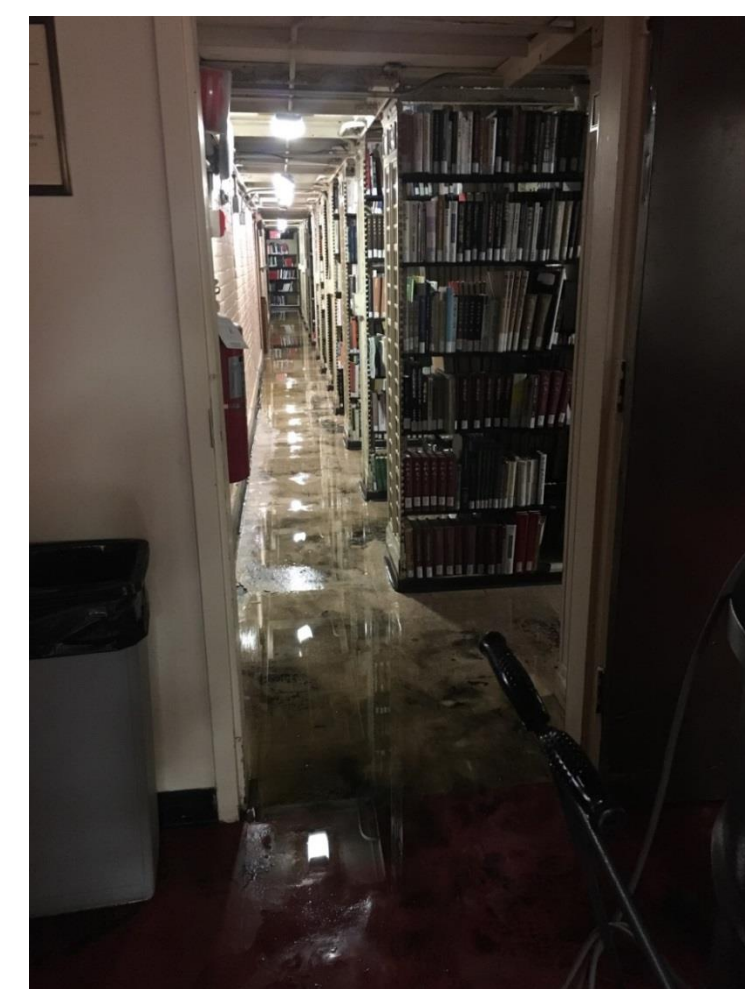
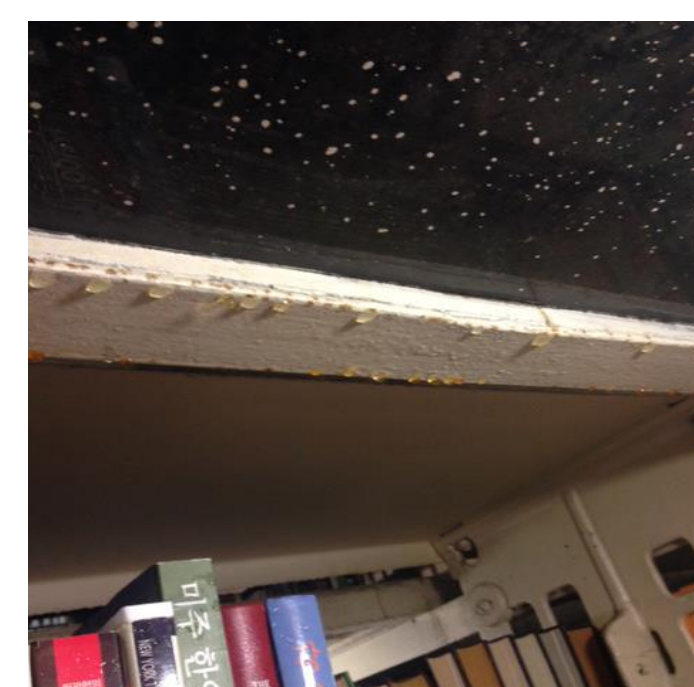


Disaster Strikes

On the morning of September 16, 2018, a Sunday, a major leak was found in the old stacks of Columbia's C.V. Starr East Asian Library. The University's Facilities staff accompanied by Security officers entered the library, found the problem, and alerted the Libraries' disaster phone at 8am; one of the conservators arrived, took stock, and alerted other preservation staff and Starr Library's management. By noon, a group of us were trying to assess the damage. In the days that followed, that assessment had to be adjusted up more than once.



