

## Headstone Cleaning Guidelines

**When to Clean:** Cleaning headstones should only be undertaken to halt or slow down deterioration or to prepare for restoration, not for purely aesthetic reasons. There is a strong desire among people to return stones to their like-new condition – this urge should be strongly resisted. The cleaning process is a form of erosion, no matter how gentle, and by cleaning you are often decreasing the life of the stone. Also, if you clean, it sets up repetitive cycle of cleaning to keep that fresh “showroom” look. Stones are meant to have a patina and that patina can only be achieved through years of exposure that cleaning destroys.

That said, algae, lichen, and fungi can be damaging to grave stones because they trap moisture on and under the surface of the stone. They also secrete acids that can dissolve marble, sandstone, and mortar. And they may insert their “roots” into the pores of the stone. These growths will swell and shrink in response to moisture, leading to cracking and spalling of the stone.

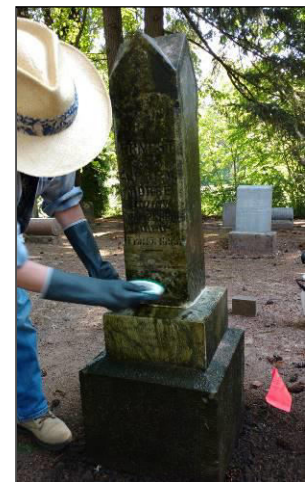
If the decision to clean the marker is made, cleaning must be done by the gentlest means possible. Bleaches and hard detergents should never be used as cleaning agents. Cleaning markers is not recommended as a routine maintenance practice and should be done infrequently, at most, every several years.

**Do Not Clean:** Do not clean markers that are tilted, cracked, damaged, or have a grainy appearance. Markers that are made of more porous stone such as marble and sandstone should only be cleaned if growth is clearly causing rapid deterioration. The introduction of water and brushing to these stones may accelerate surface deterioration especially during freeze-thaw cycles.

**Harsh Treatments:** Do not use sandblasting, ice blasting, shell blasting, high-pressure water or hose spraying, acidic cleaners, wire brushes, metal instruments, or household cleaners when cleaning markers. Do not use bleach, chlorine, or pool shock. Once a harsh treatment is applied, it cannot be undone. The damage these tools and methods do might not be readily visible, particularly when a stone is wet, but will reveal itself over time.

**Sealants:** Do not apply sealants as a means of protecting the stone or prohibiting biological growth. No matter what the product advertises, sealants will trap some moisture inside the stone, eventually causing damage to the stones. It is hard to dismiss the pitch after an arduous cleaning, but sealants must be avoided. Once a sealant is applied, it cannot be reversed.

**Who Can Clean:** Volunteers or maintenance personnel who have been properly trained may clean markers. It is a great way to employ many volunteers in a useful and fulfilling activity. Training sessions can be quick and should take place on-site by an experienced cleaner who can assist in the identification of weak markers and supervise cleaning activities.



**How to Clean:** If there is truly a determined need to clean a stone, you need only four tools: a wooden stick, a soft bristle brush, a bucket, and water. With those four tools, here are five basic steps to cleaning:

1. On stable stone surfaces, brush or scrape off algae, lichen, and fungus before washing. Always use scrapers that are softer than the stone, such as a wooden popsicle stick or caramel apple skewer. Most surfaces, however, will require wetting the growth before gently brushing, prying, or scraping it off the stone.
2. After getting the worst of the biologics off the marker, thoroughly wet the stone with clean running water or a garden sprayer. The water will wash away some of the dirt and biological material. Pull plants gently from cracks or clip them, and then brush away soil and debris from the stone. If there is a mass of plant life, do not yank the plant out, you will almost certainly damage the stone. Carefully clip and pluck each section to prevent pulling away any loose or weakened stone fragments.
3. Gently scrub the stone with very light pressure in a circular motion using a nylon or natural soft-bristle brush to remove soil and biological growth from the stone. Work from the bottom of the stone up toward the top – this prevents staining and streaking as clean water flows downward. Do not use a dry brush as the abrasion from a dry brush can cause damage by removing the upper layers of the stone. Constantly dunk your brush in a bucket of water, or better, allow a water hose to run on the stone as you brush.
4. Rinse your brush frequently. Do not abrade the stone by dragging dirt, sand, stone particles across the surface you are cleaning. If a gravestone is particularly dirty, change your bucket of water frequently, so that you are not dipping your brush into a suspended solution of grit and biological matter.
5. When done, rinse the stone thoroughly with water. Step back and admire your work.

**Detergents:** There is one detergent that has been accepted by many cemetery professionals and the National Park Service as the most effective yet gentlest stone cleaning solution today, [D/2 Biological Solution](#). D/2 is an anti-biologic, so it works on organics such as moss, lichens, fungus, etc. And it will keep working over time beyond the initial cleaning. Here is how HPNW recommends you use D/2:

1. First, perform the five steps under How to Clean, including stepping and back and admiring your work. If the stone still has strongly embedded organics after initial cleaning, try using D/2.
2. Spray D/2 on the damp stone, covering completely, and allow 5-10 minutes to work.
3. Lightly scrub the D/2 into the entire stone keeping the stone damp with the D/2.
4. Rinse the entire stone thoroughly with clean water.
5. Step back, admire your work once again, and come back in a month and see if the stone looks even cleaner. D/2 is a good item to experiment with in your cemetery.

**Resources:** The Chicora Foundation has a good page (<http://www.chicora.org/cleaning.html>) devoted to the most current theory and products for cleaning stones.

Libman makes several models of nylon scrub brushes that we prefer. Long lasting, not too stiff, and available everywhere. We like the long-handled model best with a small, roundish head.

D/2 Biological Solution can be obtained through many outlets, though none on the West Coast. LimeWorks (<https://limeworks.us/product/d2-biological-solution/>) and Atlas Preservation (<https://atlaspreservation.com/>) sell it, and it can be found on Amazon and eBay. It is not cheap – around \$20 for a quart spray bottle; however, a little goes a long ways and a spray bottle applicator is best.