Evaluation of Historic Resources following an Earthquake or Fire

Milford Wayne Donaldson, FAIA
California State Historic Preservation Officer

Disaster Training for Cultural Resources
Marconi Center
February 2 - 6, 2009
Field manual: postearthquake safety evaluation of buildings

Field manual: safety evaluation of buildings after windstorms and floods
Technical Brief 20: Archeological Resource Damage Assessment: Legal Basis and Methods

Martin E. McAllister, Archaeological Resource Investigations, Missoula, Montana


Foreword, by Francis P. McManamon, Chief Archeologist, NPS; Departmental Consulting Archeologist, DOI

This technical brief describes and explains the archeological resource damage assessment process. The legal foundation for and the necessity of archeological damage assessments is described, as are the procedures for field damage assessment, value and cost determinations, and report preparation. Archeologists, attorneys, and law enforcement specialists involved in investigations of crimes against archeological resources must understand clearly the archeological resource damage assessment process and how to carry it out correctly. The credibility of these damage assessments directly affects the outcome of legal cases and the criminal or civil penalties imposed.

In November 2002, a new sentencing guideline issued by the United States Sentencing Commission became effective. This document, entitled, “Cultural Heritage Guideline,” provided the federal judicial system with consistent, rational procedures for developing potential sentences for those convicted of crimes involving cultural heritage resources, including various kinds of archeological resources. Prohibited activities include, among other things, damage to or destruction of archeological resources, unauthorized removal of artifacts, features, or other components from protected sites, theft, and illegal trafficking.

The cultural heritage guidelines make use of the concepts of “archeological value,” “commercial value,” and “the cost of restoration and repair.” All of these terms, as they are used in a formal legal context, are defined either in the Archaeological Resource Protection Act (ARPA), the federal law that most directly protects archeological resources, or the regulations that implement this law. Since ARPA, which became law in 1979, has been enforced, the ways in which these concepts and terms have been used has developed through their application in individual cases. After 25 years of practical use of these concepts, the synthesis of what had been learned through individual cases into a set of standards was warranted. Such general standards would be of use to archeologists, attorneys, and law enforcement personnel in federal agencies.
Figure 4: Example of a Cost of Restoration and Repair Table Format (Adapt as necessary based on circumstances of violation. Note that cost is shown only as an example.)

<table>
<thead>
<tr>
<th>Cost of Restoration and Repair</th>
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</thead>
<tbody>
<tr>
<td><strong>[Category / Line Item]</strong></td>
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<tr>
<td><strong>Emergency Restoration and Repair</strong></td>
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<tr>
<td>Examination and Analysis</td>
</tr>
<tr>
<td>Consultation</td>
</tr>
<tr>
<td>Consultation with SHPO</td>
</tr>
<tr>
<td>Consultation with THPO(s) or Other Parties</td>
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<tr>
<td>Stabilization</td>
</tr>
<tr>
<td>Labor</td>
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<tr>
<td>Materials</td>
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<tr>
<td>Preparation of reports</td>
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<tr>
<td>Emergency Restoration and Repair Subtotal</td>
</tr>
<tr>
<td><strong>Projected Restoration and Repair</strong></td>
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<tr>
<td>Repatriation</td>
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<tr>
<td>Curation</td>
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<tr>
<td>Projected Restoration and Repair Subtotal</td>
</tr>
<tr>
<td><strong>Total Cost of Restoration and Repair</strong></td>
</tr>
</tbody>
</table>

Archeological Resource Damage Assessment Report Preparation

The field damage assessment and value and cost determination procedures carried out and the findings of this process are presented in an archeological resource damage assessment report. The archeological resource damage assessment report is an extremely important part of the overall criminal case report or civil case documentation because it provides the information necessary to prove that the archeological elements of a violation of ARPA (criminal or civil) or other applicable statutes are met. The report also is the basis for the author’s testimony in a criminal or civil legal proceedings since it tells the attorneys involved in the case what this archeologist is prepared to testify about.

Report Topics
November 1, 2007

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer
Office of Historic Preservation Department of Parks and Recreation
1416 9th Street, Rm. 1442-7
Sacramento, California 95814

Re: Authorization of Applicant to Initiate Consultation

Dear Mr. Donaldson:

The La Jolla Band of Luiseño Indians, a potential Applicant for Federal assistance and entitled to participate as a consulting party, is authorized by the U.S. Department of Homeland Security’s Federal Emergency Management Agency to initiate consultation with your office, as prescribed in 36 Code of Federal Regulations Section 800.2(a)(3). FEMA remains responsible for all findings and determinations and will ensure that any document or study meets applicable guidelines and standards as are necessary or required by your office.

