Welcome to the Map Makeover! Map Library staff observe increasing interest in historical maps from many types of library users, including family historians, civil planners, environmental scientists, cultural historians, and property owners. Because the information contained in these maps is NOT available online, they are being specifically sought out for their uniqueness. Therefore it is very important to preserve the maps for future researchers, and be sure they do not fade or tear, resulting in the loss of valuable information. This June the Preservation Unit embarked on a project that had been waiting in the wings for many years. We would like to share the process of rescuing these maps, repairing them, stabilizing them and eventually returning them to the Map Library. We hope that you enjoy learning the process as much as we have enjoyed treating these!

The maps: There were 38 maps in varying states of disrepair some with significant water damage, crushed ends or tears. Many of the maps were historical class room maps and were still nailed or tacked to wood or metal rods. In many cases the paper that the maps were printed on was brittle and crumbled easily. One of the bigger challenges was the size of these maps, some were as large as 9.5 feet by 6 feet. The steps below outline the treatments we performed on these large maps.

Step 1: Assess the condition. All of the maps were assigned a condition rating based on the size and the degree of damage. We decided to tackle the maps with the lowest condition rating (least damaged) and to conclude with those in the worst condition. Several of the more valuable maps in very poor condition were set aside to be sent to an outside conservator because we do not have the equipment or space to wash oversize maps in order to remove staining or remove the original backing.

Step 2: Humidification. Most of the maps will be stored flat in map cases at the Map Library. Since many of these maps had been rolled for years and years, we had to relax the paper with water vapor. Most of the maps needed humidification using our very high-tech humidifier (basically a tupperware container with a little water at the bottom and supports that allowed the maps to sit above the water).
This worked incredibly well! Once the maps had absorbed a sufficient amount of water we carefully unrolled the maps onto blotter paper, then covered the maps with a layer of blotter paper applied weight for a day or two.

Step 3: Clean. The maps were incredibly dirty. Depending on each map’s condition we used a Hake brush for the most delicate and brittle maps, a soot sponge for the others and for the dirtiest maps, we used a Nilfisk vacuum (these are made with preservation purposes in mind so we can control the suction) if the paper was stable enough.
Step 4: Remove Tape. Many of these maps had been previously repaired using household repair techniques, most commonly our enemy, pressure sensitive tape. Tape is extremely acidic and must be removed if possible (notice the discoloration of the paper below). We do our best to remove the tape
and adhesive. Our success ultimately depends on the extent of the taping, the strength/acidity of the paper, and the age of the adhesive. We had several strategies... first we tried to lift the tape using a lifting knife. If the lifting knife would not work we attempted to use heat to remove the tape. Our heat source is a tool designed for woodburning decoration. The tip is very fine and usually allows us to lift the adhesive carrier (the tape) in order to expose the adhesive. If there was many risk of losing text or any information on the map we left the tape on.

Once the tape was off, we removed the adhesive. First we used a rubber cement eraser that balls up the adhesive and removes it from the paper. If the paper was too delicate for the rubber cement eraser, we tested the inks to make sure they are not water soluable. We could then use an Ethanol solution to remove the adhesive from the paper. If some stickyness remained we used finely ground cellulose paper (cellulose powder) to cover the residue, then gently scraped it off.

Step 5: Repair. Now that the tape is off the tears must be repaired.
When sections of a map were missing, we chose a piece of non-acidic, archival paper of similar weight and color. Using acrylic paint, we stained the paper to match the color of the map as closely as possible and then attached the patch with wheat paste.

Most often tears in the maps were repaired using Japanese tissue and wheat paste. When the paper was not very old we used heat-set tissue to repair it. Many of these maps had abundant tears so the repair and patching process often took several days.

Some maps were treated with a de-acidification spray to stop any acidity in the paper from damaging the maps further.
Step 6: Roll onto tubes. The final step was to roll the maps onto tubes with Melinex for transport back to maps. In most cases the maps will be put into large flat files in the Map library, but if the maps were very large they will remain rolled on the tube custom constructed to fit it. If the map was very fragile
and would fit in the flat file we were sometimes able to encapsulate these instead of rolling them onto tubes.