

HISTORIC PRESERVATION SERIES



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ARCHAEOLOGICAL RESEARCH DESIGNS

Under Section 106 of the National Historic Preservation Act, properties eligible for the National Register of Historic Places under Criterion D (information important in prehistory or history) may be subjected to scientific data recovery as one means of mitigating an adverse effect. Under these circumstances, the lead federal agency develops a data recovery plan in consultation with the SHPO and ACHP (if ACHP chooses to participate). Work accomplished under an archaeological data recovery plan to resolve adverse effects should be guided by a research design that defines explicit goals and a methodology for reaching them. The research design should describe in greater detail the concepts and methods outlined in the data recovery plan. Both the data recovery plan and research design should be grounded in and related to the priorities established in regional, state, and local historic preservation plans, the needs of land and resource managers, academic research interests, and other legitimate public interests. For Section 106 projects, the federal agency prepares these documents in consultation with the SHPO and other stakeholders. The federal agency insures that they are consistent with the *Secretary of Interior's Standards for the Treatment of Historic Properties*, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, and the *Advisory Council on Historic Preservation's Treatment of Archeological Properties: A Handbook*.

Components of a research design:

- The results of previous research relevant to the project;
- Research problems or questions to be addressed, with an explanation of their relevance and importance;
- Field and laboratory analysis methods to be used, with justification of their cost-effectiveness and how they apply to this particular property and these research needs;
- Methods to be used in artifact, data, and other records management;
- Explicit provisions for disseminating the research findings to professional peers in a timely manner;
- Arrangements for presenting what has been found and learned to the public, focusing on communities that might have interest in the results;
- Plans for curation of recovered materials and records in accordance with 36 CFR part 79 (except for unexpected discoveries that may need to be considered pursuant to NAGPRA); and
- Procedures for evaluating and treating unexpected remains or newly identified historic properties discovered during the course of the project, including necessary consultation with other parties.

The research design in preservation planning:

The research design is essentially a documentation plan. It should include a statement of objectives based upon available preservation plans (including the Alaska Historic Preservation Plan), previous research, and existing knowledge on the resource class. The research design should discuss the amount and kinds of information required to address the objectives, and the methods used to gather the data. The discussion also should address when information becomes redundant and documentation efforts have reached a point of diminishing returns. Because archaeological investigations seldom are able to collect

and record all possible data, it is often necessary to focus on several data classes. The research design should include a justification for such decisions based on: (1) specific data needs, (2) time and funds available to secure the data, and (3) the relative cost efficiency of various strategies. Finally, the research design should discuss the relationship between the proposed investigation to the anticipated documentation or treatment of the property.

Documentation methods:

A research design should include detailed information on the methods to be used:

- *Background.* Archaeological documentation usually is preceded by or integrated with background information. This might include the identification of previous archaeological work; the inspection of museum collections; gathering of ancillary information from other disciplines such as botany and geology; archival research; and informant interviews. This background research may assist in directing the investigation, better understanding significant aspects of the property, and determining the project goals.
- *Field studies.* The goals of the research design must be flexible enough to accommodate unanticipated discoveries of new data classes or properties, as well as changing or unexpected field conditions. A phased approach is desirable when dealing with large complex properties or groups of properties. This allows for changes in emphasis or field strategy during subsequent phases. A phased approach also may be most cost effective, and allow for early termination of the program if goals are achieved ahead of schedule or are determined unrealistic.
- *Justification for methodologies and techniques.* Explicit descriptive statements, including a justification of field techniques, are important to provide a means of evaluating results. When possible, the choice of field sampling methods should be consistent with those used in previous studies to allow for comparability. It also is important to include full, clear, and accurate descriptions of all field operations and observations, including excavation and to record techniques and stratigraphic or inter-site relationships. Given the variety of possible methodologies and techniques that must be weighed against results and cost-effectiveness, the choices must be explained. This will allow the actual results to be measured against expectations, and the information applied later in similar cases.
- *Planning for the future.* When feasible, methodologies and techniques should consider the possibility that future researchers will need to use the recovered data to address problems not recognized at the time of data recovery.
- *Nondestructive / destructive methods.* Nondestructive methods are preferred over destructive methods, if portions of a property being documented will otherwise be left undisturbed. In cases where the property will be destroyed, however, it may be most practical to gather the needed data in the most direct manner, even though that may involve the use of destructive techniques.
- *Field logistics.* Field logistics (personnel and materials deployment, execution of sampling strategies) should consider site significance, the anticipated location of the most important data, cost-effectiveness, potential time limitations, and possible adverse environmental conditions.
- *Independent interpretation.* Record keeping should focus on the information needed for the analysis described in the research design. Field records (including photographs) should be maintained in a manner that permits independent interpretation, and should be standardized in format and level of detail.
- *Supervision.* Archaeological documentation should be conducted under the supervision of qualified professionals in the disciplines appropriate to the data that are to be recovered. The professionals should meet

the Secretary of the Interior's Professional Qualifications Standards appropriate to their field of expertise (36 CFR 61).

Analysis:

Analysis is integral to archaeological documentation and should be planned for in the research design:

- The research design should detail the proposed analytic methods for materials recovered in conjunction with the project;
- Techniques should be appropriate to the type of data to be collected and the objectives of the investigation;
- Forms of analysis may include but are not limited to the study of artifact types and distribution, radiometric or other means of age determination, studies of soil stratigraphy, studies of organic matter (fauna, pollen, shells, and seeds, etc.), studies of human remains, studies of soils, and studies of the natural environment in which the property appears.

Reporting:

The research design should describe provisions for disseminating research findings to professional peers in a timely manner, and arrangements for presenting what has been found and learned to the public, focusing particularly on the communities that may have interests in the results. The results should be made available to the full range of potential users.

Curation:

Archaeological specimens, samples, and records are the foundation of the documentary record of a site, and must be curated for future research, interpretation, preservation, and resource management. A research design should identify a repository that meets standards appropriate to the collection and owner. Because many curation facilities have limited space, facilities, and professional staff, it is not sufficient to simply identify a museum or repository without their approval. Some institutions require the applicant to submit a formal provisional curation request. It is becoming commonplace for facilities to charge a fee for curation, and this should be budgeted in overall project design.

Basic Resources:

- ACHP. *Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites*
- NPS. Secretary of the Interior's Standards for Archeological Documentation, in *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines [as amended and annotated]*
- NPS. Professional Qualifications Standards, in *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines [As Amended and Annotated]*