



Post-Disaster Recovery and Restoration of Historic Cemeteries

Disaster Planning and Response in Historic Texas Cemeteries

Zoom Webinar Housekeeping

- Trouble with computer audio? Try using your phone instead.
 - 1-346-248-7799 Webinar ID 895 6215 2946
- All attendees are in listen-only mode
- This session is being recorded for later viewing
- Use the **chat box** to
 - Ask for help
 - Make comments during the presentation
 - Share links or tips
- Use the **Q & A box** to
 - Ask the presenters a question
 - We'll answer them live at the end of the presentation



Webinar Series Introduction and Overview

Online Training Series: Disaster Preparedness & Response for Historic Cemeteries

- **Goal:** Provide cemetery caretakers with the knowledge and skills necessary to build greater resiliency to withstand and recover from future disasters
- **Timeline:** Summer 2021 – Summer 2022
- **Project Team:** Led by Terracon Consultants, Inc.
- **Program:** Six webinars + six stakeholder meetings



Rockport Cemetery, Aransas County

Instructional Webinars

1. Lay of the Land: Cemetery Orientation
2. Cemetery Survey and Data Collection
3. Risk Assessment & Pre-Disaster Planning
4. Immediate Response to Natural Disasters, plus Preservation Funding
5. Post-Disaster Recovery & Restoration
6. People's Choice – Building Resiliency in Historic Texas Cemeteries

Stakeholder Meetings

- Highly interactive
- Group discussions
- Feedback opportunities



McGaffey Cemetery, Jefferson County

Stay Up to Date!

www.thc.texas.gov/Harvey-cemeteries



Post-Disaster Recovery and Restoration of Historic Cemeteries

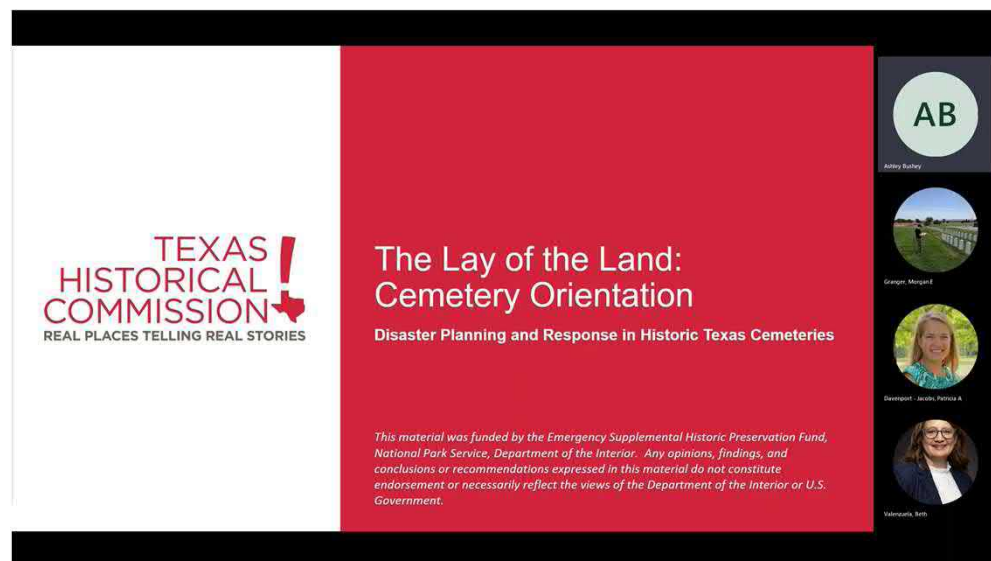
Disaster Planning and Response in Historic Texas Cemeteries

This material was funded by the Emergency Supplemental Historic Preservation Fund, National Park Service, Department of the Interior. Any opinions, findings, and conclusions or recommendations expressed in this material do not constitute endorsement or necessarily reflect the views of the Department of the Interior or U.S. Government.