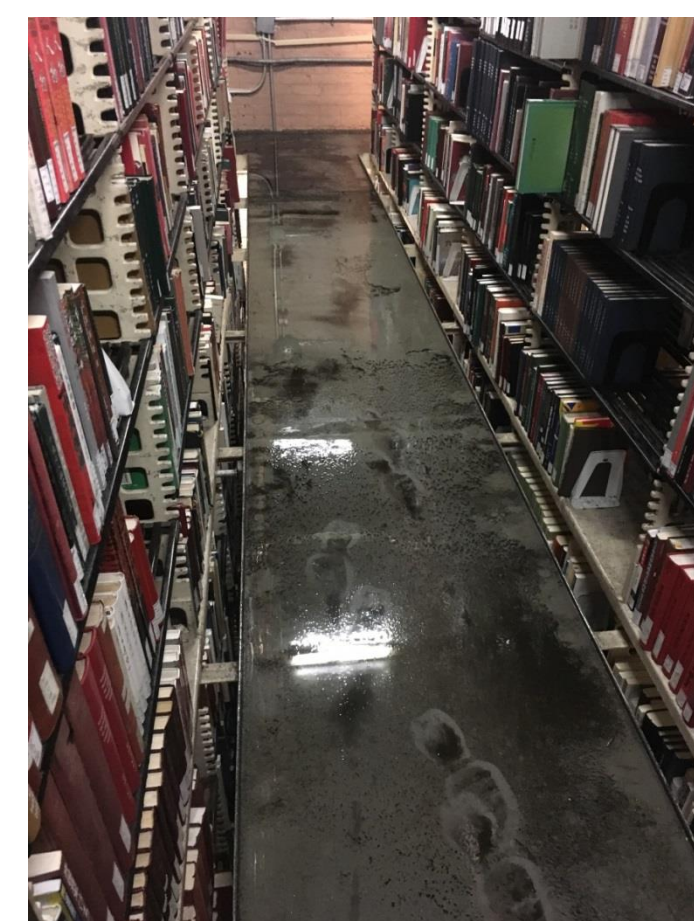
Wet aisles



Dripping beams

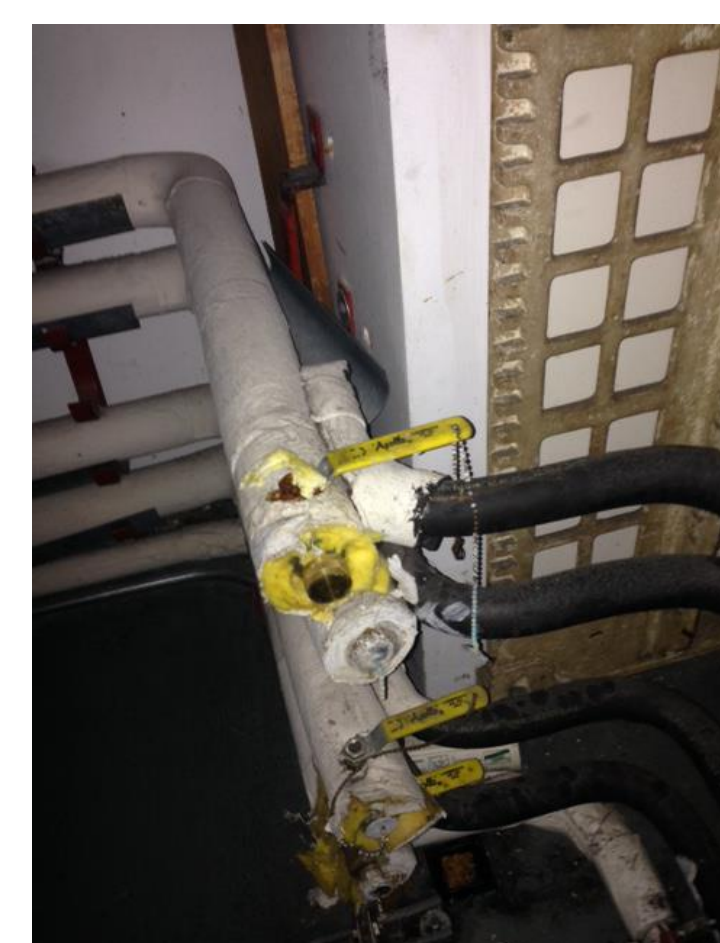


Wet, dirty books



Muddy aisles

The problem had started on the highest of the four stack levels, and by the time it was detected all four levels had been flooded extensively, resulting in wet and muddy aisles, dripping ceiling beams, and wet and dirty books.

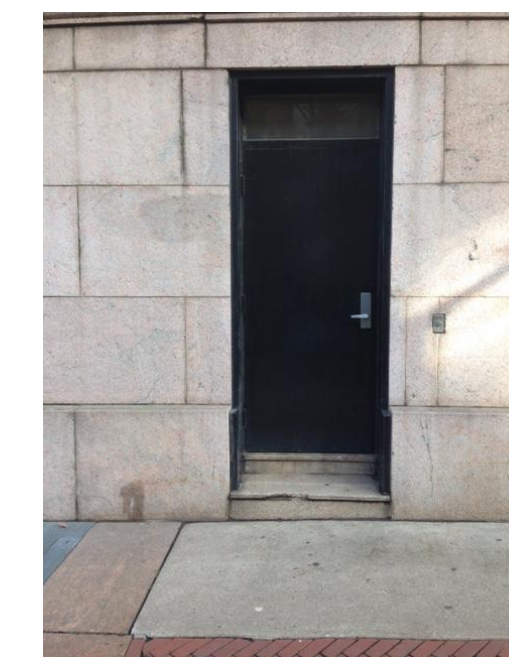


The culprit turned out to be a pipe that had literally blown its top. (here shown with a new shiny top in place).

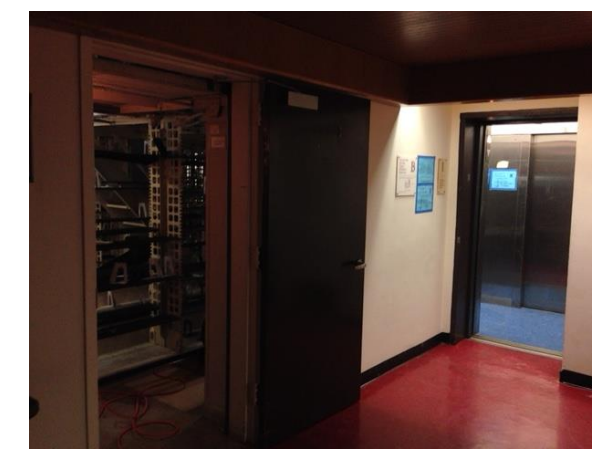
Taking Stock and Starting the Recovery Process

Polygon, a company specializing in emergency drying and document recovery services, was brought in, and an initial estimate of the damage was developed. In the end, over 51,000 wet volumes were shipped out in ten trucks. Everything from level 100, and anything that was wet on levels 150, 200, and 250 was packed out. Packing out took three long days, from early morning deep into the evening.

We had to cope with a number of handicaps:



Everything had to come out of the building through this narrow door.



Everything had to be moved in this small elevator ...



Coming out of the elevator an immediate right turn had to be made ...



And then an immediate left out the door.



And on packing day 2 the rain came pouring down, and a tent had to be built to stage the boxes for loading.

Thankfully, Day 3 brought sunshine, which helped both in speeding up the work and improving spirits. Boxes were assembled outside by volunteers, and filled up and labeled inside by Polygon staff and more volunteers; the boxes were then rolled out on dollies, and transferred to pallets before being loaded onto trucks. The labels on the boxes indicate from which shelf in which range of which aisle on which level the content was taken, in order to be able to reshell them accurately on return.



