

Cleaning Markers and Monuments

Cleaning grave markers should start with careful consideration of pertinent issues and predictable ramifications. For example, cleaning markers essentially starts a cycle of ongoing upkeep to maintain the gains from the initial cleaning, so you will need to plan accordingly. Removing organic growth may make a monument look better for a short time but a shady environment will encourage re-growth of lichens or algae. Also, some experts recommend only cleaning markers once every four to six years because of the potential to harm the stone and accelerate the natural deterioration process. These points and those below demonstrate the importance of learning first, before undertaking a cleaning project. The following information is drawn from recommendations in *The Michigan Historic Cemeteries Preservation Guide*, which is based on work by architectural conservator Tracy Walther.

GENERAL PRINCIPALS FOR CEMETERY PRESERVATION PROJECTS

- Do no harm; always respect the original historic fabric
- Use the gentlest means necessary to complete the task
- When in doubt consult a professional
- Carefully plan and document actions taken
- Quick or easy cures are often not a reasonable choice
- Each task will take longer than first anticipated

Before any cleaning begins, identify the type of material or stone and match the material with the proper cleaning solutions and methods. See *Cemetery Preservation QUICK TIPS - Common Monument and Gravemarker Materials* for help identifying various stones.

CLEANING GUIDELINES:

- Evaluate the marker's condition - only a sound stone should be cleaned. Never clean a monument if there are cracks, flaking or scaling, or if it has eroding granular surfaces. Avoid sealing a stone - it prevents the stone from breathing and will not prevent moisture from wicking up out of the ground.
- Identify the contaminant to be removed; then use the cleaning solution most appropriate for that type of contaminant. A cleaning procedure for one situation is not necessarily applicable in all others. Generally, contaminants fall into one of two categories: organic or non-organic. Organics include lichen, algae and mosses. Non-organics are soot and other pollution deposits, which can be common in urban areas, often appearing as black crusty discolorations on stones. Because they are typically not water soluble, they are difficult to remove. Use this simple test to distinguish which type is on the stone: first dip a cotton swab in common household bleach and touch the black contaminant in an inconspicuous area (e.g., bottom rear of the stone). If the dirt remains black, it is likely nonorganic. On the other hand, if the black becomes green or even multicolored, then it is most likely organic.

- Before starting to clean the entire marker, wet the stone and test your cleaning process in an inconspicuous area. Allow this to dry for several days and then determine if the results are acceptable before proceeding with further cleaning.
- Always start with the gentlest method for cleaning. This usually means using just clean water and a natural bristle scrub brush.
- Have plenty of water available. First, completely wet the stone with clean water; then scrub from the bottom up to prevent streaking. Finally, thoroughly rinse to remove all traces of the cleaner. Never allow the stone to dry before all the solution is removed and the cleaning process is complete. Cleaning is best done on an overcast day when the stone is cool, so drying will occur more slowly.
- Knowledgeable caretakers should train all volunteers before work begins and supervise the project to be sure no inadvertent harm is done to stones.
- Document the cleaning solutions, materials, and procedures used.

RECOMMENDED EQUIPMENT

- Natural bristle brushes of various sizes, toothbrushes for intricate carvings, small hand broom, cotton swabs for test spots. Use wooden handled brushes; colored plastic could scuff and stain the stone. Use no metal implements near historic stones.
- Unpainted wooden shims, craft sticks, or compressed air not to exceed 60psi for carefully removing debris.
- Clean white rags (other colors could transfer onto stone).
- Plastic pails, clean plastic jugs, or clean pump sprayers for water; garden hose.
- Protective glasses and goggles, rubber gloves.
- *Pressure washing and sandblasting are never recommended.* Commercial and homeowner pressure washers can generate up to 1000 psi, which will damage old stones and is not a method to be used. This is true even when using just water in the equipment. The preferred method is to use a hose with nozzle delivering a maximum of 60 psi.

CLEANING AGENTS

Non-ionic cleansers, such as Vulpex, Orvus, and Photo-Flo are recommended because they are electrically neutral and contain no soluble salts. Lichen and other organic contaminants can be removed with an architectural anti-microbial product such as D/2 Biological Solution.

Recommended:

Cleaning Agent	Mix Rate (by volume)	Availability/Use
Clean water	No additives	All cleaning projects
Vulpex	One part Vulpex per 6-7 parts of cold water	Conservation, janitorial, and photographic supply stores
Orvus	1 oz. per 5 gallons of water	Farm and feed store
Photo-Flo	1 oz. per 5 gallons of water	Photo supply store
D/2 Biological Solution	Full strength or mixed with water	To clean and remove organics, order from a D/2 distributor (http://www.d2bio.com/).
Chlorine, HTH (calcium hypochlorite)		Not household bleach; to be used only by professionals; for removing organic growth
Household ammonia (ammonium hydroxide)	1 cup ammonia to 1 gallon water	Use on stone only, to clean and remove organics; not to be used on bronze/metals

Not Recommended:

- » Borax
- » Calgon
- » Clorox
- » Fantastic All Purpose Cleaner, Formula 409
- » Household detergents or soaps (e.g., Ivory)
- » Lime Away
- » Liquid chlorine
- » Muriatic Acid
- » Naval Jelly
- » Spic and Span, other abrasive cleaners
- » TSP