Webinar 1

Lay of the Land: Cemetery Components, Cultural Practices, and Materials

- Recognize the physical components of cemeteries beyond grave markers
- Recognize common cultural funerary practices and recognize items located at gravesites may reflect cultural traditions that should be determined prior to removal or disturbance of these features
- Understanding of basic cemetery safety practices.



Webinar 2

Survey and Data Collection

- Historic significance of cemeteries and be able to convey the essential history contained in cemeteries to community stakeholders and potential funding partners.
- Baseline understanding of cemetery documentation methods
- Pre-disaster documentation strategies and data protection methods.

The screenshot shows a webinar slide with a white background on the left and a red background on the right. On the white background is the Texas Historical Commission logo. On the red background, the title 'Survey and Data Collection' is displayed in white, followed by the subtitle 'Disaster Planning and Response in Historic Texas Cemeteries'. Below this is a disclaimer in small white text. On the right side of the slide, there is a vertical stack of four circular icons: a portrait of a woman, a landscape photo, a circle with the letters 'AB', and another portrait of a woman.

TEXAS
HISTORICAL
COMMISSION
REAL PLACES TELLING REAL STORIES

Survey and Data Collection
Disaster Planning and Response in Historic Texas Cemeteries

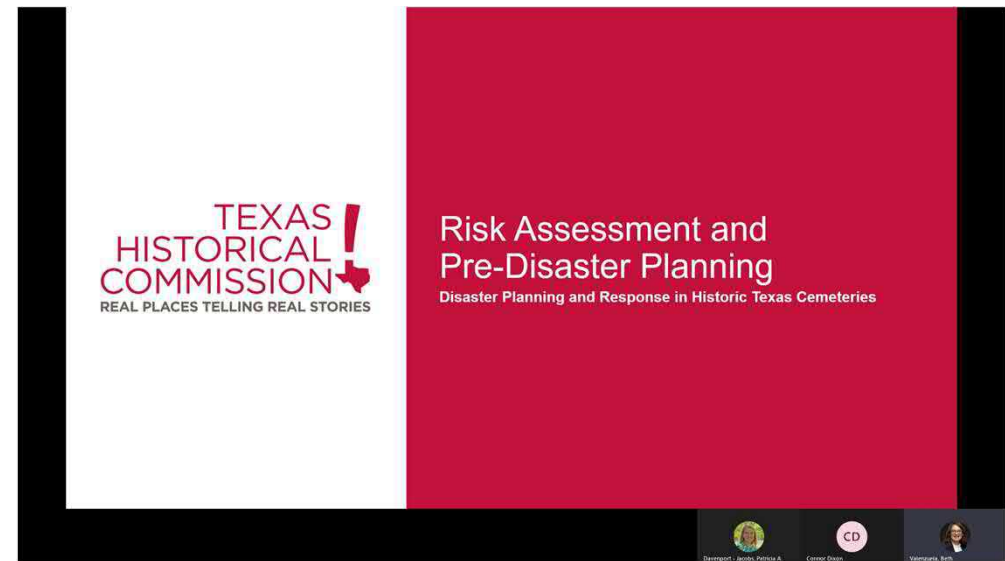
This material was funded by the Emergency Supplemental Historic Preservation Fund, National Park Service, Department of the Interior. Any opinions, findings, and conclusions or recommendations expressed in this material do not constitute endorsement or necessarily reflect the views of the Department of the Interior or U.S. Government.

