

GEORGIA STANDARDS AND GUIDELINES FOR ARCHAEOLOGICAL SURVEYS

Georgia Council of Professional Archaeologists

Whereas, the Georgia Council of Professional Archaeologists was organized in 1988 as a body of archaeologists who practiced their profession in the State of Georgia and were concerned with the State of Archaeology in Georgia, these proposed standards are intended to improve the state of Archaeology in this State.

Acknowledgments: The Georgia Council of Professional Archaeologists (GCPA) would like to recognize our colleagues in South Carolina, including the Council of South Carolina Professional Archaeologists, whose recently-published standards offered a useful template as this document was developed. Thanks go to the members of the Research Standards Committee, as appointed by the GCPA. Committee Members include Rob Benson, Paul Brockington, Jr., Daniel T. Elliott, Patrick H. Garrow, Connie Huddleston, Thomas Neumann, William Stanyard, and Brian Thomas.

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I. INTRODUCTION

This document presents the recommended minimum guidelines and standards for all archaeological surveys conducted in Georgia. These recommendations apply to projects in which practitioners are obligated to make a reasonable and good faith effort to identify archaeological sites that may be located in a given tract of land or project area. Although this document is designed to provide guidance for archaeological surveys, it does not address the specific needs for survey of submerged or urban sites.

The purpose of these guidelines is to encourage consistent, high-quality archaeological practice in the State of Georgia. They can be used by practitioners as a basis for developing project-specific research designs and by regulators as a means of evaluating work. The over-riding goal is to protect the archaeological record by encouraging the use of rigorous, project-appropriate methods among all archaeological professionals.

For background on the development of survey standards and methods in Georgia, refer to Elliott (2000).

A. Definitions

The following definitions are provided to ensure a common understanding of the terms and concepts used in this document. Some of the definitions are taken directly from cultural resource legislation and regulations. Others have been agreed upon by the Georgia Council of Professional Archaeologists.

1. Area of Potential Effects

The area of potential effects is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist” (36 CFR Part 800.16[d]). Examples of effect can be direct, indirect, cumulative, visual, atmospheric, audible, beneficial, or adverse.

2. Archaeological Site

An archaeological site is a concentration of artifacts, ecofacts, or modifications to the landscape that are associated with past human activity and retain their context. An archaeological site must be at least 50 years old, and is characterized by any of the following criteria:

- An area yielding three or more artifacts from the same broad cultural period (i.e., historic or prehistoric) on the surface within a 30-m radius;
- A shovel test that produces two or more artifacts from the same broad cultural period, as long as the artifacts cannot be fitted together (i.e., they are not two pieces of the same artifact);

- A shovel test that produces one artifact and at least one surface artifact from the same broad cultural period within a 20-m radius from that shovel test;
- An area with visible or historically-recorded cultural features (e.g., shell midden, cemetery, rockshelter, chimney fall, brick walls, piers, earthwork, etc.).

3. Archaeological Survey

Archaeological survey, often referred to as a Phase I or intensive survey, is a systematic, detailed examination of an area designed to gather information about archaeological sites. The goal of an archaeological survey is to identify all archaeological sites within the area of potential effects. For surveys done for compliance with state or federal regulations, an additional goal of the survey is to evaluate those archaeological sites against the criteria for inclusion in the National Register of Historic Places (NRHP), in accordance with 36 CFR Part 60.

4. Data Recovery (Phase III)

Data recovery, often referred to as Phase III, is a term used in a Cultural Resource Management context to describe excavation (usually partial) of a site to retrieve important from the site before it is impacted or destroyed by an undertaking. When an agency's proposed action will cause an adverse effect to a site included in or eligible for inclusion in the NRHP, the agency consults with the State Historic Preservation Officer (SHPO) to seek agreement, usually through a Memorandum of Agreement (MOA), on ways to avoid, minimize, or mitigate the adverse effect to the site. Data recovery is one possible alternative for such mitigation, although it is considered an adverse effect to the site, since excavation is a destructive activity.

