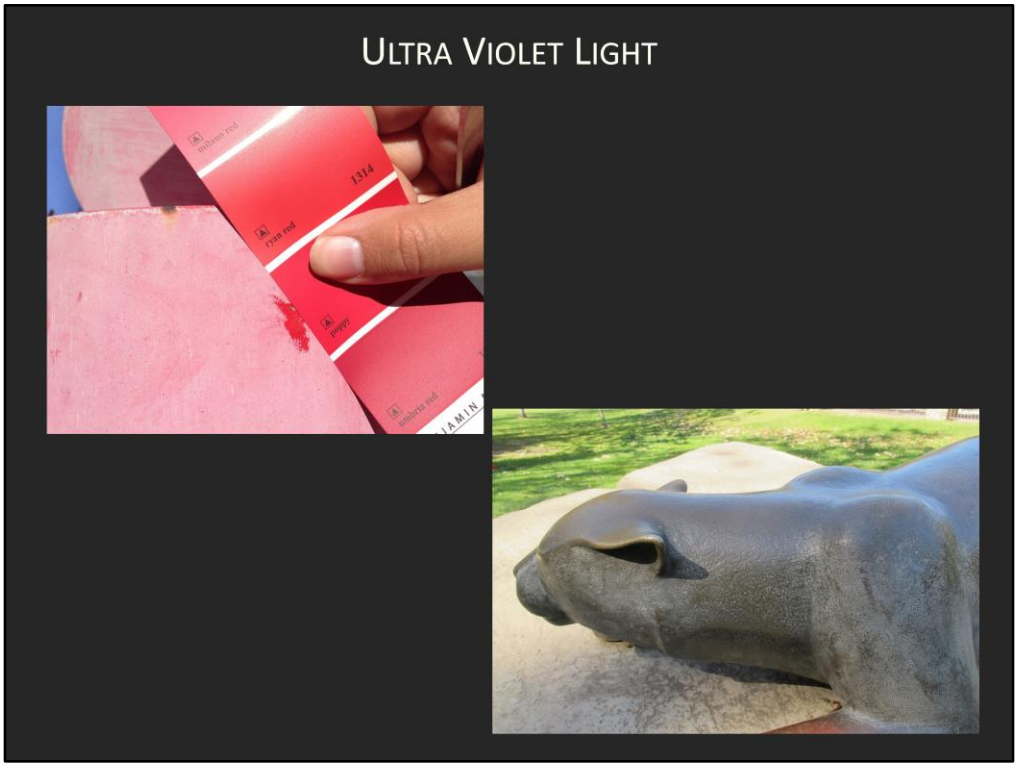
Good morning everyone. My name is Christina Varvi and I'm a Senior Conservator with RLA Conservation of Art and Architecture. Our firm has offices in Los Angeles and Miami with the bulk of our practice focused on the care and maintenance of artworks, monuments, and decorative features in the public realm. Today I'm going to be speaking about common materials and objects found in public gardens as well as means of deterioration and damage and some suggestions for remediation. And though I'll be speaking specifically to artworks and decorative elements, there are obviously correlations between these materials and more utilitarian or temporary objects such as signage, installations for specific events, etc.

