Best Practices for No-Collection Projects and In-field Analysis in the United States

The Archaeological Collections Consortium (ACC) includes representatives from the Society for American Archaeology (SAA), the Society for Historical Archaeology (SHA), and the American Cultural Resources Association (ACRA) who are focused on the use, preservation, and management of archaeological collections. A key ACC goal is to develop and act upon a common platform of objectives that seek to benefit the discipline and ultimately the public for whom archaeological collections are curated in the public trust.

The ACC is concerned about the growing trends of no-collection, in-field artifact analyses, and collections reburial[1]. The use of these practices is driven by several factors, including limited availability of collections storage space, costs of curation, pressure among agencies to reduce overall project costs, and concerns among some THPOs and tribes about how their patrimonies are being treated by others once archaeological objects are removed from a site. These practices negatively impact the types and breadth of archaeological collections available for present and future research, interpretation, and education. They impede the archaeologist's ability to analyze existing artifacts by using future research designs and methods and independently verifying results, actions which are critical to the credibility of an archaeological project and the scientific process in general. They also run counter to the professional ethics[2] of the organizations participating in the ACC.

Furthermore, these strategies are not justified in law, are rarely included in federal or state standards and guidelines, and very little has been published on these topics.[3] Statutory authority for recovery of archaeological material remains on federal land primarily comes from Sections 106 (compliance) and 110 (resource management) of the National Historic Preservation Act (NHPA) and the Archaeological Resources Protection Act (ARPA). These federal laws were enacted in recognition of the need to preserve and research the enormous historic, cultural, and scientific value that archaeological materials contain for the benefit of the American people. By specifying that such items located on federal land are the property of the federal government, and by systematizing the procedures for the excavation and handling of covered objects, ARPA sought to 1) protect the items from pillage, and 2) by doing so, better enable the American people to learn about and appreciate the lives of those who came before them. Likewise, the NHPA ensures that development considerations are balanced with preservation values, and confirms the public's interest in heritage preservation. Compliance agreements under Section 106 of NHPA require management considerations, which in many cases include archaeological data recovery and curation of the recovered collections. ARPA permits also govern archaeological data recovery and curation of the recovered collections. The federal regulations 36 CFR Part 79 then ensure that the recovered and analyzed collection is deposited in a repository that meets certain standards. Burial in the ground does not meet those standards.

The ACC is not aware of any published studies that explore the relative costs of no-collection and in-field analysis versus long-term curation to determine where the most significant expenses/savings occur

[1]Several of the terms used in this document are defined by the ACC in a compendium of definitions jointly published in The SAA Archaeological Record (2016, 16(1):41-43), SHA Newsletter (2015, 48(4):4-6), and ACRA's February Monthly Member Update (2017).

[2]ACRA Code of Ethics: http://acra-crm.org/code-of-ethics, SHA Ethics Principles: https://sha.org/about-us/ethics-statement/, SAA Principles of Archaeological Ethics: http://saa.org/AbouttheSociety/PrinciplesofArchaeologicalEthics/tabid/203/Default.aspx

[3] For exceptions, see Butler 1979; Griset and Kodack 1998; Heilen 2013; Heilen and Altschul 2013; Heilen et al. 2008; and Williams 2011. Only Butler 1979 and Heilen and Altschul 2013 are in peer-reviewed publications.

when both follow professional ethics and guidelines. No-collection strategies might actually cost agencies more than curation if sites must be revisited and reevaluated because collections are not available to verify artifact identifications and specific attributes of those artifacts. Additionally, even when artifacts are not collected during a project, the associated records, whether hard copy or digital, should be assembled as a collection and may be subject to curation fees (Childs et al. 2010; Drew 2010; Kintigh and Altschul 2010).

Various combinations of no-collection and in-field identification and analysis have been implemented, particularly in the western United States. It is unclear whether these practices were developed using data sets and studies about their benefits and drawbacks or whether an assessment was made of how these practices may run counter to historic preservation laws. The effectiveness and reproducibility of these practices and their impacts on the archaeological record and future research should be carefully considered by archaeologists and other stakeholders involved in an archaeological investigation.