The applicant contact is:

Mr. Rob Roy
Cultural Resources Coordinator
La Jolla Band of Luiseño Indians
22000 Hwy 76
Pauma Valley, CA 92061
Phone: 619.540.8508
# PROJECT WORKSHEET

## APPLICANT CONCURRENCE FORM

<table>
<thead>
<tr>
<th>DECLARATION NO.</th>
<th>PROJECT NO.</th>
<th>FIPS NO.</th>
<th>DATE</th>
<th>CATEGORY</th>
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<tbody>
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</table>

**APPLICANT**

**LOCATION**

**SCOPE OF WORK**

Do you concur with the scope of work described on this Project Worksheet? **YES** ☐ **NO** ☐
If NO, provide statement of reasons and new scope of work. Additional pages may be attached.

**PROJECT COST**

Do you concur with the project cost on this Project Worksheet? **YES** ☐ **NO** ☐
If NO, provide statement of reasons and proposed project cost, including line item estimates. Additional pages may be attached.

**PROPOSED PROJECT COST $**

**SPECIAL CONSIDERATIONS**

Do you concur with the nine (9) findings of the SPECIAL CONSIDERATIONS QUESTIONS?
If NO for any of these, provide statement of reasons to support your position:

1. Insurance availability **YES** ☐ **NO** ☐
2. Located within a floodplain or wetlands **YES** ☐ **NO** ☐
3. Adjacent to a protected area **YES** ☐ **NO** ☐
4. Changes pre-disaster condition **YES** ☐ **NO** ☐
5. Hazard Mitigation Proposal **YES** ☐ **NO** ☐
6. Historic facility or site **YES** ☐ **NO** ☐
7. On or near pristine or undisturbed area **YES** ☐ **NO** ☐
8. Hazardous materials at or adjacent to facility **YES** ☐ **NO** ☐
9. Other environmental or controversial issues **YES** ☐ **NO** ☐

Statement of reasons for non-concurrence with Special Considerations finding(s) above. Additional pages may be attached.

**APPLICANT SIGNATURE**

**DATE**
FEDERAL EMERGENCY MANAGEMENT AGENCY
PROJECT WORKSHEET

PAPERWORK BURDEN DISCLOSURE NOTICE
Public reporting burden for this form is estimated to average 36 minutes. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the forms.
You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to:
Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, Paperwork Reduction Project (3067-0151). NOTE: Do not send your completed form to this address.

DECLARATION NO.  ________________
FEMA- __________-OR- __________

PROJECT NO.  ________________
FIPS NO.   ________________

DATE  ________________
CATEGORY

DAMAGED FACILITY

WORK COMPLETE AS OF:  ________________  ________________  ________________%

APPLICANT

COUNTY

LOCATION

LATITUDE

LONGITUDE

DAMAGE DESCRIPTION AND DIMENSIONS

SCOPE OF WORK

--

Does the Scope of Work change the pre-disaster conditions at the site?  □ Yes  □ No

Special Considerations issues included?  □ Yes  □ No  Hazard Mitigation proposal included?  □ Yes  □ No

Is there insurance coverage on this facility?  □ Yes  □ No

PROJECT COST

<table>
<thead>
<tr>
<th>ITEM CODE</th>
<th>NARRATIVE</th>
<th>QUANTITY/UNIT</th>
<th>UNIT PRICE</th>
<th>COST</th>
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</table>

TOTAL COST $0.00

PREPARED BY:

TITLE:

FEMA Form 90-91, SEP 98  REPLACES ALL PREVIOUS EDITIONS.
100th Anniversary Earthquake Conference
Commemorating the 1906 San Francisco Earthquake

Managing Risk in Earthquake Country
April 18 - 21, 2006 | The Moscone Center

An Affiliation of Earthquake Scientists, Engineers, and Emergency Managers
FEDERAL EMERGENCY MANAGEMENT AGENCY
PROJECT WORKSHEET
INSTRUCTIONS

The Project Worksheet must be completed for each identified damaged project.

Projects with estimated or actual cost of damage greater than $47,800 (FY 99) are large projects.
Projects with estimated or actual cost of damage less than $47,800 (FY 99) are small projects.

After completing Project Worksheets, submit the worksheets to your Public Assistance Coordinator.

