



### The Ten Agents of Deterioration:

<b>Physical Forces</b> – Energetic forces that cause damage to objects due to impact, shock, vibration, pressure, and abrasion. Examples: improper handling packaging and movement, earthquakes
<b>Thieves, Vandals, and Displacers</b> – Willful damage to collections by vandalism and removal of collections due to theft. Example: staff pocket small objects
<b>Fire</b> – State of combustion resulting from the reaction of a fuel source (anything that burns), oxygen, and an ignition source. Usually causes catastrophic loss, if not a complete loss; impact may include water and/or soot damage
<b>Water</b> – Excessive moisture and liquid typically resulting from natural occurrences, technological hazards, or mechanical failures. The majority of water-related problems in cultural institutions are the result of accidents or neglect. Example: Hot water heater leaking
<b>Pests</b> – living organisms that are able to disfigure, damage, and destroy material culture. Pests include rodents, insects, mold, mildew, fungi and even plants in certain contexts. Most damage is caused by species that feed on either the object materials or dust that has collected on the object. Example: wool is a food source for webbing/case making clothes moths as well as carpet beetle larva
<b>Pollutants</b> – Gaseous, aerosol, liquid or solid substances that are known to have adverse effects when in contact with objects. Example: Volatile organic compounds (VOC's) in fresh cut wood, will cause acid burn on paper materials and textiles over time
<b>Light</b> – Visible and Ultraviolet (UV) light energy wavelengths that cause cumulative and irreversible damage to objects. Sources include both artificial lighting and sunlight. Example: fading of a textile on exhibition due to years of ambient room lighting
<b>Incorrect Temperature</b> – Temperature that is too high, too low, or fluctuates too frequently and causes chemical, physical and biological damage to collections. Example: high temperatures cause deformation of plastic objects
<b>Incorrect Relative Humidity</b> – Relative humidity is the percentage of water vapor in the air out of complete saturation (saturation= 100% Relative Humidity). Four key types of potentially incorrect RH: damp (>75%), RH outside a critical value for an object, and RH fluctuations. Example: condensation on metal surfaces can promote corrosion
<b>Custodial Neglect &amp; Disassociation</b> – Natural tendency for ordered systems to fall apart over time, causing loss of objects, or object-related data, or the ability to retrieve or associate objects and data. Example: neglect of collections due to poor housekeeping