

Disaster report assessment for Georgia Tech Archives (GTA)

I worked with visual archivist, Mandi Johnson, to complete the survey questions and was able to add information to the survey based on an actual visit to the archive. This is what I came up with:

The main archive is located in the library annex which is at basement level; it comprises several small rooms that include offices, a processing area, bathrooms, a kitchen and a reading room with a small exhibition. Hallways surrounding rooms are used for storing shelving, file cabinets, display cases, archival supplies, and as temporary storage for the always incoming science fiction collection. Down the hall from the reading room is a climate controlled vault/closed stacks which is secured by key card access only; on the back side of the vault is a small, warehouse type storage area and loading dock. The remainder of this space is used by the library and library personnel, but there is an additional room that is not climate controlled beyond regular HVAC that is used for book storage and also houses the science fiction pulp collection. Beyond this main area there is a public gallery in the library proper that exhibits some of the rarer books that are under the archives care in locked exhibit cases. **(Please see map for better orientation).**

The collections housed at the GA Tech Archives (GTA) include everything except microfiche, natural history materials, organic materials, and daguerreotypes. All other items would be considered at risk and need to be considered when developing salvage strategies.

The **natural hazards** that face the main GTA are similar to those that face VSU; however the items housed in the library proper are at greater risk due to location toward the outside of building and presence of large windows in the gallery area. GTA is located in downtown Atlanta and is at minimal risk from Hurricane force winds that could break the front entrance doors or the skylights and allow water and debris to enter the archives.

Thunderstorms and lightning pose a minimal risk in the form of power outages; heavy rain and wind risk is same as described for a hurricane. Tornados pose a minimal risk to the main archives due to the basement location, but the gallery items could be at greater risk. Severe winter storms have happened in the Atlanta area and pose a minimal risk from power outages and possible frozen pipes breaking.

Flooding may or may not be an issue as there are not any major water ways near the archives; however due to the basement location, flooding could happen if drainage were to back up or from internal water leaks. The front entrance is a few steps down from the main walk way and is a natural collecting point for water to pool should a drain fail; otherwise the physical location is still on higher ground than the surrounding landscape. Coastal flooding is not an issue. I tried to find out if the Atlanta area would be under threat from a dam breaking, but I could not find much information, and since the Chattahoochee river has many dams as it travels through the state, I don't think a dam break is that much of a threat for the GTA.

Earth Quakes and Wildfires pose a minimal to no risk assessment for the GTA.

The **industrial or environmental** nature of the GTA poses a greater local risk to staff and collections. Due to location, damage from water main breaks, power outages, and sewer backups pose a moderate risk. The closed stacks do not have plastic sheeting ready in the event of a large water main break and may not even be accessible during a power outage due to the key card entry system (this could be a good thing as well.) Power outages would be more of a risk for staff in getting out of the building since there are no windows; for the collections there would be a loss of HVAC control that could be a greater issue based on the time of year and weather conditions.

There is a minimal to no risk for gas leaks, oil leaks, or proximity to hazardous materials or nuclear power plants.

Risk due to riots, civil disturbance, or terrorist attack could be moderate to minimal and are assessed based on intent of participants for destruction of information. Colleges and urban areas have been known to have riots, so GTA is a prime candidate; however the archives are well off the beaten path and made be ignored with the library posing as a more visible target. In terms of terrorist attacks the GTA could be at risk due to location. The basement is the foundation of a 5 story building and could create much damage if explosives were to wipe out the foundations; however the motive and low amount of human lives destroyed may not have much appeal when you think of the having the Georgia dome stadium nearby.

The risks to the GTA sustained from the **building and procedures** vary by the types outlined in the survey. I will cover them here in the same order; however I would like to point out that the greatest risk comes from the location itself: a basement in Georgia. Basements here are great at controlling temperature year round, but they also allow mold to grow quickly and there is an increase in critters not seen in floors above. Without the HVAC control and scheduled pest control, or in a 'life without people' the archive may fail quicker than others during a Georgia summer.

Water: As mentioned in the first part of this assessment, there is a non-climate controlled storage area on the backside of the vault. This area has a roof with skylights and a roll up door; it is used to house supplies (including archival supplies like large boxes) and from observation looks very much like a garage. I cringed a bit at the thought of having to get supplies from this area; spiders and other crawlies would have to be removed first. The roof over this area poses a moderate to minimal risk for water damage and the skylights pose a serious to moderate risk for water damage. I was told that the skylights have leaked in the past and that archival supplies have been damaged in the process. This area needs to be cleaned up and sealed from future water damage. All archival storage materials should be given a new home in a climate controlled part of the GTA.

I noticed a box of rolled up blue prints on a stack of boxes setting in the center of this area and was told that they were getting some much needed humidity (I concluded here that GTA needs a humidity chamber in a controlled environment that does not put materials at risk). In addition to the roll up door mentioned earlier, there is another door at the end of this area that leads to the library area; it is questionable as to whether or not this door is in use. The door to the vault from this area also requires

a key card for access. The risks of roof drainage from this area into the vault area are moderate, whereas the risk from gutters or spouts is reported as not a risk.

