Preservation management & disaster response plan:

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Introduction

Nitrate film is highly combustible, and throughout the years various movie houses have burned down from RKO to Warner Brothers to the National Archives in 1978. In the 1940s, safer acetate film became the go-to, however nitrate film is still being preserved and stored in some institutions (Daley, 2018). While film is one of the most combustible items that can be stored in an archive, many items - like paper records - are highly flammable. On July 12, 1973 a fire destroyed millions of military personnel documents at the National Personnel Records Center, a part of the National Archives and Records Administration (Macchi, 2023). Much has changed in planning, preparation and recovery methods since the worst archive fires of the 70s. This report will be analyzing and simulating a disaster response to an electrical fire based upon the *Disaster Plan* from the ArchDiocese of Seattle, Washington. We will discuss the response, recovery, planning, and conclude with an analysis of the success and failures in the plan.

Wednesday at 2:00 pm - Electrical outlet overloads

At 2:00 pm, on a hot summer day, an electrical outlet overloads, and a fire erupts. The main area affected is the staff offices on the third floor of the Cathedral Place Building. However, smoke begins spreading immediately. The fire begins to grow, threatening other spaces of the building. The staff on the third floor have begun their evacuation procedures, and notified John Doe of the fire as they are the Response / Recovery Team Leader. Additionally, John called the staff in the 907 building, and let them know to begin their evacuation. He immediately pulled the fire alarm switch outside of the Vault Annex Room, began notifying all other staff of the fire, and ordered the evacuation of all staff in the 807 building. Chris Doe, the Health and Safety Coordinator, determined that at this point the fire is not smaller than a waste basket, and so any attempts to extinguish it ourselves would be hazardous. As such, Sarah Doe called 911. The fire is growing quickly, however it is in another building at this time. There are still three archive staff in the basement level of 907 Terry Avenue, Jane Doe, Sarah Doe, Chris Doe and John. John would consult with Chris on the immediate risk, and determine that there is enough time to turn off computers and equipment, and close the fire doors. Sarah and Jane split up to close the fire doors, while Chris and John begin shutting off the equipment. While doing that, they would keep

their backs firmly on the escape route. Once completed, John ordered the evacuation of the remaining staff, Chris grabbed the red Emergency Support Unit pack, and they all evacuated to the Terry Avenue assembly area at the corner of Terry Avenue and Columbia Street.

Wednesday at 2:10-2:30 pm - Fire department arrives, evacuation occurs

With 911 notified, fire trucks began to arrive at 2:10. While standing in the assembly area, John Doe conducts a head count to ensure that everyone who was in the building is present. Luckily, everyone arrived safely to the meeting spot. While the emergency responders work to put out the fire, the fire chief asks John if there is anyone remaining in the building. Then he asks if there are any records of priority that they should try to evacuate. While we have closed the fire doors – so hopefully the fire doesn't spread to the vault – John gives him a list in order of priority of records to evacuate:

Collection Salvage Priorities					
Priority	Collection	Location	Material Type	Size	Notes
1	RG 800s Clergy Records	Vault - movable shelf, Rows 16-17	Paper, Uncoated	123 linear ft	All records in the RG 800s: 810, 811, 812, 813, 820, 822, 823, 824, 825, 830, 840, 850, 870, 875, 880, 885
2	RG 610 Bishops Central Files	Vault - movable shelf, Rows 4-9	Paper, Uncoated	176 linear ft	Bishop Blanchet, O'Dea, Junger, Shaughnessy, Hunthausen, & Brunett
3	RG 420 Bishops Personnel	Vault - movable shelf, Row 3	Paper, Uncoated	13 linear ft	
4	RG 700 Parishes Sacramental Records	Vault - movable shelf, Row 18	Paper, Uncoated	48 linear ft	

(Archdiocese of Seattle, 2018, p. 19).

While the fire department is working to control the blaze, the archive staff needs to determine a safe place to store records and assess damage. According to the disaster plan, the archives designated command center is in the 807 Terry Place building. However, at this time that building is under evacuation. In the meantime, John determines that the best place to go is the WA State Catholic Conference building on 803 Terry Ave. Any records that the fire department is able to rescue will be brought there and stored in this space until the damage can be assessed.

Wednesday at 5:00 pm - Fire is out, damage assessment and planning

At 5:00 the fire department has put the fire out, and announces that the building is safe. Essential staff – along with fire service supervision – is allowed to enter the building to assess damage. As the archive staff were able to safely close all fire doors before leaving, the fire did not spread to the main basement archive in the 907 building. However, while the fire doors stopped most soot from entering the basement, some smoke still entered the vault. Since no staff was present to abort the alarm, the fire suppression system went into effect releasing Halon Gas. The 803 building was the main area affected, which meant that our office space and two shelves of archival materials were compromised. These shelves consisted of film reels, photographic prints and photographic albums in Hollinger boxes, and metal film canisters. Lastly, the building's electricity was affected and will need to be re-wired.

John Doe will lead the overall effort of the response and recovery team. He is designated as the administrative and financial coordinator, assessment coordinator, communications coordinator, and salvage coordinator. Jane Doe will be in charge of making sure all proper documentation is collected, and will lead the effort to save the collection after damage assessment. Sarah Doe has been designated as the responder and security/facilities liaison. She will make calls to salvage companies, and keep in contact with the Facilities Manager about the building's status. Additionally, Sarah will manage the emergency supplies. Chris Doe is in charge of health and safety. His role was vital in initial evacuation, and will also be important for monitoring the safety of the disaster area once the fire service supervision dispenses.