Therefore, for all of the reasons stated above, the ACC strongly discourages the use of no-collection, in-field analysis, and collections reburial until further study can be done, with exceptions for the use of no-collection and in-field analysis in the following circumstances: when a site is subject to a HAZMAT situation (e.g., harmful contamination) and for projects that conform to selected types of surface survey only (e.g., water lines, culverts, power lines, pumphouses, microwave towers). For these few instances when the applications may be appropriate, the ACC offers the following best practices to provide guidance to stakeholders. The goal of these guidelines is to ensure that no-collection and in-field identification and analysis methods—when agreed upon, documented, and adopted—are implemented with appropriate care and ethical consideration. The ACC decided not to provide best practices on reburial at this time because the reasons for reburial and the methods used seem to be widely varied, unevaluated, and unpublished in the United States (an exception is Williams 2011 on reburial for conservation).

These best practices should be considered interim until more research is conducted on the history, legal foundations, and long-term impacts of no-collection and in-field identification and analysis on the archaeological process (see last section below). Primary stakeholders for these guidelines include government (federal, tribal, state, and local) archaeologists and resource managers, descendent communities, cultural resource management companies, academic archaeologists, students, and professional societies, all of which might participate in developing archaeological research designs.

The ACC also considers these best practices to provide a framework that can be adjusted to specific archaeological projects and, perhaps, state policies and guidelines. There is considerable regional variation in how prehistoric and historical archaeological investigations are undertaken across the United States, especially during survey projects, which can affect these practices. Factors, such as local flora, topography, and soil type(s), should be considered when choosing appropriate archaeological field methods, as should the guidelines presented below.

Best Practices for No-Collection and In-Field Analysis

- **Determine if a no-collection and/or in-field analysis and identification strategy is appropriate for the project**. Consider the following instances when these field methods might <u>not</u> be appropriate:
    - Projects where the discovered sites will yield artifacts that are difficult to identify, are unique, and/or will require precise artifact identification, such as chemical or microscopic analysis, to answer the research questions established for the project.

  - Projects where accurate artifact identification is critical to determine the eligibility of a site for listing in the National Register of Historic Places.
  - Projects where one or more sites are at a high risk of being destroyed through natural (e.g., erosion or climate change) or human (e.g., development or mitigation) causes.
  - Testing and data recovery projects, since the long-term research value of the well-documented contextual associations for these collections will be lost to science. Exceptions might be if a site contains burials or hazardous materials.

- **Prepare to curate the project records.** Field notes, maps, photographs, artifact data, background research for the project, and other records associated with any archaeological project are a crucial part of the resulting collection. For a no-collection project, the associated records will constitute the entire collection and, therefore, should be curated in a repository just like records that have associated artifacts. The associated digital records, including all the data about the artifacts found but not collected, should be curated in a repository that has well-established procedures for long-term preservation, management, and accessibility of digital records and data. For federal and many state projects, the collections must be curated in a repository that meets the standards in 36 CFR Part 79, and the repository must be identified prior to the start of fieldwork. It is strongly recommended that the repository is identified in the project report.

- **Consider no-collection and in-field analysis methods in agency or other program planning.** The use of no-collection and/or in-field analysis is usually decided during project scoping and are identified in a Request for Proposal for a contracted archaeological project or Scope of Work/Performance Work Statement. However, the efficacy of no-collection and/or in-field analysis needs to be considered at a programmatic level and should be addressed in agency/installation/university planning documents (i.e., Integrated Cultural Resources Management Plans). Agencies and university programs, in particular, should find opportunities to engage stakeholders in discussion and meaningful consultation regarding the merit of these methods, including during Section 106 consultation under the National Historic Preservation Act, to inform scoping of specific projects. Any positions of agreement and disagreement should be recorded in writing, used for future planning, and curated with the project's associated records. The following considerations related to no-collection and/or in-field analysis should be assessed by stakeholders during any opportunities for consultation:
  - The results of background research to identify the potential for archaeological resources, including previous land use; geomorphological processes that have affected the project area; previous archaeological investigations in the project area and surrounding area; and, when appropriate, historical sources (e.g., original maps, deeds, birth records). If no archaeology has been done in the area, then carefully consider whether no-collection and/or in-field identification and analysis is appropriate at all.
  - The results of examining existing collections from the project and surrounding area, if available, to determine the range of potential artifact classes and corresponding cultural time periods. If several artifacts were difficult to identify in the existing collections, then this information should be factored into the appropriateness of no-collection and/or in-field identification and analysis for the new project.
  - The proposed collection strategy (i.e., collection, no-collection, limited no-collection when diagnostics are kept, or no-collection with some sampling at a complex site) to be used, including the reasons for collecting versus not collecting artifacts that are appropriate to the project at hand.