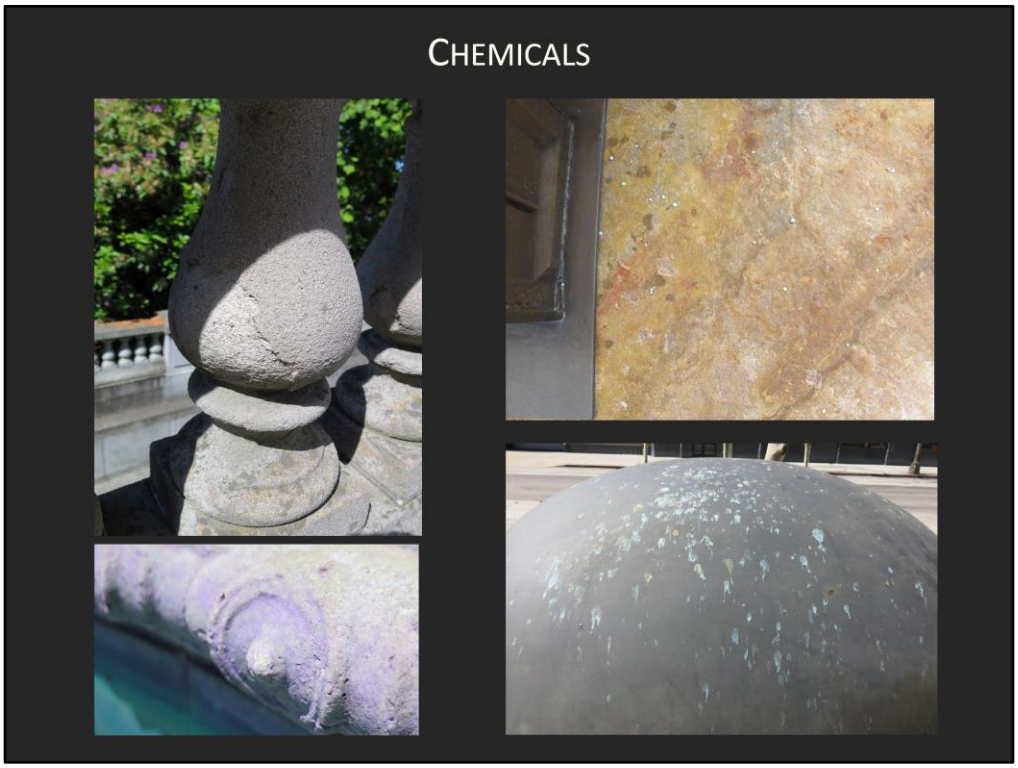
There is no group of artworks and objects that need more concerted and ongoing care than those outdoors in the public realm. The reasons?

For objects out in a garden setting, there is, as you know, a complete lack of climate control. Depending on your geographic location, environmental conditions can vary wildly from season-to-season as well as from day to night. While you have no control over such conditions, you can take into account certain public and environmental burdens on these objects and attempt to mitigate their deleterious effects. These burdens include:

My number one nemesis…water. Primarily sprinklers, but also proximity to salt water. Even if something is not getting hit by ocean spray, there are still salts in the air that can negatively impact objects. As I'm sure you know, water causes a whole host of issues for outdoor objects, particularly when it's allowed to sit and dwell on a surface. If you have mulch, plant debris, plants growing against the surface; all of these things can trap water and promote deterioration. If those objects are in a shady area, these conditions can be accelerated. These modes of deterioration mainly include corrosion and biological growth. Even if corrosion and biological growths are mitigated and removed, they can leave residual staining on the surface. Corrosion runoff staining can even transfer to adjacent surfaces. Salt water or salts in the air combined with moisture on the surface can greatly accelerate corrosion. Repeated wetting and drying of a surface can lead to water spotting or (over time) thick build-ups of mineral deposit crusts that bond to the surface. In cold-weather locations, as water freezes, the force of its expansion can promote cracking and displacement.



The sun can also be brutal for decorative surfaces, particularly in southern climates. For painted or pigmented surfaces, it can cause them to fade and look bleached out. This is especially true for shades of black, red, orange, and yellow. UV also breaks down protective coatings, such as wax, lacquer, varnish, and paint as well as most plastics and adhesives, causing them to blanch, flake, crack, shrink, and/or become chalky and opaque.



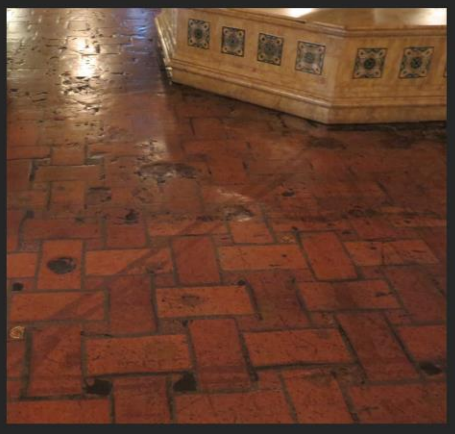
De-icing salts can promote corrosion of metals. For porous surfaces, they are absorbed into the pore structure. Through routine wetting and drying cycles, the formation of salt crystals and the pressures they exude, cause the material to deteriorate, usually at the face. This can lead to sugaring, disaggregation, exfoliation, and general loss of definition and detail. Fertilizers can also promote corrosion and staining and should not be allowed to dwell on object surfaces.

Bird droppings are particularly nasty and can stain stone as well as negatively impact metal patinas, promoting corrosion and patina loss.

