Cleaning Stone Grave Markers

Illinois Department of Natural Resources Cemetery Preservation Training
Cardinal Rules

- Do No Harm
- Don’t do anything that cannot be reversed
- When in doubt, contact your instructors
Activities Before Cleaning

- Read, research, ask questions
- Contact the Illinois Department of Natural Resources (IDNR)
- Get written landowner permission to enter the cemetery & IDNR permit to clean the marker
# Identify Types of Issues

<table>
<thead>
<tr>
<th>Natural</th>
<th>Man-made</th>
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<tbody>
<tr>
<td>Dirt</td>
<td>Air pollution (acid rain, carbon deposits)</td>
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<tr>
<td>Flora &amp; fauna</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Organic (algae, lichens, moss)</td>
<td>Treatment &amp; Repairs</td>
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<tr>
<td>Inorganic (paint)</td>
<td>Vandalism</td>
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<tr>
<td>Weathering</td>
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Steps

• Determine the problem
• Consider gentlest solution
• Follow acceptable methods
• Don’t expect a “like new” appearance
• Allow time to improve stone’s appearance
Leave these items at home…

- Bleach
- **All** household cleaners
- Abrasive pads
- Wire or stiff-bristle brushes
- Rotary wheels
- Metal scrapers
- Power washers
DO NOT Use Any of These

- TSP
- Borax
- Calgon
- Formula 409
- Spic and Span
- Fantastic
- Windex
- Woolite
- Liquid detergent
- Hydrochloric Acid
- Muriatic Acid
- Phosphoric Acid
  - Lime Away
  - Naval Jelly
- Oxalic Acid
- Sodium Chloride
- Sodium Sulfate
- Sodium bicarbonate
- Ammonium carbonate
Remember…

• Stay away from any product whose formula contains the words: **acid** or **sodium**.
• Do not rely on product label or advertising. Major brand name products are generally intended for household use.
• Do not rely on products whose instructions say to use it on dry stone.
• Be concerned if the product label contains health warnings.
• Improper cleaning products can cause serious and irreparable damage to stone.
Essential Toolkit

- Clean water source (2-3 gal. tank sprayer or hose)
- Soft-bristle brush
- Plastic scraper or wooden craft stick
- Plastic bucket
- Clean rags
- Safety glasses
- Gloves
Use white or natural bristle brushes
Safety First

• Use caution when working around leaning markers

• Some may appear stable but can topple easily
Check Condition of Stone
Check Condition of Stone

Safe to clean

Unstable – Do not clean
Photograph Before & After

• Photograph the stone before starting cleaning process

• Take a comparison photo 6+ months later
Remove Plant Growth

- Ivy, ferns & moss can deteriorate stone
- *Gently* pull plants from surface & out of cracks. Clip as needed but don’t yank roots from the stone
- Brush away any remaining soil or debris
- Clean as recommended below

*Use caution when working with poison ivy!*
Basic Washing

- Always pre-soak stone with water before cleaning
- Clean stone using water & soft brush
Start at Bottom…Work Upward

- Start with the back side
- Test a small area
- Clean from the bottom up
Elbow Grease

- Use small, circular motion
- Rinse often to keep stone moistened during cleaning
- Craft sticks are helpful when cleaning the inscription
- Use plastic scrapers to remove excess surface dirt & debris
Rinse, Rinse, Rinse

- Use lots of clean water...rinse often
- Use hose or garden tank sprayer
Biological Growth

- Algae, lichen, mold, fungi
- Traps moisture
- Acidic “roots” dissolves stone
- Solution?
Removing Biological Growth

- Pre-wet stone with clean water
- Use plastic scraper & soft brush to gently remove lichens or moss
- Rinse & clean with approved biological cleaner
Approved Biological Cleaner

- **D/2 Biological Solution**
- Easy to use
- “Immediate Result” method
- Safe for marble markers (pH of 9.5)
- Safe for environment
- Tested & approved by National Park Service
D/2 – “Immediate Result” Method

- Pre-wet surface (always pre-wet the surface even if product label says to apply to dry stone)
- Apply with brush, pump spray or spray bottle
- Allow to remain on surface for 3-5 minutes. Lightly spray with clean water or additional D/2 to maintain moist surface during this time
- Gently scrub surface
- Allow D/2 to remain on surface for additional 5-10 minutes, spraying to maintain moist surface
- Reapply D/2 and gently scrub surface
- Rinse thoroughly with clean water
D/2 Biological Solution

- D/2 Biological Solution can be applied full strength for heavy biological deposits
- It can also be diluted from 1:1 to 1:4 parts water by volume to remove light biological deposits
- Avoid splashing the liquid in your eyes
- The use of gloves and safety glasses is recommended even though this product has no specific hazards
- In most cases, this product keeps surfaces clean for up to a year
D/2 Biological Cleaner

Distributors
Bonstone Materials Corp., WI
http://www.bonstone.com/products/d/2

Granite City Tool, St. Cloud, MN
http://www.granitecitytool.com/

Lime Works, Telford, PA
http://www.limeworks.us

Granite City Tool, Barre, VT
http://www.granitecitytoolvt.com

Bicknell Supply, Elberton, GA
http://www.bicknellsupply.com/
Improvements

- Take “before” photograph of your work
- After cleaning, allow Mother Nature to improve your effort
- Sun, wind, and rain will continue to clean the stone
- After 6+ months, take another photograph and compare it with the “before” photos
- Only clean stone every 5-10 years, if needed
Questions?

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• https://www2.illinois.gov/dnrhistoric/Preserve/Cemetery/Pages/default.aspx

• Photo credits & content: Dawn Cobb (IDNR), Hal Hassen (IDNR) & John Heider