Before data recovery is carried out, a data recovery plan must be developed and approved by the agency, the SHPO, and other involved parties. For further guidance in developing a data recovery plan, see *Treatment of Archaeological Properties: A Handbook* (Advisory Council on Historic Preservation 1980) and *Consulting About Archaeology Under Section 106* (Advisory Council on Historic Preservation 1990). See also the Advisory Council on Historic Preservation's "Recommended Approach for Consultation on Recovery of Significant Information From Archaeological Sites," in the *Federal Register* (65(95):27085–27087), which contains a model MOA.

5. Evaluation (Phase II Testing)

Evaluation, or Phase II testing, is the process of determining whether identified properties meet defined criteria for inclusion on the NRHP, as set forth in 36 CFR Part 60.4. Phase II testing is warranted when a site has been identified that may be eligible for the NRHP, but not enough is known about it to make a recommendation about its eligibility.

6. Isolated Find

An isolated find is defined as no more than two historic or prehistoric artifacts found within a 30-meter radius. Isolated finds are, by definition, not considered eligible for listing on the NRHP. For cases where an isolated find is unique, and potentially may be considered eligible for inclusion in the NRHP, it should be defined as a site. Deposits of cultural artifacts that have no integrity, such as road fill, stream gravels, or other situations where artifacts clearly are re-deposited, also should be considered isolated finds.

7. Reconnaissance Survey

A reconnaissance survey is defined as “an examination of all or part of an area accomplished in sufficient detail to make generalizations about the types and distributions of historic properties that may be present” (*Federal Register* 48:44739). Both predictive models and “landform surveys” are considered to be specific types of reconnaissance survey. *A reconnaissance is not a substitute for archaeological survey.*

Reconnaissance surveys are most appropriately used to develop a historic context. They are also useful when there are multiple alternatives for a project location, or when it is necessary to assess the archaeological potential of areas that will not be immediately affected or subject to Section 106 requirements (see discussion of Section 106 in Section B below).

The results of a reconnaissance survey can provide an estimate of the number and types of historic properties expected in a particular area. Reconnaissance findings also can guide management decisions based on an area’s sensitivity relative to historic preservation. Areas surveyed in this manner often require a more intensive, archaeological survey or evaluation if additional information is needed about specific properties (e.g., NRHP eligibility decisions) or when a project location is finalized.

B. Federal Legislation

Most archaeological surveys conducted in Georgia are done to comply with the National Historic Preservation Act (NHPA) of 1966, as amended through 1992. Section 106 of the NHPA requires federal agencies to review the effect their actions may have on archaeological sites and other historic properties that are listed in or eligible for the NRHP. Review procedures are referred to as “the Section 106 process” and are set forth in the recent regulations issued by the Advisory Council on Historic Preservation (36 CFR 800), as amended on January 11, 2001. This process is designed to identify historic properties (including archaeological sites) that are eligible for listing on the NRHP, and to reduce the adverse effects of federal projects on those properties. Federal projects include those projects that use federal money or require federal permits (e.g., a U.S. Army Corps of Engineers permit under Section 404 of the Clean Water Act). Emphasis is placed on consultation with the SHPO and interested parties, including (but not limited to) Native American groups.

Archaeological surveys may be done to comply with other federal laws or mandates, such as Section 110 of the NHPA or the National Environmental Policy Act of 1969. Regardless of the mandate, the standards and methods outlined in this document are applicable.

C. State and Local Legislation

Although Georgia currently has no single, over-arching law to protect state or local cultural resources, it does have several laws that protect archaeological sites in particular situations (e.g., Georgia Environmental Policy Act). The guidelines presented in this document also are designed to satisfy the requirements for archaeological survey under state and local laws.

II. PERSONNEL QUALIFICATIONS

Archaeological projects require the services or input of professionals in archaeology and other related disciplines. It is essential that archaeological surveys and evaluations be performed and supervised by qualified professional personnel. Agencies, institutions, corporations, associations, or individuals will be considered “qualified” when they meet the Secretary of the Interior’s *Professional Qualifications Standards* (36 CFR 61 and *Federal Register* 48:44739).

The minimum professional qualifications for an archaeologist are a graduate degree in archaeology, anthropology, or closely related field, plus:

- At least one (1) year of full-time professional experience or equivalent specialized training in archaeological research, administration, or management;
- At least four (4) months of supervised field and analytic experience in general North American archaeology; and
- Demonstrated ability to carry research to completion.