Overstreet, Jessica, Patricia A.
Greene, Morgan E.
AB
Ashley Buckley
Vannoy, Beth

Webinar 3

Risk Assessment and Pre-Disaster Planning

- Potential threats to the cemetery from natural disaster events and identification tools
- Maintenance, landscape, and pre-disaster preparedness plans and mitigation strategies
- Tools for implementing pre-disaster mitigation plans including basic through comprehensive measures



Webinar 4

Sound the Alarm! Natural Disasters, Immediate Response, and Preservation Funding

- Unique safety considerations when working in a post-disaster cemetery environment
- Tools for identifying appropriate post-disaster response actions
- Post-disaster documentation
- Funding support and technical assistance

TEXAS
HISTORICAL
COMMISSION
REAL PLACES TELLING REAL STORIES

Sound the Alarm! Natural Disasters, Immediate Response, and Preservation Funding
Disaster Planning and Response in Historic Texas Cemeteries

This material was funded by the Emergency Supplemental Historic Preservation Fund, National Park Service, Department of the Interior. Any opinions, findings, and conclusions or recommendations expressed in this material do not constitute endorsement or necessarily reflect the views of the Department of the Interior or U.S. Government.

Wendy Cole, BPH

Deborah L. Smith, PHD

CD

Corinne Owen



Tivydale Cemetery – Gillespie County

Learning Objective 1

- Participants will have tools to recognize typical disaster related deterioration mechanisms.

Learning Objective 2

- Participants will understand basic restoration/conservation strategies.



Lamar Cemetery – Aransas County



Broadway Cemetery, Galveston County

Learning Objective 3

- Participants will gain understanding of when a professional is required for the proposed work.

Learning Objective 4

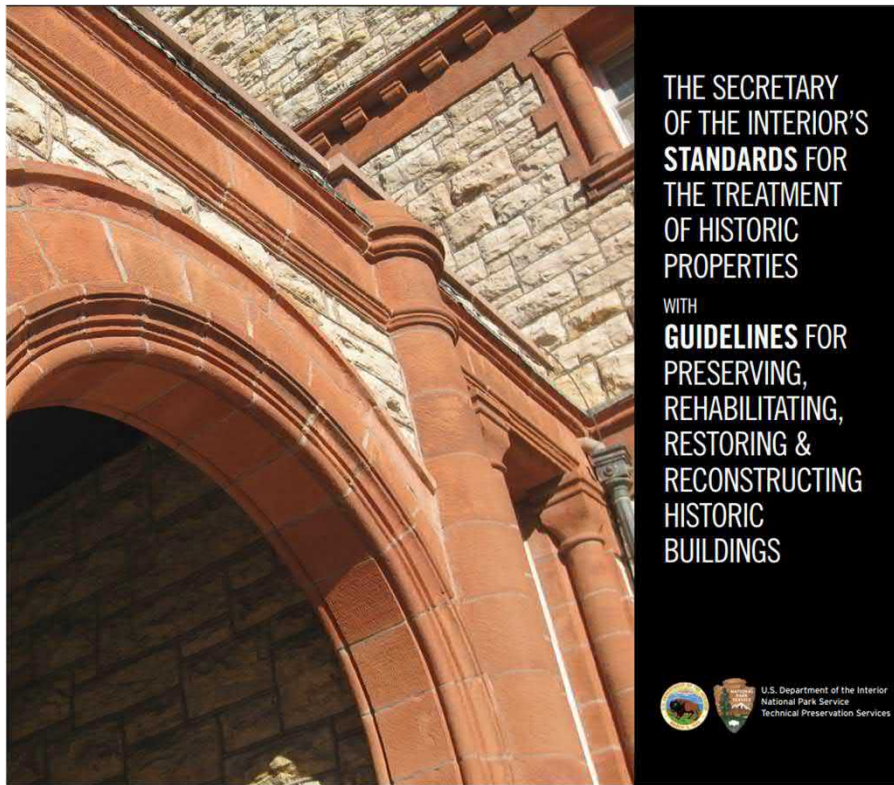
- Participants will understand the safety concerns for restoration type work



