

Historic Gravestone Restoration and Cleaning

The following is a compilation of **DOs** and **DONTs** for gravestone and cemetery restoration and cleaning. Well meaning volunteers performing simple cleaning or restoration can damage a stone beyond repair. Only perform tasks for which you have received proper training.

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Basic Cemetery and Gravestone Restoration

Volunteers can

- Document the location of gravestones within the cemetery including transcription of stones, the layout of plots, and basic assessment of gravestone condition
- Use photography (see below) to document gravestone transcription, location and condition
- Mow and trim grass and planting in the cemetery

With proper training, volunteers can

- Clean gravestones
- Straighten gravestones
- Reset fallen gravestones

Call a professional when

- the stone is broken into several pieces
- the stone is too heavy to pick up without damaging it or you
- the stone is already damaged or the integrity of the stone is compromised (eg spalling, delaminating, sugaring)

NEVER REMOVE PIECES, PARTS, OR INTACT GRAVESTONES FROM THEIR ORIGINAL PLACE IN THE CEMETERY. Gravestones should always remain in their original location in the cemetery to prevent further damage to the stone, to prevent being lost, and to mark the location of the grave.

Photography

- **NEVER** use any product (shaving cream, bleach, corn starch, flour, chalk, etc) to read or photograph a gravestone.
- **NEVER** touch a gravestone when reading or photographing it.
- To read or photograph a gravestone that is difficult to see, **use a mirror**. For this to work, go to the cemetery before noon on a day with plenty of sun and no clouds. Angle the mirror in front of the stone, reflecting the sunlight over the stone using a raking light technique. This allows shadows to form in the letters and symbols on the stone, making it easier to read and photograph.
- Alternately, go to the cemetery on a dark, cloudy day or at night, and **use a flashlight**. LED flashlights work best. By holding the light on the side of the gravestone, the same raking light effect appears, and makes the inscription easier to read.

Mowing and Trimming Grass and Planting

- **When mowing**, be sure to aim the grass clippings away from the stones. Grass sticking to the stone can cause staining, damage from erosion, and biological growth on the stone.
- **When mowing**, never let the lawn mower touch the stones. It is better to let the grass close to the stone grow, than to get so close the stone is damaged.
- **When trimming** with a weed whacker, be sure not to touch the stone with the string. This cause damage to the stone with scratches and eventual weakening of the stone structure causing delamination.
- **NEVER** let bushes, trees or large plantings get too large when located directly next to a gravestone. The roots can cause the gravestones to fall over and increases the biologic growth on the stone. Vines growing on a stone also affect the integrity of the stone.

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Restoring

- **NEVER** attempt to reset, restore or fix a gravestone unless you have had the proper training.
- **NEVER** use steel straps, bolts, pins, etc to restore a gravestone.
- **NEVER** use Portland cement, concrete, epoxies, caulk or automotive glue to repair a gravestone.
- **NEVER** jam rocks around the edge of a gravestone in an attempt to make it stand straight.
- **NEVER** use metal shovels or trowels when digging around a gravestone. Only plastic trowels and wooden tamps should be used to prevent scratching the stone.

Cleaning

- **NEVER** use any household products (bleach, ammonia, orange clean, 409, etc) to clean gravestones
No matter how mild you think it is or what the internet says
- **NEVER** use sandpaper, hard bristle or wire brushes, or metal tools of any kind
- **NEVER** use a power washer to clean stones, this can cause sugaring
- **USE soft bristle brushes** - If the brush is not soft enough to scrub your face, do not use it.
- **USE** plastic or wooden tools to prevent scratching the stone
- The only recommended wash for cleaning gravestones is **D2 biologic product**.
 - D2 was developed by conservators, who know the damage that can be done by cleaners containing acid or salts. D2 has been specially formulated without these harmful agents. D2 is a nearly pH-neutral quaternary ammonium solution with surfactants that help carry surface contaminants away. No other solution is more trusted by architectural and monument conservators.
 - D2 has been successfully used to remove staining from a variety of surfaces including natural stones such as marble, granite, limestone, sandstone, slate; masonry surfaces such as brick and cast stone; concrete; wood; aluminum and vinyl siding; and canvas.
 - D2 has been successfully used to clean millions of buildings and monuments. From the White House to Arlington Cemetery, D2 is trusted to work and keep on working when results matter.
- **List of recommended supplies for each group**
 - (2) 1 gallon sprayers (1 for water, and 1 for D2)
 - 1 gallon D2 biologic wash
 - Plenty of clean water, amount is dependent on number of stones to be cleaned

NOTE: Rain water is best or good well water without iron or sulfur or metals
Municipal water may contain additives (chlorine, fluoride, etc) and well water that is softened contains salt that can discolor or damage the stones
- **List of recommended supplies** for each volunteer present to clean stones
 - 2 to 3 gallon plastic bucket
 - plastic paint scrapers
 - nylon bristle tooth brush
 - wooden craft sticks
 - plastic spray bottle

Cleaning Procedure

- Be sure to select a date that is well after the last frost date in the spring and well before the first frost date in the fall.
It is critical that a frost not occur within 48 hours of the cleaning, due to water saturation of the stone.
- Select a stone to be cleaned; Do Not attempt to clean a stone that is damaged in any way
- Dilute D2 with water (60% D2, 40% water) in gallon spray bottle
- Saturate the stone with clean water, followed by saturation with D2/water mixture
- Wait 20 to 30 minutes
- Begin cleaning using plastic scraper, and large brush rinsing with clean water as needed
- Continue cleaning using tooth brush, and craft sticks to reach smaller places
- Rinse the stone with clean water

Alternately, saturation with water followed by full strength D2 may be performed without any scrubbing but the results are not immediately obvious and may or may not produce the same level of cleaning in the long term.

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D2 can be purchased from the following:

LimeWorks.us

Andrew deGruchy
(215) 536-6706
admin@limeworks.us
www.limeworks.us
Pennsylvania

Current Prices (as of 6/5/2019)

Quart \$18.95

Gallon \$41.95

5 gallon \$189.00

55 gallon \$1890.00

Plus shipping