure to keep them flat. It is very difficult to correct this problem. 	CDs and DVDs	 All types of disks are composed of several layers. Of these, the metal reflective layer is probably the most important and the most vulnerable to physical damage. Normally, this layer is covered by a very thin protective coating. The metal reflective layer is usually unaffected by water unless it has been soaking for a week or longer. If time and resources permit, immediate response can save the information on the disks. Remove the disk from its case or cartridge. Cases that are not damaged can be thoroughly cleaned with water or soap and water and re-used. Damaged ones should be discarded. Rinse the disk in clean room-temperature tap water and then in distilled water. If any residue remains, using distilled water, gently wipe the disk surface with a wet, soft cotion tissue—not paper towels, as they are too abrasive. Wipe in a radial direction, not a circular direction, to remove the water. Follow this wiping with another rinse in clean, distilled water. After rinsing, gently blot off any excess water with a soft, lint-free tissue to prevent water spots during drying. The best chance of avoiding damage is to limit the time a disk is wet. Therefore, it is best to recover disks immediately. If immediate recovery is impossible, rinse the disks in distilled water and store them in their cases in cool clean water until they can be recovered. If the disks need to be transported, they can be sealed in zip-lock bags immersed in cool or cold water in a portable cooler.
	 If air drying: If the surface is not cracked or flaking, and the photographs have soot or mud on the surface, you may be able to rinse them in a tray of cool, clear water while they are still wet. Dry photographs image side up on clean blotters for at least one hour. If the emulsion or surface of the photograph is sticky or tacky to the touch, it will need to be interleaved between sheets of spun-bond polyester to prevent disturbance of the surface during drying. Place the polyester and photographs between blotters to create a stack. Put a flat sheet of Plexiglas[™] or other heavy-weight flat material on top of the stack. Suitable weights include telephone books or bricks wrapped in plastic to add additional pressure. 	Computer Hard Drives	Modern information carriers such as computer hard drives and electronic media also require immediate attention to ensure recovery. Computer hard drives have a large number of components, some of which are metal and susceptible to rust and oxidation; others are soft plastics and materials susceptible to mold. • Remove hard drives from computers. • Send hard drives to a contractor as soon as possible for recovery. • Keep hard drives wet, sealed in plastic, and do not let them dry out Tapes are constructed of layers of water-resistant materials. Although water will not cause these layers to swell and break up (as would the layers in a photograph), tapes can still be damaged. Both the tape and the binder layer may be susceptible to water damage than a loosely wound tape.

TYPE OF RECORD	PROCEDURE
Magnetic Tapes (continued)	 Magnetic tape recovery should be a high priority if the tapes are valuable to your agency.
	 Do not play or rewind a tape that is wet.
	 Consideration should be given to sending the magnetic tapes to a contractor who specializes in recovery of magnetic tape.
	 Initial response steps, if air drying:
	 Drain any excess water out of the cassette or off the reel of tape. The cassette gate, if present, may be flipped open to allow water to drain.
	 If the tape is wet with seawater or contaminated water, rinse the tightly wound tape with cool, clean water.
	 For reel-to-reel tapes, wipe the wound surfaces with a wet or damp soft, lint-free cloth.
	 For cassette tapes, shake as much excess moisture out of the cassette housing as possible, and stand the tape vertically with the empty hub on the bottom for air drying.
	 Allow the tape to acclimatize to the new environment for at least two days before any further treatment.

Additional Tips on Handling Damaged Records

- Some water-soluble inks will bleed; freeze as quickly as possible to minimize damage and vacuum freeze dry.
- Air dry records indoors if possible. Sunlight and heat may dry certain materials too quickly, particularly bound volumes or artifacts made with wood, causing splitting, warping, and buckling.
- Documents, books, photographs, and special media are extremely fragile when wet. They tear
 easily and require caution when being handled. Always consider providing a secondary support to
 prevent more physical damage.
- When mud or soot is present, with guidance you may be able to rinse off some of the particulate in cool, clean water, but do not scrub the surface.
- Many plastics will swell and soften when they are wet. Sensitive surfaces, including wet
 photographs or electronic media such as CDs or DVDs, must be handled with care to avoid
 scratching the surface.
- While exterior housings such as folders, encapsulation, or shrink-wrapping may slow the seepage of
 water into the records, they will not prevent water damage and must be removed to allow air drying.

Handout 4.4—Common Drying Methods

Air Drying

Air drying involves drying records at room temperature. Typically materials are spread out on, or interleaved with, absorbent papers. In some instances, materials may be dried under restraint in a stack of weighted blotters.