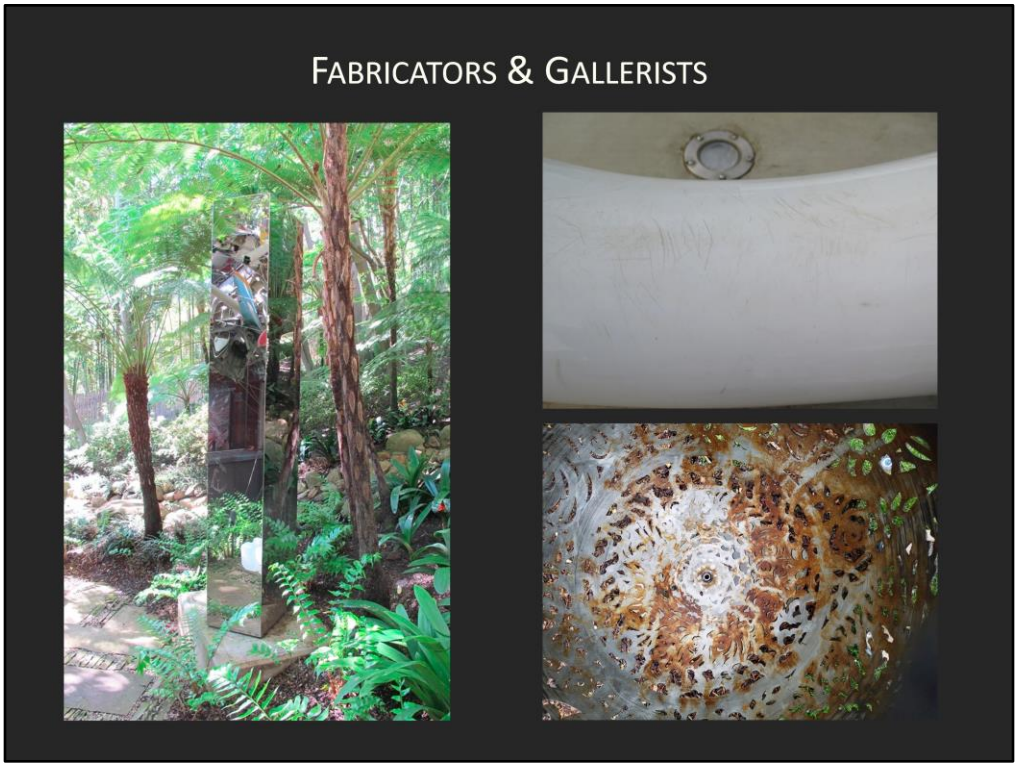
Imbalanced water chemistry can lead to inadvertent staining on object surfaces. I've come across this purple staining many times and it's my understanding that it's the result of Cyanuric acid. This can be introduced by adding stabilized chlorine into a fountain. When levels of Cyanuric acid are too high, it reacts with copper residue in the water, forming the purple-blue compound, Copper Cyanurate. The copper in the water can come from piping, coins, and/or the addition of certain algaecides. Coins breaking down in fountains and other water features themselves can cause localized staining on surfaces. Food and acidic beverages can also stain and even etch some objects.

In terms of damage from grounds keeping staff, the two biggest offenders I've seen in garden settings are, not surprisingly, lawnmowers and weed whackers, but you'd also be surprised how many artworks and objects have been damaged by small facilities carts backing into things or large piles of dirt or mulch placed next to artworks which then become heavily soiled from the particles blowing around.