Port Bolivar Cemetery, Galveston County

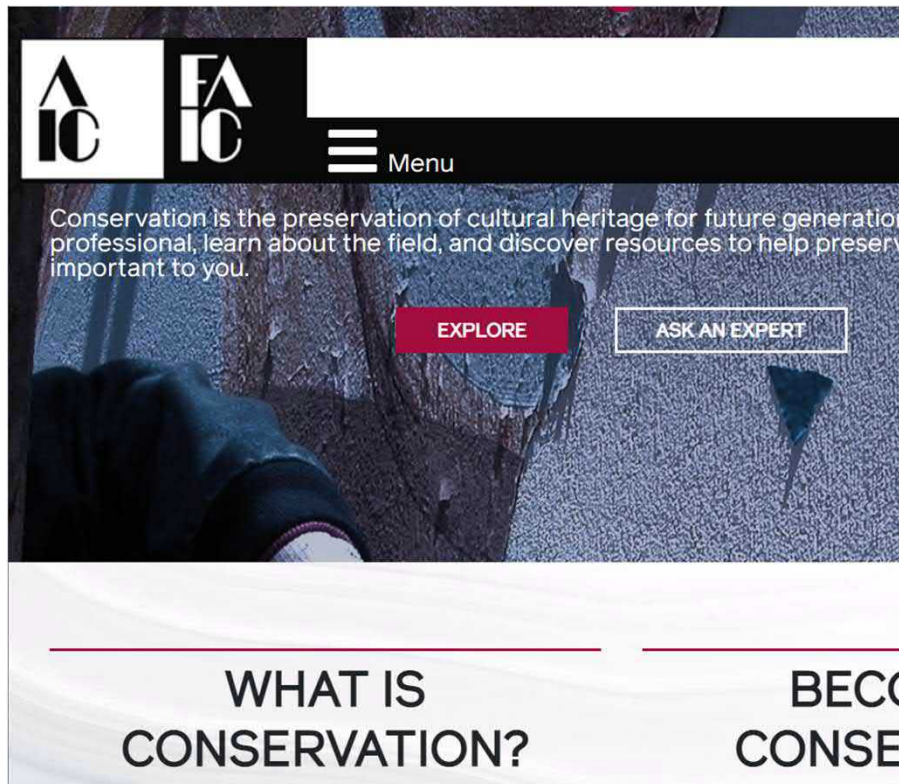


Pace Cemetery Post Ike— Jefferson Co



Standards for Restoration

- Secretary of the Interior's Standards for the Treatment of Historic Properties



Standards for Restoration

- Secretary of the Interior's Standards for the Treatment of Historic Properties
- American Institute for the Conservation of Historic and Artistic Works

Steps for Cemetery Restoration Projects

Cemetery Condition Assessment

- 20 markers broken
- 15 markers intact but displaced
- Roof damage to sexton's office (complete replacement)
- Erosion damage at 5 burial sites
- Erosion damage at pedestrian walkways (1500 linear feet)
- Fence replacement - 500 linear feet
- Fence repair - 2500 linear feet

Repair Projects Timeline

- Stone Conservator - 6 months
- Roof replacement - 2 months
- Sitework to correct erosion and drainage - 6 months
- Fence repair and replacement - 6 month lead-time on replacement components; 2 months to install once on-site

Phased approach

- Condition assessment
- Work plan
 - Narrative scope of work
 - Quantified repair items
 - Cost proposals
- Restoration project(s)
 - Can be phased according to funding and assistance availability



McGaffey Cemetery – Jefferson Co.

What is the cause of damage?

- Conduct a comprehensive assessment prior to any work
- Assess the resource to assure material and structural stability
- Before implementing conservation techniques, understand the causes for deterioration and failure



Old City Cemetery – Jacksonville, Florida

Safety Considerations

- Be aware of hazards identified as part of your initial site assessment
- Compromised subsurface resources (burial vaults) may not be apparent initially
 - Material failure
 - Impact from machinery or debris
 - Human interaction
 - Vegetation