A. Principal Investigator

The Principal Investigator (PI) is the individual responsible for planning and investigating cultural resources and for ensuring the validity of the material presented in cultural resource reports. All archaeological investigations must be carried out under the direction of the PI, who minimally will meet the qualifications as an Archaeologist outlined by the Secretary of the Interior (above) and:

- Have at least one (1) year of full-time supervisory experience in the study of related resources (e.g., historic archaeology, prehistoric archaeology or underwater archaeology);
- Have at least six (6) months of archaeological experience in the southeastern United States;
- Be certified by the Register of Professional Archaeologists.

B. Project Archaeologist/Field Director

If the PI is not directing the project in the field, field work should be supervised by a Project Archaeologist/Field Director who meets the following minimal qualifications:

- Graduate training in archaeology (or equivalent);
- At least 12 months of fulltime archaeological experience/training in the southeast;
- Proven ability to complete satisfactory archaeological field work.

C. Report Authors

Among the report author(s) should be the individual(s) who supervised the bulk of the field work, whether they be PIs or Project Archaeologists/Field Directors. The report author should be intimately familiar with the tracts that are being surveyed and the cultural resources they contain.

III. FIELDWORK STANDARDS FOR ARCHAEOLOGICAL SURVEY

A. Introduction

The following guidelines describe suggested methods, staffing, and minimum levels of effort for various aspects of archaeological survey in Georgia. They are based on a working knowledge of Georgia's archaeological resources and environments. These guidelines are specifically useful to field archaeologists, agency personnel, and the contracting agent (as appropriate). They can be used as a yardstick to ensure compliance with federal and state regulations, comparability of research results, and evaluation of research designs and project reports.

B. Preliminary Literature Review and Records Search

All archaeological studies (whether reconnaissance, archaeological survey, Phase II testing, or Phase III data recovery) should be preceded by a literature review and records search. This search will include a review of the Georgia Archaeological Site File to identify previously recorded sites in and near the project area, as well as other sources to provide the prehistoric and historic context for the study. Researchers should examine pertinent holdings in some or all of the following institutions:

1. Georgia Archaeological Site File

The Georgia Archaeological Site File (GASF) at the Laboratory of Archaeology, University of Georgia in Athens, is the official repository for information about known archaeological sites of all periods in the state of Georgia. The electronic site file data are available on CD ROM, updated periodically. Other information is available in paper records, topographic maps, and other files. Other records concerning archaeological sites in Georgia also are housed at South Georgia College in Douglas. Previous site files were kept by the Anthropology departments at Georgia State University, Atlanta, and West Georgia College, Carrollton. The Site Files currently charges a one-time fee per project for professional archaeologists to access the site files (\$175 as of October 2000).

2. Historic Preservation Division

The Historic Preservation Division (HPD), Georgia Department of Natural Resources, maintains a library of archaeological assessment reports and NRHP files on archaeological sites nominated for or listed on the NRHP. Although the NRHP listing is available in published and electronic form, these lists only include those sites already listed and not properties whose eligibility has been determined or whose listing may be pending.

3. Georgia Department of Archives and History

The Georgia Department of Archives and History and the Surveyor General's Office in Atlanta contain a wealth of historical information about the state. These sources include original deeds, plats, photographs, and maps, and copies of courthouse records from every county in Georgia.

Robert S. Davis, Jr. (1991) published a useful guide for conducting historical research in Georgia, which details the records that have survived for each county.

4. University of Georgia Libraries

The libraries in the university system of Georgia house a variety of documents that are useful in locating archaeological sites. U.S. Department of Agriculture (USDA) aerial photographs from the early to mid-twentieth century are available for most sections of the state. Copies of these photographs and index sheets are available to researchers at the Science Library's Map Collection at the University of Georgia in Athens. These photographs are a ready source of information on early twentieth century house and farmstead locations, as well as a source of information on previous land use (areas in cultivation, timber, road routes). The same Map Collection contains early soil survey maps, obsolete county road maps, and early topographic maps that often show the location of buildings, houses, and other structures. Enlargements of most of the soil survey photographs can be obtained from the federal government for a fee. Other early maps of Georgia are contained in the Hargrett Rare Book and Manuscript Collection at the University of Georgia Library. Many rare maps are available as online as digitized computer files on the Internet (web address: <http://scarlett.libs.uga.edu/darchive/hargrett/maps/maps.html>).