Box assembly



Labels show aisle-range-shelf location for content



Catching the dollies being pushed down the ramp



It took many dollies



Pallets ready for loading

Business Continuity

The first priority, obviously, was to inform the public. Initially that was done through printed announcements posted around the library. Subsequently email notifications were sent out with more clarifications. This was followed by periodic blog posts with further updates and instructions.

During the first week, packing out and initial clean-up prevented us from providing access to the remaining collections for library users. While the stacks remained closed, we devised a regular paging schedule, but in order to do so we first had to identify what remained available. This was a 2-step process:

- Material packed out for drying/cleaning was charged to a "Temporarily Unavailable" status, so users could request those materials through Borrow-Direct and ILL. This required identification of the call number ranges of the removed material by noting the last item on the shelf before and the first item after removed material. No less than 273 pairs of call numbers were recorded. This, along with a number of further criteria, allowed the systems office to charge the items out in only 28 batches.
- What remained on the shelves was automatically given a status of "Ask a Librarian." These materials are available for paging.

Administering the Recovery

- Insurance: claims were filed early on, and a walk-through with the University's Risk Management Dept. and the insurance company was made before approval.
- Dehumidification: Maxon's, an emergency recovery company, installed heavy-duty dehumidifiers, and enclosed the entire stack area in plastic sheeting to speed up the process.
- Cleaning: Maxon's cleaned all surfaces on the 100 level, and floors, ceilings and walls on the 150, 200, and 250 levels
- On October 16, exactly one month after the disaster hit, University Facilities started extensive repair work; this was held up when asbestos was found, and abatement work had to be performed first.
- Between November 26-December 7, Clancy Library Services cleaned both the shelves and the remaining books on the 150, 200, and 250 levels.
- Mid-December the final repairs and clean-up were finished, and the stacks were ready for the return of the dried and cleaned books.

Getting Back to Business

An initial shipment of dried/cleaned books was returned the week of December 17, more than 3 months after they had first been packed out. Then the holidays interfered.

In January re-delivery was started up again, though the process was slower than initially planned. Final delivery is now expected to take place by mid-March.

Polygon's staff merely unpacks the boxes on the corresponding shelves, based on the labels on the boxes. They are not familiar with library classification systems, so books end up upside-down, backwards, and in no particular order.

Once the re-delivery is completed, Clancy will return to shelf-read the 51,000+ books. That work is anticipated to take 2-3 weeks, so we should be able to re-open our stacks by mid-April.

The Cost

The final cost can only be estimated, and comes in many forms. The financial cost is easiest to assess, and is expected to come out to somewhere between \$500,000-\$750,000. This will by and large be covered by insurance. However, there are also costs that are harder to express in dollars, such as:

- Staff time during the packing days. Many volunteers, and certainly most of Starr Library's own staff spent entire days away from their regular responsibilities.
- On-going staff time for Starr access staff due to (intensive) paging activities.
- Preservation Division time for managing the recovery effort.
- Extra ILL and Borrow Direct requests to be processed and accommodated.
- Starr staff time spent on coordinating all the vendor comings and goings.
- Starr staff time liaising with faculty, students, and visiting scholars.
- Books lost? This is as yet an unknown. It is highly unlikely that 100% of the affected books will return unscathed. Any books returning too damaged for use will be, at the very least, hard (if not impossible), and expensive to replace.
- Disruption to teaching, learning, and research. Not only will 51,000+ volumes have been unavailable for some seven months, but an entire freshman class will have spent the better part of their first academic year without access to their library, other than the reading room!

Lessons Learned

- Disasters can happen anytime, and can not always be avoided.
- As far as possible, avoid risks, e.g. by protecting materials from sources of damage (be they water, humidity fluctuation, extreme heat, etc.), and keeping materials off the floor. Though it would not have helped much in this case, our library has since invested in a large number of plastic pallets for storage areas and offices.
- Work with Facilities to make sure routine maintenance really happens. It will require a lot of persistence because they have their own routines, and you're not their only client. It is only too easy to fall back into old habits.
- Build in monitoring and alarms where possible, so problems get detected early, and damage may be limited.
- Plan ahead for how to survive the big one. Have disaster supplies on hand, as well as contact information for all relevant agencies and contractors to move in and deal with a disaster as soon as it occurs.