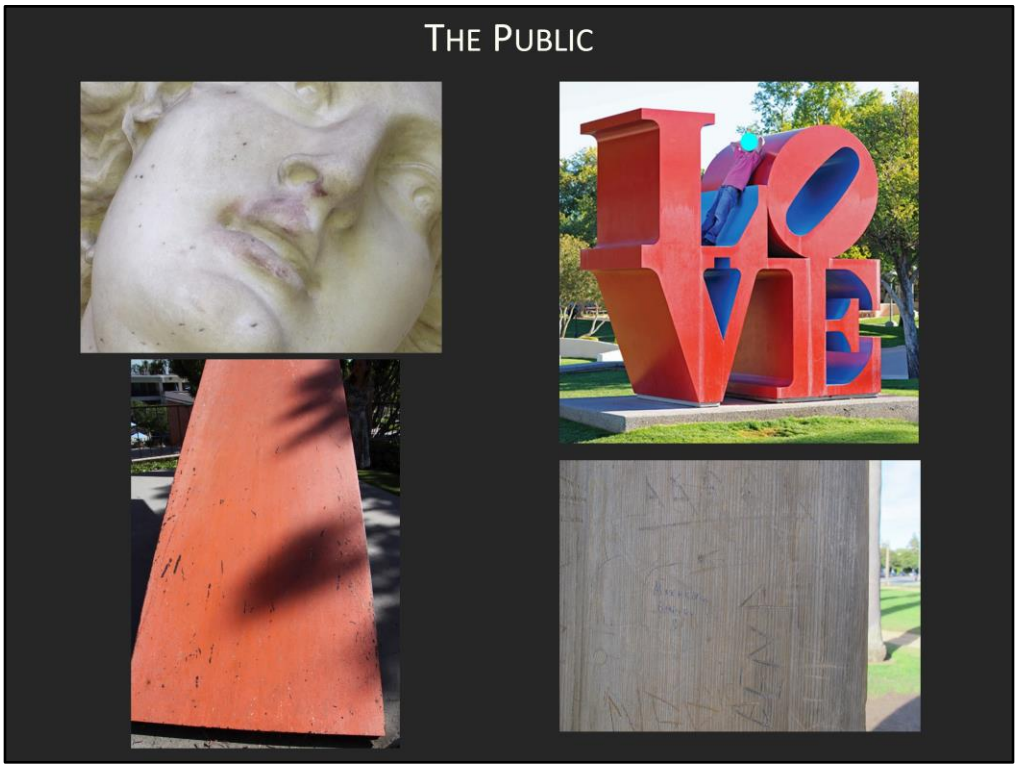
VENDORS



For vendors, we've been called out several times to remove tape residue from surfaces where cords had been taped down. Lighting and rigging equipment has damaged tall sculptures where the people carrying things weren't looking up to see what was overhead. These companies are usually on a pretty tight schedule and need to get equipment set up and broken down in a timely manner, which can lead to miscommunications and inadvertent damage.



If you're considering a new acquisition for installation in your garden setting, particularly where there is public access, take what the people selling it to you are saying with a grain of salt. We've had clients that were assured the artwork they were receiving would do well outdoors in a public setting with a lot of public interaction or where there are lots of sprinklers, only to find out soon afterward that this wasn't the case, resulting in the need for more frequent maintenances, resurfacing, or ultimately returning the artwork because it was too difficult to maintain in that setting.



And my personal favorite, the general public. Truthfully, what won't they do, especially in the age of social media? Outdoor garden settings are often less-monitored spaces. The obvious forms of damage are graffiti, both applied and incised. Scuffs, scratches and burnishing from climbing as well as food stains, fingerprints, and even lipstick marks. This particular damage was noted by the client shortly after it happened. They were actually able to track down the person who did it because she posted a picture of herself kissing the sculpture on Instagram right afterward and put the garden's name as a hash tag with the photo.

WHAT CAN YOU DO?

So what can you do with all of these different and often unpredictable variables constantly working against you?

It seems very obvious, but keep the water away if you can. Re-direct sprinkler heads, install drip irrigation, or even hand water in the immediate area if possible. Routinely clean dirt, debris, mulch, and anything else that can trap water against an object's surface or its base. Sop up pooling water on horizontal surfaces or in recesses.

Plant or trim back plantings several inches away from object surfaces, including grass, bushes, etc. These can also trap water against the surface and promote corrosion and biological growths. If this is difficult, maybe consider switching out plants for those that require less watering or stones with adequate drainage. Bases, pedestals, bolts, and connectors for artworks and objects are critical to their sustainability and are often subjected to the most deterioration from water infiltration, so placement and protection of these connections is crucial to an object's overall stability.

A quick side note on tree branches and bird mitigation; keep them trimmed back and away from objects when possible. We've seen tree limbs fall and strike sculptures during high wind events. They also drop plant debris on objects, which traps water as I've mentioned, but also the decomposition of the plant material can stain surfaces. Trimming branches back also gives birds one less means of getting droppings on your objects. We've also seen various gardens, parks, and private owners use rubber snakes on our around sculptural elements to try and scare birds away from perching on them, but like the plastic owls, they have to be moved around periodically.

There's really not much you can do for atmospheric salts except keep a good maintenance schedule for outdoor objects as well as make sure that any protective coatings are intact and in good condition. The same goes for fertilizers and de-icing salts. Just be vigilant about notifying staff who are applying them to keep clear of artworks and delicate surfaces as well as routinely inspect these surfaces yourselves. Coins should be removed from water features on a regular basis and spills should be removed from artwork surfaces as soon as possible.