Air drying is a tried and true method most familiar to many, has been proven through many experiences, and provides the greatest control over the drying process. It provides security and privacy controls if done in-house, and allows separation of materials that require special handling, such as photographs, coated paper, parchment, magnetic media, etc. It also provides for the direct monitoring of the original order and intellectual control of materials, but may result in problems if the materials become disarranged outside of their containers. This method therefore requires a meticulous system for tracking items during the drying process. It is also labor-, space-, and materials-intensive, particularly in terms of the absorbent paper used.

Air drying can be made more efficient with the addition of drier air. The current choices for adding drier air include increasing air circulation with a fan or hiring a contractor to bring in equipment that provides heated, extremely dry air.

Air Drying with Added Heat (Desiccant or Dehumidification Drying)

Materials are dried by pumping cycles of moist air out of a chamber or space and introducing dried (desiccated or dehumidified) air with relative humidity (or moisture content) lower than fifteen percent. One potential problem with this is that air temperatures are usually in the range of 80°–100° F, which can dry paper records too much, resulting in distortion, increased volume, and re-boxing problems.

This method is often cited in the literature as giving excellent results for damp collections, and it allows access to the materials during the drying process, if that is required. It can be performed onsite with equipment rented from a contractor or by employing in-house staff or professionals from the drying service. Items can also be sent directly to the contractor for service. Drying is complete within several days, depending on how wet the items were originally.

Vacuum Freeze Drying

Vacuum freeze drying is almost always recommended for most incidents involving records in boxes, where the quantities are large and the records are of varying levels of wetness. The records will generally be frozen first for transport to the facility, and held in storage in a freezer until the drying process is carried out. These facilities are all contractor-owned. Contractors dry the materials using a very strong vacuum to lower the pressure while the temperature is held below freezing. Cycles of controlled heat may be used on the shelving. This process sublimates the frozen water; this means that the water passes from a frozen state to a vaporous state without passing through a liquid phase. The items remain frozen throughout the drying process.

Vacuum freeze drying can be performed off-site at a contractor's facility or onsite in mobile vacuum freeze drying chambers. The mobile chambers are smaller than the fixed-site ones, since the walls of the chamber have to be strong enough to withstand the low pressure of the vacuum. On-site drying is more expensive than drying records at the contractor's facility.

Among the advantages of vacuum freeze drying, the procedure:

- · Minimizes the feathering and bleeding of soluble media
- · Allows coated materials to dry without blocking
- · Results in minimal distortion to the records
- Does not require the removal of encapsulations or polyester sleeves from records before drying
- Allows records to be dried in their original containers, thus reducing risk of disruption of original order

The process is performed at the drying facility because of the weight of the structure needed to create a chamber where the pressure can be lowered significantly. Drying time depends on the wetness of the materials, but for each volume of material that fits into the chamber, the drying time is normally less than two weeks.

If records need to be used frequently, the agency will need to indicate to the contractor the order in which to process the records. There may be additional costs for gaining access to the records while they are with the contractor.

Vacuum Thermal Drying

Vacuum thermal drying is similar to vacuum freeze drying in the kind of chamber used, but different in that cycles of warm to hot air are used. Vacuum thermal drying is a cost-effective option for temporary records or archival materials of low intrinsic value. The procedure distorts paper considerably, causes coated records to block, and exacerbates the feathering and bleeding of soluble inks. The drying time is usually less than that for vacuum freeze drying, but also depends on initial wetness.

Most vacuum-drying facilities no longer use this method because of the problems discussed above.

Thermal Vacuum Freeze Drying

Another method is thermal vacuum freeze drying. This technique is similar to vacuum freeze drying in that a vacuum is used, but controlled heat is applied to vaporize the water, and this method also has a patented procedure to compress the materials into shape. It is more expensive per cubic foot than vacuum freeze drying.

Freeze Drying

Freeze drying is a very slow technique. Records are packed in permeable containers and kept in a cold storage vault for months. Over time, moisture sublimates out of the records in the same way that food gets freezer burn. This is a slow process that will dry damp and partially wet records, but the records are inaccessible for a long period of time and the energy used to keep them frozen is very expensive.





Records Trauma. Disasters and emergencies will have long term or permanent effect to records, even if they are salvaged. Records should be periodically "checked" after any disaster or emergency for effects. Effects might not be immediately obvious.