Identifying Information

Declaration No.: Indicate the disaster declaration number as established by FEMA (i.e. "FEMA 1133-DR-TN", etc.).
Project No.: Indicate the project designation number you established to track the project in your system (i.e. 1, 2, 3, etc.).
FIPS No.: Indicate your FIPS number within this space. This is optional.
Date: Indicate the date the worksheet was prepared in MM/DD/YYYY format.
Category: Indicate the category of the project according to FEMA specified work categories. This is optional.
Applicant: Name of the governmental or other legal entity to which the funds will be awarded.
County: Name of the county where the damage is located. If located in multiple counties, indicate "Multi-County."
Damage Facility: Identify the facility and describe its basic function.
Work Complete as of: Indicate the date that the work was examined in the format of MM/DD/YYYY and the percentage of work completed to that date.
Location: This item can range anywhere from an "address," "intersection of..." "1 mile south of..." to "county wide." If damages are in different locations or different counties please list each location. Include latitude and longitude of the project if known.
Damage Description and Dimensions: Describe the disaster-related damage to the facility, including the cause of the damage and the area or components affected.
Scope of Work: List work that has been completed, and work to be completed, which is necessary to repair disaster-related damage.
Include items recorded on the preliminary damage assessment.
Does the Scope of Work change the pre-disaster conditions of the site: If the work described under the Scope of Work changes the facilities conditions (i.e. increases / decreases the size or function of the facility or does not replace damaged components in kind with like materials), check (✓) yes. If the Scope of Work returns the site to its pre-disaster configuration, capacity and dimensions check (✗) no.
Special Considerations: If the project includes insurable work, and/or is affected by environmental (NEPA) or historic concerns, check (✓) yes. If no opportunities for hazard mitigation exist check (✗) no. Appropriate action will be initiated and avoided delays in funding. Refer to "Applicant Guidelines for further information."
Hazard Mitigation: If the pre-disaster conditions at the site can be changed to prevent the disaster-related damage, check (✓) yes. If no opportunities for hazard mitigation exist check (✗) no. Appropriate action will be initiated and avoided delays in funding. Refer to "Applicant Handbook for further information."

Is there insurance coverage on this facility? Federal law requires that FEMA be notified of any entitlement for proceeds to repair disaster-related damages, from insurance or any other source. Check (✓) yes if any funding or proceeds can be received for the work within the Scope of Work from any source besides FEMA.

Project Cost

Item: Indicate the item number on the column (i.e. 1, 2, 3, etc.). Use additional forms as necessary to include all items.
Cost: If using the FEMA cost codes, place the appropriate number here.
Narrative: Indicate the work, material or service that best describes the work (i.e. "force account labor overtime", "42 in. Dia. RCP", "sheet rock replacement", etc.).
Quantity/Unit: List the amount of units and the unit of measure ("48"cy, "32"ft, "36"ea, etc.).
Unit Price: Indicate the price per unit.
Cost: This item can be developed from cost to date, contracts, bids, applicant's experience in that particular repair work, books which lend themselves to work estimates, such as RS Means, or by using cost codes supplied by FEMA.
Total Cost: Record total cost of the project.

Prepared By: Record the name and title of the person completing the Project Worksheet.

Record Requirements

Please review the Applicant Handbook for detailed instructions and examples.

For all completed work, the applicant must keep the following records:
• Force account labor documentation sheets identifying the employee, hours worked, date and location;
• Force account equipment documentation sheets identifying specific equipment, operator, usage by hour/mile and cost used;
• Material documentation sheets identifying the type of material, quantity used and cost;
• Copies of all contracts for work and any lease/rental equipment costs.

For all estimated work, keep calculations, quantity estimates, pricing information, etc. as part of the records to document the "cost estimate" for which funding is being requested.


Method of Estimating

The type of construction for the facility has a value of $100.00 per square foot; the building had a footprint area of 2,000 square feet; the building height was 3 stories; and there was 10% to 30% damage.

The dollar estimate of the damage would have a range:

$100.00 \times 2,000 \times 3 \times 0.1 = $60,000.00
$100.00 \times 2,000 \times 3 \times 0.3 = $180,000.00
Evaluation Criteria (Cont.)

3. P-Delta Effects

\[ M_S = P \times \Delta \]

\[ H = \frac{M_S}{h} \]

\( M_S \) increases \( \Delta \) which increases \( H \) and \( M_S \)
CALIFORNIA REPUBLIC

GO GREEN