As previously mentioned, the designated command center was the spot of the fire, and the archives will need damage assessment before returning. Instead, the recovery center will be run out of the WA State Catholic Conference building on 803 Terry Ave. The fire department previously rescued the RG 800s Clergy Records, RG 610 Bishops Central Files, RG 420 Bishops Personnel, and RG 700 Parishes Sacramental Records. Since the 907 building is mostly untouched, John decided to focus first on the two shelves that were directly affected by the fire and subsequent fire-fighting in the staff offices.

The film reels, photographic prints and albums in Hollinger boxes, and metal film canisters were affected by water from sprinklers and firefighting efforts. Jane leads the effort to save the collection. Starting with the film reels, she contacts a film restoration lab to rewash and dry the film within 72 hours. Once a suitable place has been found, she packs the wet film in plastic bags and ships the film overnight to the lab. Any dry film in damp or wet boxes is removed and kept together with the box or metal film canister. Wet film is kept in the box, and rubber bands are used to hold the cartons together. The photographic albums will be air dried, as only a small quantity was affected, and the albums were stored in Hollinger boxes so the majority of albums only have water damage around the edges. Any photographic albums with more substantial water damage will be freezed instead. For print photographs the salvaging will be based upon material. Albumen prints, matte and glossy collodion prints, silver gelatin prints, and photomechanical prints will be air dried. Carbon prints and Woodburytypes will be freezed right away while the other materials are being taken care of. Dye transfer prints will be separated to stop migration, and air dried with high-priority.

Luckily no items were charred, so the remaining damage is anything affected with soot and ash. The archive staff will need to wear protective gear when addressing the ash, in order to not breathe in any harmful particles. Additionally the items in the vault were not exposed to water, so all ash in the vault is dry. Using a HEPA filter vacuum, the staff will begin removing the ash from objects being cautious to not press or smear the particles into the item. If soot remains after the vacuum, then the archive staff will gently press a soot sponge onto the affected objects removing any remaining residue (AIC & FAIC, 2016). The necessary equipment for the overall salvage operation are a vacuum cleaner with a HEPA filter, soot sponges, plastic bags, trays, boxes, plastic for lining boxes, sponges, rubber bands, fans, extension cords, dehumidifier, monitors (temperature and relative humidity, moisture meter, freeze/waxed/silicone release

paper, polyester spunbond, large flat supports, shrink wrap, un-inked newsprint, blotting paper, dish drying rack, clothesline, rust proof clips, and microspatula. Most of these items can be found in the accessions closet in the 907 building, and all other items are in the Shaughnessy Room or the basement level. The gathering of emergency items will be handled by Sarah, and John Doe will handle the acquisition of any items not present.

Sarah Doe would notify the Safety Team that our fire suppression system went off, and we will need to refill the halon gas. She then will call Sedgwick Insurance Claims Management and Arthur J. Gallagher Insurance Representative, Judy Doe to discuss the damage. The Dioceses' current deductible is $250,000 per occurrence, and $100,000,000 in fire property coverage. Then Sarah will call Lance Doe from Seattle Electric to set an appointment to rewire the 807 building. Sarah and I decide to forgo contacting Belfor - the professional restoration company - as only a small section of the collection has been affected. However we do notify the Facilities Manager of the damage, and the need for clean-up in the staff offices after the collection has been removed safely.

Conclusion

The scenario above highlighted a few flaws in the *Disaster Plan* of the Archdiocese of Seattle, WA. The first is that the fire erupted in the same building that was demarcated as the "off-site command center" for the archives in the case of a fire. If there was a fire that erupted in the 807 building that building would be evacuated, but so would the vault in the 907 building. Both buildings – according to the written plan – are inaccessible during a fire scenario, and no alternative command center is given. My suggestion of moving to the Washington State Catholic Conference building on 803 Terry Ave was based purely on a preliminary glance of the Archdiocese campus layout and surrounding building on Google Maps (Google, n.d.). This seemed to be the closest, most accessible, and largest space to operate an off-site command center. I would suggest coming up with a designated second option, when both archival staff spaces are inaccessible. The second flaw that I saw in the *Disaster Plan* was the use of Halon 1301 as the main fire suppression system. In the beginning of 1994, Halon 1301 was banned as an ozone depleting chlorofluorocarbon, and all production halted. That was 30 years ago. At this point, halon gas would be extremely expensive to obtain. A new fire suppression system should

be created to be in place when the halon charge is depleted (National Archives, 2017). The final item to discuss is the planning given for the salvaging of damaged materials. All recommendations were based upon water-damage. The scenario above was a fire, and while water damage did occur through fire-fighting techniques and sprinkler systems. No recommendations were given for addressing soot or smoke damage, and nothing to address any possible harm caused by Halon 1301. Additionally, detailed recommendations for item types were not given for mold or insect infestation – which is not the scope of this paper, but I felt was worth noting. I would advise expanding upon the salvaging recommendation to address other kinds of damage. Besides these items the *Disaster Plan* by the Archdiocese of Seattle, WA is very thorough, and even includes prevention items towards the end of the report. It is always helpful to run simulations to determine missing items, in order to improve the disaster preparedness of an organization

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