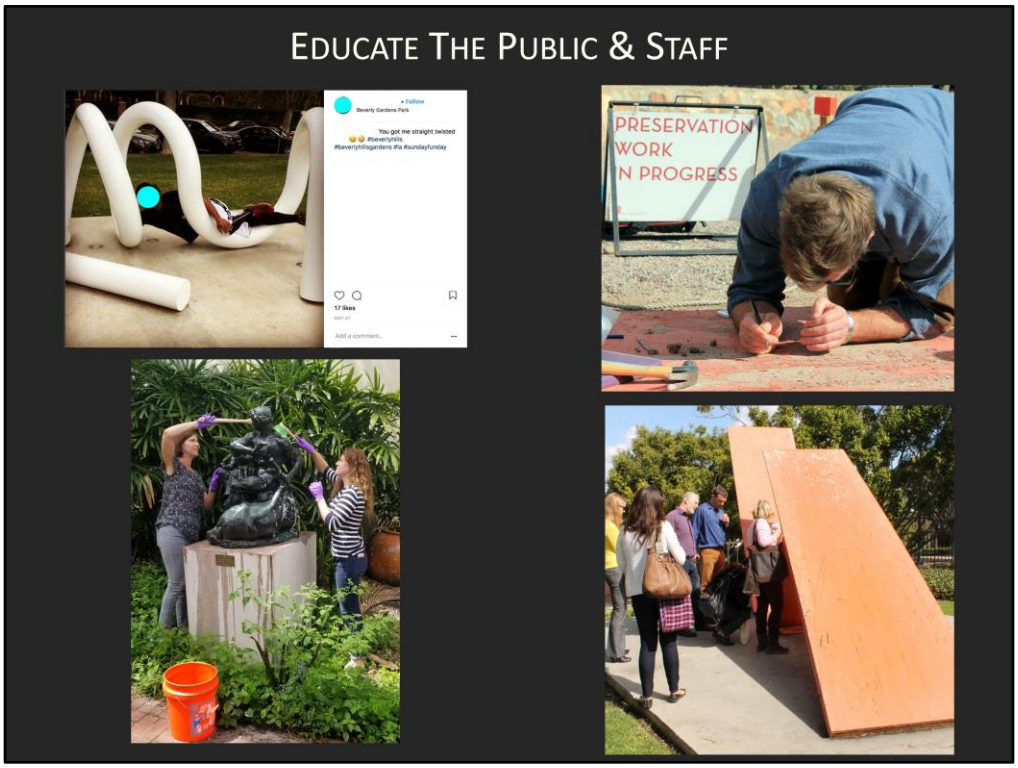
For water features, maintaining good water chemistry is crucial. Consider using bromine instead of chlorine for water treatment. To try and keep mineral deposits at bay, consider switching out the water on a regular basis as your budget and drought restrictions permit. In hard water areas, as the water evaporates naturally from the water feature, it leaves the minerals behind in the basin, making the solution more concentrated with minerals. By completely flushing out the water and adding new water, you reduce that concentration.

For bird droppings, they should be removed as soon as possible. If they've already hardened on the surface, you can usually take a damp rag and let it sit on top to soften them and then gently wipe them away or rinse them off with distilled water.

We've seen success in garden settings where low, physical plant barriers are implemented to indicate to the public and grounds keepers that they should keep back from the artwork. The more prickly and thorny the plant, the better. Even if it's not a large physical barrier, like a hedge, it can serve as a visual barrier to deter most people from trying to get to an artwork or object. If security cameras are not in the budget, even putting up an inoperable or fake one can sometimes act as a vandalism deterrent if people think that they're being monitored. At night, spot lighting or even ambient lighting from nearby sources can also help deter vandalism. And if it's amenable to your superiors and guests, there's always signage and decorative fences. As I also mentioned, you can check social media to see how people are interacting with objects in your garden settings, which might bring about new ideas as how to address issues of damage and/or vandalism.

You should also Keep an eye on vendors

I would be sure to take photos of artworks, decorative elements, etc. before any vendors come in to set up as well as have a designated person with them to watch and guide them around objects. This person should have a camera with them as well and document placement of equipment, where things are anchored or adhered, and anything that was moved, just to make sure that you're covered if something should happen. If you're not sure about what can or can not be done to an artwork, you can contact a conservator or other art professional. I've sat in on taping of a TV show in a garden where they wanted to make a 16th century stone fountain look like it was operable, even though it wasn't. So I was there to discuss the means and methods of how they were going to achieve this as well as monitor them throughout the shoot to make sure they didn't damage the fountain.