Handout 4.3—Sample Post-Event Report

Date and location		Date:		
of incident		Location: Bldg:	Floor:	Room:
Type of incident		Water-clean		Mold
		Water-gray		Pest infestation
		Water-black		Contamination
		Fire		Other:
Source of problem				
Areas affected				
Types of materials affected and				antity (include units, e.g., boxes, pic feet, linear feet, items)
	0	Bound volumes		
affected and	1000	Bound volumes Unbound paper		
affected and	ū	Board Fordines	cut	
affected and		Unbound paper	cut	antity (include units, e.g., boxes, pic feet, linear feet, items)
affected and		Unbound paper Maps, plans, oversized records	cut	
affected and		Unbound paper Maps, plans, oversized records Photos/film/electronic media	cut	
affected and		Unbound paper Maps, plans, oversized records Photos/film/electronic media Magnetic tapes, CDs	cut	

Recovery methods	5	Material Treated & Volume	Reason
	Air drying in-house Air drying contractor Freezing in-house Freezing contractor Vacuum freeze drying		
		Material Treated & Volume	Reason
	Replacement Discarded Other in-house Other contractor		

Agency staff involved	Name & Unit	Role	Dates	
Contractor(s)	Name	Work Performed	Dates	
Notes/comments				



Prevention is more effective than recovery.

In order to be effective, disaster and emergency related plans, policies, and procedures should be tested periodically.

Response efforts should be led by a person and/or a team who understand the records.

Resources



CoSA Emergency Preparedness: :

https://www.statearchivists.org/research-resources/emergency-preparedness

CoSA Pocket Response Plan PReP Templates:

https://www.statearchivists.org/research-resources/emergency-preparedness/pocket-responce-templates

FEMA Planning Guides:

https://www.fema.gov/emergency-managers/national-preparedness/plan

NEDCC:

https://www.nedcc.org/free-resources/disaster-assistance/

KDLA

https://kdla.ky.gov/Pages/default.aspx

KDLA Preservation Checklist

https://kdla.ky.gov/archivists/Pages/Preservation-Checklist-for-Government-Officials.aspx

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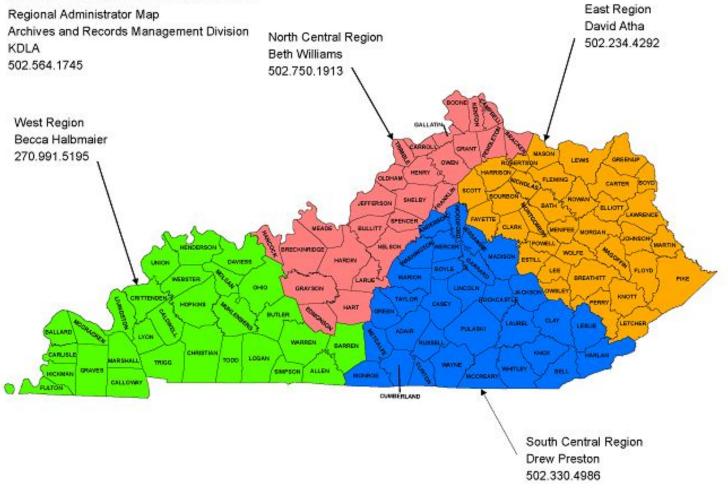


Kentucky Department for Libraries and Archives

Librarians +	Archivists +	Researchers -	State Employees +	Records Manageme
Preservation (Officials Everyday, records help us live our liv identity, whether for an individual or past, present and future, it is very in records serve many needs: adminis	ves at work, at home, or even on vac an institution. In order to protect th nportant and necessary to maintain trative, legal, fiscal, and historical. It		Ask a Librari and Public Librar Job List <u>Accords Ret</u>	ate Digital Archives an y Directory ention Schedules Iking Book Library
formats, such as paper, film and ele can be threatened by disasters, suc conditions that can also place reco example, improper temperature and essential to not only identify these consider in preservation planning in	ustody many unique and valuable re ectronic data. Regardless of the forr h as fire and floods, as well as by th rds in danger of damage, deteriorat I humidity levels can severely dama conditions, but to act on them throu Iclude security, environmental cond	ecords. These records likely exist in different nat, the safety and maintenance of each r left and vandalism. However, there are oth ion and complete loss of information. For ge records of any format. Therefore, it is gh preservation planning. Key factors to itions, handling, storage, and fire protection of these areas will highly contribute to ens	ecord ler If you have any qu information, pleas <u>melissa.shields@</u>	iestions or would like further ie call or send e-mail to: <u>ky.gov</u>

An integral part of preservation is prevention. By considering each of the key factors, and taking appropriate preventive measures in each, damage to records can be minimized. These preventive measures need to be carried out

KDLA LOCAL RECORDS REGIONS





Thank you to the Institute of Museum and Library Services (IMLS) for sponsorship of this webinar.

Thank you for attending!

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