- Details about the documentation process. This should include the qualifications of those who will be responsible for field analysis and artifact identification; the process that will be used to record the presence/absence and identification of the artifacts; and the standardized information that will be recorded about each artifact found.
- The location where artifact identification and documentation will be performed during the project (e.g., at the location of discovery, field laboratory, or non-field laboratory). A dedicated laboratory—a separated space away from the site itself—is recommended for artifact identification, analysis, and documentation to ensure that the process is performed accurately. Discuss the relative benefits of in-field vs. laboratory analysis, if the former is intended to be used.
- The method to be used to test the accuracy of in-field artifact identification and analysis (see "Verify Research Results" below).
- Final disposition of the recovered artifacts, including the rationale for, and location where they will be relocated at the site, if no-collection and/or in-field identification and analysis are used.

- **Develop a contingency plan.** All project scopes of work designed with a no-collection and/or in-field identification and analysis methods should have a contingency if, during the project, it becomes clear that the method(s) is not appropriate. For example, a survey anticipating late prehistoric sites might encounter an early Paleoindian component, which might justify modification of collection strategies. Therefore, project scopes of work should include:
  - Criteria that identify when no-collection and/or in-field identification and analysis should be reevaluated.
  - A clause in the Scope of Work and/or contract that allows the archaeologist performing the work to recommend a change in scope and, when applicable, allows the project proponent to modify the scope.
  - An alternate plan for collection recovery that would be triggered in these circumstances, including consideration of an appropriate budget and how funding would be acquired to carry out collection recovery, analysis, and curation.

- **Define appropriate in-field analysis procedures:** Many government agencies and some cultural resource management firms have a technical field manual for archaeological investigations. Such manuals should include the following information for projects involving no-collection surveys and/or in-field identification and analysis:
  - Explicit information on how to identify and record the potential artifact types, especially for prehistoric and early historical period sites (e.g., pre-industrial). Since artifact types vary by region across the United States, pertinent resources to assist with this step are available through State Archaeologists, State Historic Preservation Offices, Tribal Historic Preservation Offices, state historical societies, and others. Provide a full citation to any books or articles from which typological definitions are derived.
  - Standardized forms for each anticipated artifact type for field technicians to record key information about each artifact found, including, but not limited to: provenience, including descriptive information about context (e.g., high density artifact concentration; on top of a visible feature); description; dimensions; diagnostic/decorative elements; and degree of fragmentation.
  - Standardized procedures for photographing cleaned artifacts using current technology appropriate for the project. A representative percentage of artifacts should be photographed using a sampling strategy that is appropriate to the project goals. A dimensional scale should be used to ensure that future researchers, resource managers, and persons conducting background

research about the site and region have enough information to make appropriate decisions about the artifact type. The manual should include explicit information on how to decide which artifacts to photograph when there are many comparable examples; how to select a representative sample size of an artifact type; the number of faces of the artifact to photograph based on the artifact type; and how to record the photographs in standardized photo logs and/or by metadata tagging.
    - A strategy for identifying and documenting artifacts that are difficult to classify. Identify the qualified material culture specialist(s) and/or institutions who will consult on artifact identification. Provide the procedure to follow if unexpected diagnostics or other artifacts are found when no one on the crew is qualified to identify them. Define circumstances when diagnostics and/or other artifacts will be retained for curation and which material culture specialist(s) will make that decision (see "Develop a contingency plan" above).

- **Train field technicians.** Prior to fieldwork, it is critical to train all field technicians to identify and record artifact types specific to the survey area, region, and cultural time periods expected to be represented. The training should complement the information in the technical manual provided and include:
    - How to operate any hand-held devices that are used to record artifact location and conduct artifact identification.
    - How to clean artifacts, whether in the field or lab, to ensure that artifact identification is accurate and photo documentation is good-to-excellent quality.
    - How to accurately identify artifacts using replicable artifact classifications and standardized forms.
        - Develop an exercise to test field technicians on artifact identification prior to starting fieldwork. The exercise should be overseen by appropriate material culture specialists.
    - Who to go to with questions about identifying particular artifacts. If possible or practical, discuss the use of mobile devices to take photos and who to send them to for identification.
    - How to accurately photograph artifacts using appropriate, current technology for permanent documentation purposes and how to complete a photo log or to record metadata about the photographs.