Common damage and deterioration types

- **Freeze – thaw**
- **Water**



Oakland Cemetery – Atlanta, Georgia

Common damage and deterioration types

- Freeze – thaw
- **Water**



Tivoli Cemetery – Refugio County

Common damage and deterioration types

- **Construction failure**
- Material failure



Rockport Cemetery – Aransas County

Common damage and deterioration types

- **Construction failure**
- **Material failure**



Old City Cemetery – Jacksonville, Florida

Common damage and deterioration types

- **Construction failure**
- **Material failure**



Old City Cemetery – Jacksonville, Florida

Common damage and deterioration types

- Construction failure
- **Material failure**



Old City Cemetery – Jacksonville, Florida

Common damage and deterioration types

- Incompatible materials and/or poor previous repairs



Broadway Cemetery – Galveston County

Common damage and deterioration types

- Incompatible materials and/or poor previous repairs



Old City Cemetery – Jacksonville, Florida

Common damage and deterioration types

- Incompatible materials and/or poor previous repairs



Old City Cemetery – Jacksonville, Florida

Common damage and deterioration types

- **Impacts (machinery, debris)**
- Disruptions due to root systems or similar vegetation



Rockport Cemetery – Aransas County

Common damage and deterioration types

- Impacts (machinery, debris)
- **Disruptions due to root systems or similar vegetation**



Liberty City Cemetery – Liberty County



Rockport Cemetery – Rockport, Aransas County

Important Components and Considerations

- Address post-disaster treatments to bring cemetery and its elements back to pre-disaster state
 - Same treatments can be done on monuments pre-disaster and as necessary
- Emergency stabilization may be needed while awaiting repairs
- Prioritize list of repairs to be undertaken based on funding and assistance availability



Restland Memory Park – Nueces County

Important Components and Considerations

- **ALWAYS** use the gentlest method to clean or repair
- **ALWAYS** make repairs reversible
- **ALWAYS** use tools and materials according to the manufacturer's instructions



Lamar Cemetery – Aransas County

Common treatments post-disaster

- Stabilization
- Cleaning
- Repointing/Joint Repair
- Resetting



Broadway Cemetery – Galveston County

Stabilization

- Stabilize while awaiting repair actions to avoid/minimize additional damage
- Not just markers and monuments – stabilization can include structures and site elements



Orchard Cemetery – Fort Bend County

Cleaning Considerations

- How will cleaning affect the monument?
 - Will the soiling accelerate deterioration?
 - Will it cause loss of original materials?
 - Will it affect long-term stability?



Restland Memory Park – Nueces County

Cleaning Considerations

- Cleaning may trigger additional repairs
 - Know your materials
 - Identify the element is being cleaned (organic, inorganic)
 - Gentlest method first
 - Test the cleaning materials before full use
 - When in doubt, do nothing!

- Cleaning video demonstration



Lamar Cemetery – Aransas County

Repair Considerations

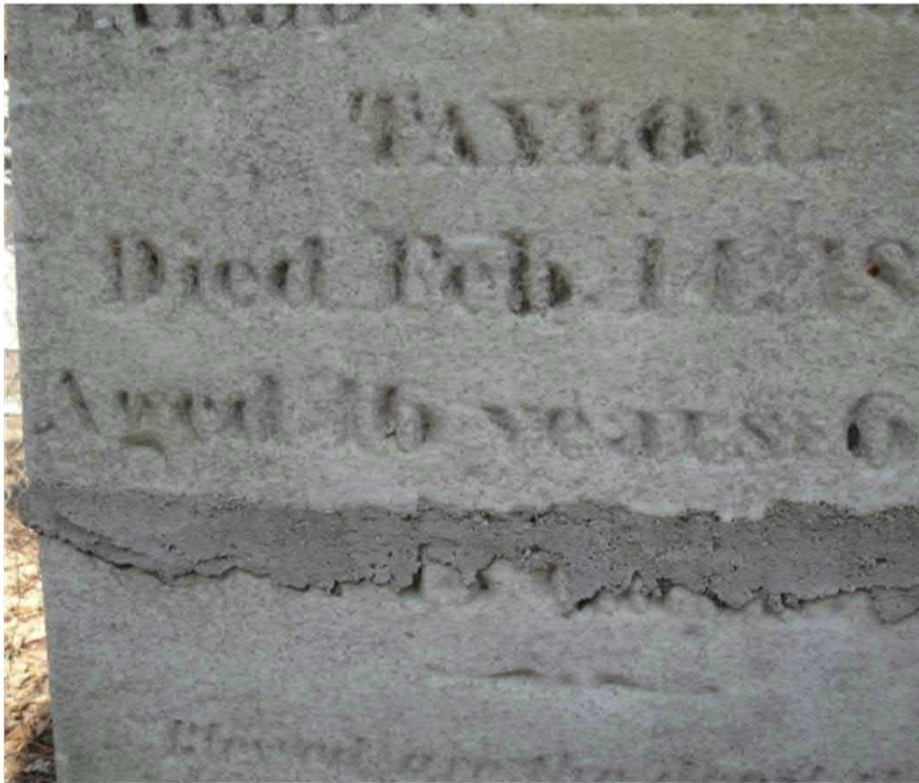
- Consider the materials before deciding on repair materials
- Differences in strength and permeability will affect the repair and resource longevity