Inside the vault and in other areas, the foundation itself could be considered a moderate to minimal risk if cracks and or leakage were to occur due to the basement nature of location. Water collecting in the basement is of course the most serious risk that faces the GTA and I noticed an open pack of water soaker-uppers at the ready on a nearby desk. Risks associated with sumps and other drains are questionable at this time.

There is moderate to minimal risk of damage to the collections from the restrooms which are located on an adjacent wall in the upper left corner. Problems with internal plumbing or foundation cracks in this area would put that section of the collection at risk. Keeping this area clear of collection material and regular inspections would minimize this risk.

Risk to the collection from the kitchen is also moderate to minimal based on the location of the kitchen being adjacent to the processing room. This could be a moderate risk based on habits of staff in carrying lunch from the kitchen through the processing room to their desks. Requiring all staff to eat in the kitchen would help lower the risk of damage to materials waiting to be process or in the middle of being processed. Water leaks from the kitchen could pose a risk to the newspaper files located on an adjacent wall or if the leak went under the wall the boxes stored on the floor in the hallway would be at risk. (See the map)

The donor files may be at some risk for water damage should water start coming in the main entrance; the donor files are located directly underneath the main entrance stairs and are housed in partially open file cabinets.

At the time of the initial survey the water pipes that ran through the collections area were considered to be a minimal to no risk issue. It was explained that these pipe were no longer used and were empty. However, during my visit it was pointed out that these pipes had started leaking as evidenced by missing ceiling tiles and water soaker-uppers on the floor. Further, maintenance officials were baffled by how the water had gotten in the pipes. This would place water pipes running through the collection in a serious risk category. Installation of plastic sheeting for the ready would be a feasible suggestion in preparedness for further water leaks.

The presence of water bearing HVAC equipment near the collection is a moderate risk for the GTA, as the HVAC unit for the vault is located in the vault. It needs be noted here that there are not water sprinklers in the vault and there is not a water detection system; however there is a chemical suppression system and 24 hour monitoring by security personnel. All collections in the vault are on shelving off the ground by about 6 inches; the only collection that is temporarily stored on the floor is the incoming science fiction items.

Fire: As mentioned above there is a 24 hour monitoring of the vault by security personnel. This monitoring is also for fire and of course for security. In addition to the monitoring, there is a gaseous suppression system in the vault that when triggered will adjust all the stacks to allow for proper

circulation and then use a gaseous vapor that sucks all the oxygen out of the room (a FM-200 fire suppression system). In case of accidental triggering there is also an emergency shut off switch and/or two exits from the vault. The system itself is on a regular schedule for inspections and maintenance.

That said, I did notice that beyond the vault there was an absence of fire suppression systems and that according to the survey this lack was addressed with fire extinguishers that are inspected yearly. The survey noted that fire exits were kept clear of obstruction and that drills were in place but not experienced as of yet.

The issue of book drops is not relevant for the archive, but the fact of sharing a building with the library leaves some issues of fire suppression in question. Of interest would be whether or not there were fire doors in place to stop fires from the main building traveling to the annex building.

Lastly concerning fire, the issue of having cellulose-nitrate base films is questionable. Mandi said that it is possible that the collection had some of this film, but when I asked if the GTA had a refrigerator or other such cold storage she said no. This leads me to think that there may not be any cellulose-nitrate base films in the collection, as it would most likely have been found and cold stored before now.

Smoking is not an issue as it is illegal in all Georgia public places except over-21 bars.

Climate Control: As already mentioned there is an HVAC unit in the vault that controls the temperature and the humidity, but the other areas of the archive are controlled by the building wide central heat and air. Both systems are routinely inspected and maintained, but share a minimal risk of occasional or frequent failure. The building does not close down in the winter and the HVAC system in the vault keeps the temperature and humidity constant to the needs of the collection. The areas beyond the vault (mainly the non-climate controlled storage area) may experience occasional or frequent extremes in temperature or humidity. Issues of mold have not been experienced. However, probability of mold in cases of equipment failure and water damage can be expected due to basement location. It was also noted on the survey that there are some large artifacts that are stored in the top floor of a building, and I noted that there were several antique tables and map cases in the rare book gallery area in the library.

Speaking of the rare book gallery, the rare books housed in this area are noted as part of the highlights of the archive collection and I inspected this area closely in terms of this assessment. The room itself had one entrance fielded by two empty display cases on either side. There were two large bay windows that ran floor to ceiling but appropriately had dark curtains to filter the UV rays of the sun. There was a circular display in the center of the room that had framed maps hung on the outside with empty display cases stored underneath. Both sides of this circular area had an entrance into the interior of the circle. Inside the area had built in display cases that exhibited Sir Issac Newton's books and other books dealing with mathematics and probability. I didn't notice any additional lighting other than the natural diffuse sun light and the high overhead fluorescents that seemed a little dim as well. All the books were in cradles, held open with plastic strips; except one book that was closed and missing a cradle and there was an area of upright stacked books about 2 feet long. Over the open books was a small piece of signage that briefly explained what you were looking at.