- **Verify research results.** Within the first couple of days of the project, the accuracy and adequacy of in-field artifact identification/documentation should be tested for each person tasked with the work. Any inaccuracies must be corrected in the forms already completed, and new training should be initiated to correct the procedures to ensure standardization and accuracy. Periodic testing of the accuracy of in-field artifact analysis should occur to ensure consistent procedures and accurate data collection.

Moving Forward

The ACC and others (Heilen and Altschul 2013) advocate for more research on no-collection and in-field identification and analysis practices across the United States. Some critical topics to explore, which are ripe for dissertation or thesis work, include:

- The driving forces or reasons behind the use of these practices to better understand how pervasive they are. The ACC recognizes that limited availability of collections storage space; high curation costs; pressure from government agencies at all levels to reduce overall project costs; and tribal feedback and concern are some of the reasons, but are there others? How do the reasons break down across stakeholder groups and in different regions of the United States? How are those reasons impacting the frequency of the practices across the country?

- How and when were these practices developed by different stakeholder groups? Were considerations given to the effects of these practices on future research potential or replicability of the data created and interpreted at different types of sites, or by project phases (i.e., survey, testing, and data recovery)?
- Other than the study by Heilen and Altschul (2013), has any research been done to determine the accuracy of the data created during projects using no-collection and/or in-field artifact identification by different stakeholder groups or by region? Are there any other testing strategies that compare and evaluate the data from no-collection projects with data from projects that collected artifacts to identify if there are meaningful differences in the information recovered? If there are meaningful differences, what are some recommended solutions?
- Where are these practices codified in law, regulation, policy, and/or guidance with a breakdown by stakeholder group (e.g., federal, tribal, state, and local agencies; academia; private developers)? What is the range of variation in the methods prescribed and what might be motivating any variation found?
- How can in-field artifact identification and analysis be further improved through training, technology, or other means to increase the accuracy and reproducibility of the data and the interpretation of the sites that rely on those data?
- What are the relative costs of no-collection and in-field analysis versus the costs of long-term curation of both artifacts and associated records, including digital records, when all are done appropriately and follow professional ethics and guidelines? How does this vary by region of the United States? How does the cost of curation compare to the cost of revisiting a site when questions arise, and artifacts are not available to verify conclusions?
- What are the possible impacts of no-collection and in-field artifact identification and analysis on the dissemination of the results of the archaeological investigation, as well as public outreach and education for investigations that use these strategies? Consideration needs to be given to the future number and types of artifacts available in museums for exhibition and research and other venues for public outreach and education.
- What are the possible effects of no-collection strategies on the commercialization of the archaeological record? If fewer artifacts are curated, how might the laws of supply and demand affect the commercial value of artifacts obtained either legally or illegally? Will this encourage or discourage looting of archaeological sites?
- Artifact reburial is often associated with no-collection and in-field artifact identification and analysis.[4] Research related to reburial is needed on a number of topics. These include the reasons for artifact reburial; best methods to ensure that reburial will not be mistaken for an archaeological site or cultural component of a site in the future; the physical and chemical impacts on artifacts that are reburied; whether reburied artifacts are ever retrieved to evaluate the accuracy of previous artifact identifications or to test new hypotheses; and the potential impact of reburial on public perception of, interest in, and knowledge about archaeological investigations.

In conclusion, the ACC contends that the practices of no-collection, in-field analysis, and collections reburial run counter to historic preservation laws and professional ethics. In only two circumstances—the event of a hazardous situation and for some kinds of **surface** survey—does the ACC recognize that no-collection and in-field analysis could be utilized. Additional comparative studies on this topic are needed; the few that exist clearly demonstrate that no-collection and in-field analyses cannot match analysis completed in the laboratory, in terms of replicability and accuracy. However, given that no-

[4] The ACC is not including immediate reburial of large organic objects for preservation purposes in its consideration of artifact reburial.

collection projects are proceeding without clear answers to the questions outlined above, the ACC offers these best practices for no-collection projects and in-field artifact identification and analysis as interim guidance. When further research into the legality, legitimacy, and cost-effectiveness of these archaeological field strategies is completed, this guidance can be amended. In drafting these initial best practices, the ACC is making an effort to fill an informational void for those who undertake such projects while trying to preserve a breadth of archaeological collections available for present and future research, interpretation, and education.

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