Damage to historic brickwork by Portland cement repointing

Repair Considerations

- Historic bricks, stone, and mortar are not compatible with most contemporary materials.
 - Avoid using Portland cement-based products such as Quickcrete



Damage to historic grave marker by Portland cement repair

Repair Considerations

- Historic lime-based mortars are softer than today's readily available concrete mixtures
 - Procure historic mortar from a reputable company
 - Slaked (wet) lime should ONLY be handled by qualified individuals as it has a chance to burn the user and/or explode if not mixed properly
 - Source materials such as sand near production location of mortar



Epoxy repair to damaged headstone, completed in controlled environment

Epoxy Repairs

- Epoxy repairs are **virtually irreversible** and should only be conducted when absolutely necessary
- These repairs should be handled by a trained professional

- Repointing/Joint Repair video demonstration



Old City Cemetery – Jacksonville, Florida

Resetting Considerations

- Should only be done within your limits. Resources are heavy and should not be lifted without appropriate ability, assistance, or equipment.

- Resetting video demonstration

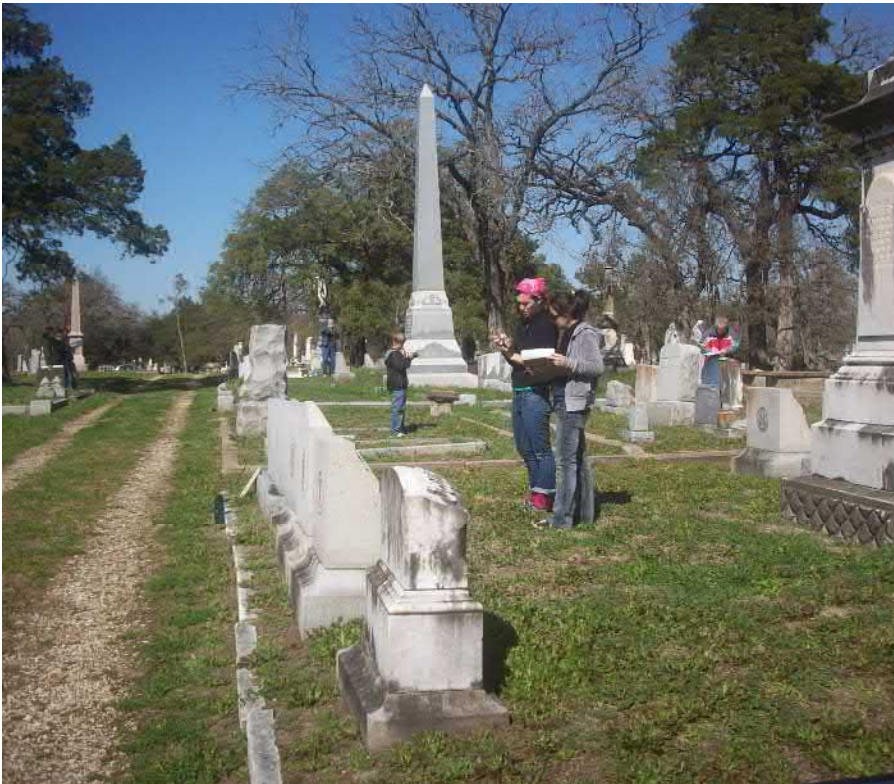
Volunteer versus Professional assistance