Outside of the circular display, and placed against the outside walls and the interior walls were very tall, locked, glass covered book cases full of books. Spaced in front of the cases and along the remaining parts of the wall were chairs, antique tables (with “do not use” signs) and antique map cases on dollies (that I drooled over). Overall, I loved this room and felt sorry for it. It seemed neglected, unloved, and unused. I fear for the rare books stored here, and I would suggest an immediate appraisal of their condition to include a resting period and a redesign of the exhibit space, exhibit items, and exhibit use and conditions to bring it up to date and back into use.

Security: I feel that security is one of the more serious risks for the GTA. This is based on the location in a shared facility. There are five ways to enter the basement level, two of which are from internal stairways or elevators. The elevators are supposed to be key card accessed, but it was mentioned that stray students have been found on the elevators. There are no divisions that control access to the archive area other than the key card access for the vault. All other areas are open to the public and do not have security guards. However, the survey says that there is the 24 hour monitoring system. I feel that at this point, there is a pretty heavy demand on this monitoring system and it would be interesting to pay a visit to see just what can be seen and how monitoring is actually done. If this system is covering the entire campus, chances are good that the actual time spent physically monitoring the archive may be once an hour or less and that additional monitoring may be needed.

That said the reading room is set up so that researchers can be viewed by staff easily. A staff member is present at the front desk at all times and need only look over a small computer monitor to observe researchers. There are procedures in place that all researchers, student workers, and volunteers must adhere to; mainly this is through filling out a form before allowing access to any materials. Identification is not generally required unless requested items are restricted for the specific use of Georgia Tech Faculty, Staff and students.

Concerning vandalized or stolen collections the survey concluded that this was not a risk; however during the first day of my mini internship I found evidence in the donor files that vandalism had occurred with archival exhibits and that later a part of this particular collection had been stolen. I would assume based on this evidence that there is a likelihood of other stolen materials and that all archives assume some minimal or even moderate risk when exhibiting and storing articles of information. I would also conclude based on other evidence that most of the stolen articles are probably an inside job carried out by someone who knows the value and more importantly the location of said objects.

Housekeeping & Pests: According to the survey there is no known evidence of pest infestation affecting the collection, but it is unclear whether or not the facility and vault area are on a routine pest control program. If not, I would consider pests a serious risk in a basement environment and recommend routine pest control.

As for housekeeping, there are policies in place that keep housekeeping out of the vault unless requested and supervised by archive staff. Other areas of the GTA are cleaned by housekeeping staff on a routine schedule and trash is removed on a daily basis. The vault does not show visible signs of dirt or dust and the cleaning schedule or policies (by trained archivists) for the vault and/or collections are

unclear if even nonexistent. Establishment of routine collection cleaning policies should be written down and routinely scheduled.

Concerning food and drink: see above mention of kitchen and processing room. In addition there is an enforced policy of no food or drink in the vault or reading room, but in my visit I saw drinks sitting right next to computer equipment while a student worker was processing materials. I also saw collections being used in offices which would put them at risk if staff were eating lunch in their office. That said, it was noted in the survey that the kitchen was kept clean and that any food used for special occasions was cleaned up promptly.

Storage: Most of the collections are properly stored on anchored shelving, snugly stored in archival boxes when possible, and not stored on the floor with the exception of the already mentioned incoming science fiction boxes. There are no windows in the main archives or vault and shelving is at appropriate height from the floor. Compact shelving in vault uses an electric system that employs sensors and cushions to prevent banging of units, crushing of staff, and allows for ease of use when accessing collections.

This same system is used in the additional shared shelving area that houses the science fiction collection. These books are considered part of the rare book collection even though they are not in the climate controlled vault. They are not protected in archival boxes and are found lying on their spines in an order that mimics traditional LC cataloging of fiction. Their catalog numbers are written on manila card stock and placed in the center of the book (no title accompanies the number) and a strong gust of wind would make life pretty miserable for someone.) In my visit it was even noted that a book on the end was not upright and was missing both the end book support and the manila card as well. The issue with this collection lies not only with its storage and organization but also with its nature: pulp paper and the inherent acid migration and eventual deterioration. It is not something that is within the scope of this assessment, but it is something that should be investigated for the future of this growing collection.

Personnel: The GTA staff has some training and drills in place for emergency preparedness. The staff is stable with the exception of additional positions that have been added to existing personnel. Security staff is trained to routinely inspect the vault and are on the lookout for HVAC problems when the archives are closed. Security and maintenance staff are quick to respond to alarms, requests for aid and needs for maintenance or repair.

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See map on next page

Library Annex (basement)

