

HOW TO PROTECT STONE FOUNTAINS OR MONUMENTS

One of the biggest challenges with stone sculptures or fountains in the Kansas City climate is freezing thawing. Stone can be very porous, allowing water to penetrate into the sculpture or fountain. When temperatures drop quickly, the water in these pores freezes and expands, causing the stone crack and pieces to break off. Even gradual erosion of the stone surfaces, caused by constant water flowing over them, can open the pores and roughen the surfaces, allowing more water to penetrate into the interior. Even when a fountain is turned off and water drained for the winter, there is still rain and melting snow and ice which can refreeze causing damage to porous materials. If a fountain is left running in the winter it can make ice formations, sometimes adding weight to bowls or armatures that they may not be able to support. Covering the stone sculptures and fountains in the winter can help prevent the water from penetrating the piece, although it hides the beauty of the artwork for much of the year.

Qualified stone conservationists are able to repair and sometimes replace parts and pieces and restore a damage sculpture or fountain.

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HOW TO CLEAN STONE FOUNTAINS AND SCULPTURES

First evaluate the general condition of the monument or fountain. Do not attempt to clean it if it exhibits any cracks, flaking and scaling or eroding. Carefully tap the surface with your finger to determine if there are any underlying hollow areas. If hollow areas are detected, do not continue and call a professional conservator.

If your piece appears to be in good condition, initiate the cleaning process with the least aggressive method—gentle, clean water rinsing. If washing with water alone is not sufficient, carefully proceed with the use of a selected material to facilitate cleaning. Test the selected cleaning method in a small inconspicuous area before general application.

If using a chemical cleaning solution pre-wet the monument or fountain to prevent excessive penetrations of cleaning solutions and to soften the soiling. Clean from the bottom to the top to avoid streak staining. Periodically rinse runoff. Always rinse thoroughly with water. Do not allow cleaning solutions to dry on a monument to prevent a blotchy appearance. Do not

assume that a cleaning procedure that is effective in one case is applicable for all cleaning situations. Consult a professional conservator if you need assistance.

EQUIPMENT USED FOR CLEANING STONE

- A. Liquid soaps and detergents: Gentle household detergents such as Dawn or Meyers. A mix of one teaspoon detergent to one gallon water is suggested.
- B. Non-ionic Detergents: These do not contain or contribute to the formation of soluble salts. They provide better wetting of the masonry surface and facilitate the removal of general soiling. They are available from conservation, janitorial and photographic suppliers. A suggested cleaning solution is one ounce non-ionic detergent to 5 gallons water.
- C. The following items are recommended for use in cleaning procedures for stone: soft natural bristle brushes, nylon brushes, tooth brushes, Q-tips and natural sponges. Do not use a wire brush. Wood or plastic spatulas are also recommended.
- D. A good water supply such as a hose or portable garden sprayer.
- E. Wooden ladder to reach a tall piece.

Tracy C. Walther, Architectural Conservator

EQUIPMENT USED TO CLEAN OUTDOOR BRONZE SCULPTURES

- A. A non-ionic Detergent from Conservations Support Systems: A pint will last for many cleanings.
- B. Butchers Bowling Alley Wax or a simple paste wax available at hardware stores.
- C. Brushes such as a soft bathroom brush with a large head and plastic handle that will not scratch the surface.
- D. Plastic buckets
- E. Rags: Cotton diapers are the best as they absorb water easily, wring dry and are lint free and washable.
- F. Misc: wooden cocktail sticks to pry off encrustations, white Scotch Brite pads (do not use brown or green) to remove light corrosion products, and sponges work well on smooth surfaces.
- G. Water supply for rinsing: A garden sprayer or gentle spray hose.

HOW TO CLEAN BRONZE SCULPTURES

- A. Thoroughly wash the sculpture with the non-ionic detergent using soft brushes and/or sponges.

- B. Surface encrustations can be removed with a wooden cocktail stick; never use metal instruments to remove encrustations or you may scratch the bronze. If the encrustation is too thin to pry off, try the white colored Scotch Brite pad on it. Be very careful on corners as you may rub through the patina down to bare bronze.
- C. Thoroughly rinse off the sculpture with clean water and dry with soft cloths.
- D. Touch the clean metal with your hand and if it feels warm then the sculpture can be waxed. If the metal feels cool, then you may have to wait for it to warm up before applying the wax.
- E. Only use a good quality paste wax on bronze sculptures. Butchers, Trewax, and Johnsons paste wax are all good waxes. Use a stencil brush to apply the wax thinly and evenly. A little wax goes a long way.
- F. After the wax has hardened it should be buffed with a soft rag. On a somewhat cool day be sure to not wait too long before buffing the wax as it may harden and be very difficult to buff out.