Crenshaw Cemetery – Galveston County

Properly trained volunteers can help with:

- Maintenance activities
- Debris cleaning
- Cleaning of markers
- Minor stabilization



Oakwood Cemetery – Travis County

Considerations when using volunteers

- Record of volunteer activities (when, what, where)
- Record cleaning methods and locations
- Make sure volunteers have proper training for the tasks they are conducting

What to Ask

When selecting a conservator, seek sufficient information on the individuals under consideration. Ask for the following information:

- > What is your background?
- > What training have you completed?
- > How long have you been a practicing professional?
- > What is the scope of your practice? Is conservation your primary activity?
- > What is your experience in working with my kind of object?
- > What is your involvement in conservation organizations?
- > What is your availability?
- > What are references and previous clients?

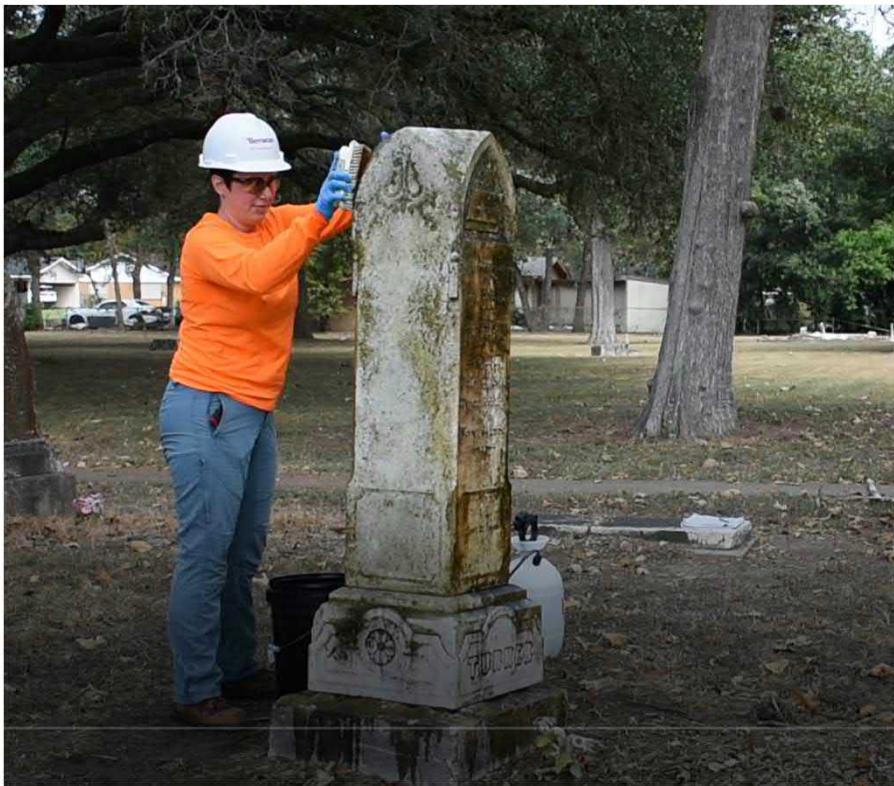
What to Expect

When you have selected a professional, you should expect the following standard practice and your experience in working with them:

- > **Procedures:** A conservator will want to examine the object before suggesting a treatment. Prior to beginning a treatment, the conservator should provide for your approval a written preliminary examination report with a description of the treatment, expected results, and estimated cost. The conservator should consult during the treatment if any serious deviation from the agreed-upon proposal is