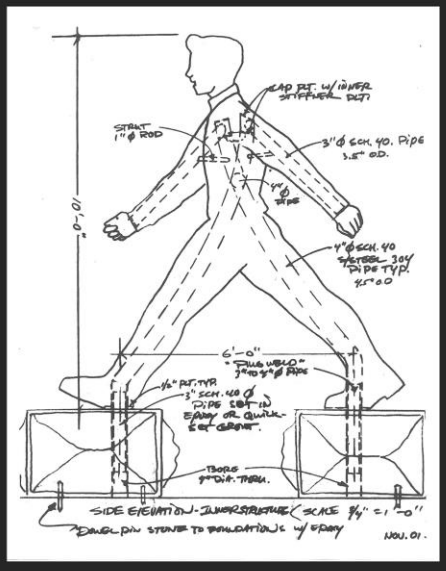
As well as indicating to the public why it's not a good idea to climb on or touch artworks and decorative elements, it would be good to have that talk with staff in various departments as well. We've found that identifying the most senior and/or invested and interested staff member to maintain plantings around artworks and decorative features has proven successful for many of our clients. Those who take ownership of and pride in their area are more likely to be careful when working around these sensitive elements.

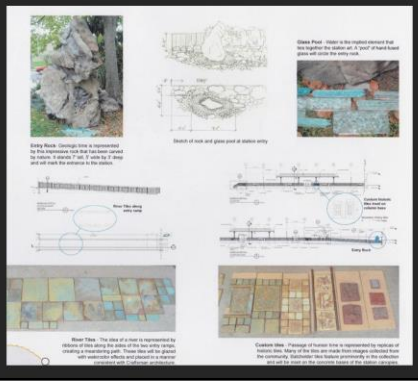
You can also form partnerships with other departments; bring appropriate representatives in to your planning meetings to drive home the importance and sensitivity of your collection and how the daily functions of other departments may impact these objects. Identifying yourself as a point of contact for future projects where your objects may be impacted can also served to help mitigate damage further down the line.

Fabrication Review for New Works

Review of Proposal Documents:

- MODELS
- SKETCHES
- MATERIAL SAMPLES
- PREVIOUS SIMILAR PROJECTS
- PROPOSED FABRICATOR
- ENGINEERING DOCUMENTS
- RECOMMENDED MAINTENANCE





Educate yourself on the various objects and materials in your collection. This is particularly true in regard to new acquisitions and dealing with artists and fabricators. If you have someone making something for you or are acquiring an existing object and someone swears that there is little to no maintenance and it will last for 100 years, be very skeptical. Everything needs maintenance, especially things that live outdoors. Conservators do pre-acquisition and pre-fabrication reviews of design concepts and materials that take into consideration what an artist or fabricator wants to use to make an object, how they plan on putting it all together, where is it going to be installed and how, as well as what is the recommendation for maintenance. We make sure all of the materials (metals, coatings, etc.) are compatible and you can do this on a more simplified level. Vetting materials beforehand doesn't mean that something will be maintenance free, but it at least starts you off in a good place. Another thing of note: STAINLESS DOES NOT MEAN RUST-PROOF, it means that the steel is more resistant to rust. There are varying degrees of stainless steel, some of which are more resistant to corrosion than others. But under the right set of circumstances, all stainless steel can start to corrode.

And finally, conservators understand that calling us in and implementing a routine maintenance plan can be cost-prohibitive for many entities, so I wanted to provide a list of public resources that can be referenced and hopefully give you some more in-depth information regarding the various modes of deterioration for materials and some more in-depth mitigation strategies.

The National Parks Service and GSA have preservation briefs online related to care and treatment of historic materials. The Getty Conservation Institute and American Institute of Conservation are also good resources, as well as the National Center for Preservation Technology and Training, which is part of the National Parks department and has many online tutorials and lectures about various materials, treatments, and on-going research. I would also encourage you to reach out to your local colleges and universities that may have conservation or preservation programs as they may be able to provide additional assistance and/or guidance. And for guidance in terms of registration and curatorial issues, ARCS is a good professional, national resource.

THANK YOU!

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