KNOW YOUR LIMITS

- Know when to call a conservator or similarly qualified individual
- List contacts within your post-disaster plan
- Relationships should be built prior to a disaster



Old Hallettsville Cemetery – Lavaca County

KNOW YOUR LIMITS

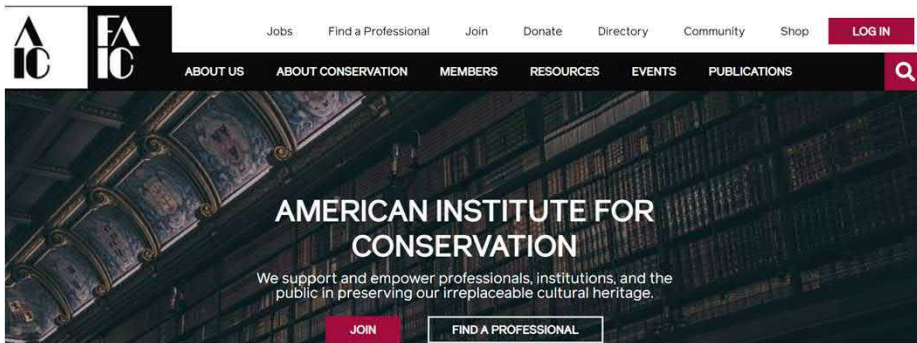
- Conservation, preservation, and restoration work should be done by an **appropriately qualified individual**
 - Architectural or artistic conservator
 - Preservationist
 - Preservation architect
 - Mason specializing in historic materials/structures.



Lamar Cemetery – Aransas County

KNOW YOUR LIMITS

- For complex restoration projects, documentation of the resource in-situ may be required
- Especially if an advanced repair needing a climate-controlled environment is required
- Resource's placement, orientation, and setting should be thoroughly documented and photographed prior to removal of the resource from site.



OUR CODE OF ETHICS

PREAMBLE

The primary goal of conservation professionals, individuals with extensive training and special expertise, is the preservation of cultural property. Cultural property consists of individual objects, structures, or aggregate collections. It is material which has significance that may be artistic, historical, scientific, religious, or social, and it is an invaluable and irreplaceable legacy that must be preserved for future generations.

In striving to achieve this goal, conservation professionals assume certain obligations to the cultural property, to its owners and custodians, to the conservation profession, and to society as a whole. This document, the Code of Ethics and Guidelines for Practice of the American Institute for Conservation (AIC), sets forth the principles that guide conservation professionals and others who are involved in the care of cultural property.

CODE

1. The conservation professional shall strive to attain the highest possible standards in all aspects of conservation, including, but not limited to, preventive conservation.

KNOW YOUR LIMITS

- Resources for finding a conservator
 - American Institute for Conservation of Historic and Artistic Works (AIC)
- Standards for conservation work
 - NPS - Secretary of the Interior's Standards for the Treatment of Historic Properties
 - AIC - Standards of Practice and Code of Ethics
 - Department of Veteran Affairs (VA) - setting standards



Tivydale Cemetery – Gillespie County

- Recognize typical disaster related deterioration mechanisms

- Understand basic restoration/conservation strategies



Lamar Cemetery – Aransas County



Broadway Cemetery, Galveston County

- Understand when a professional is required for the proposed work

- Understand the safety concerns for restoration type work



Port Bolivar Cemetery, Galveston County

- Handouts
 - Hazard Safety Sheet
 - Restoration recordation form/conservators report
 - Webinar 5 Slides
- Resources
 - Preservation/Restoration/Rehabilitation Standards
 - Cleaning Procedures/Standards
 - Resetting and Repair
 - Material Specific Repair



Webinar Series Information

Stay Up to Date!

www.thc.texas.gov/Harvey-cemeteries



Questions?

Next time... Building Resiliency in
Historic Cemeteries

a Terracon Pinyon production