A list of available aerial photographs, by county, and other cartographic images at the University of Georgia's Map Library also is available online (web address: <http://www.libs.uga.edu/maproom/ahtml/mchpiout.html>).

Researchers on urban areas of the state should consult the available Sanborn Fire Insurance Maps. The Map Library at the University of Georgia has the most comprehensive collection of Sanborn maps in the state, but others can be obtained for a fee from Environmental Data Resources (web address: <http://www.edrnet.com>).

5. Other Resources

Other institutions or resources that can be consulted include:

- Regional Development Commission (Historic Preservationist)
- County Historical Societies, Local Historians, Local Museums, and Local Libraries
- County Courthouses and Agencies
- Georgia Historical Society, Savannah;
- Archives and Museums in Other States
- Federal Archives (Southeastern Archaeological Center, Tallahassee)
- National Archives (East Point Regional Branch)

- Smithsonian Institution

C. **Archival Research for Evaluation (Phase II Testing) and Data Recovery (Phase III) Projects**

In addition to the literature search and archival research necessary for a Phase I survey, additional historical information may be required for site evaluation (Phase II testing) and data recovery (Phase III) projects.

Phase II testing of historic sites should include a title search for historic sites.

For Data Recovery of historic sites, additional historical research may include:

- Census data, such as Agricultural, Population, and Industrial Censuses.
- Slave Schedules.
- Family papers, wills, probate inventories, daybooks, etc.
- Informant interviews (particularly for early 20th century sites).
- Tax Records.

D. **Field Methods for Archaeological Survey**

During an archaeological survey, all land within the project boundaries requires inspection. A preliminary inspection of the project area and review of documentary records may allow investigators to stratify the project area into three general categories:

- ***Indeterminate Probability:*** Areas that are permanently or seasonally inundated; tidal areas; and active floodplains (or other active depositional environments) where deposits are so deep that finding sites using conventional methods is unlikely.
- ***Low Probability:*** Areas with slopes greater than 10 percent; areas of very poorly drained soil (as determined by subsurface inspection); and areas that have been previously disturbed to such a degree that archaeological materials, if present, are no longer in context. Documentation of disturbance can include recent aerial photographs, ground views, or maps showing the disturbance (e.g., recent construction). However, surveyors should be aware of small landforms with high site potential within areas that otherwise are characterized by 10 percent or greater slope.
- ***High Probability:*** Areas that do not meet any of the foregoing criteria.

Archaeologists should not omit parcels from an archaeological survey simply because they have been classified as “poorly drained” by the USDA Soil Conservation Service, and areas should not be automatically excluded because of plowing or forestry activities. Similarly, areas depicted

as wetlands or slopes on USGS maps should be examined on the ground to determine their suitability for survey.

1. Survey Strategy for Indeterminate Probability Areas

An alternative method of fieldwork may be necessary in areas of indeterminate probability (e.g., deep testing with a backhoe or auger). Such work should, whenever possible, rely on guidance from a professional geomorphologist who can assess the potential for deeply buried cultural deposits within a given tract. Because it is difficult to apply standard archaeological survey methods to an entire tract with the potential for deeply buried sites, monitoring of such areas may be necessary during the undertaking to ensure that no sites are destroyed.

2. Survey Strategy for Low Probability Areas

Field investigation of low probability areas should include a surface inspection of all areas where the slope is greater than 10 percent, such as rockshelters, caves, mines, quarries, and/or petroglyphs. In disturbed areas or in areas where the soil is very poorly drained, subsurface inspection (i.e., shovel testing, coring, or augering) may be used to verify soil conditions at intervals no greater than 100 meters.

3. Survey Strategy for High Probability Areas

Generally, survey of high probability areas should follow these guidelines:

a) Pedestrian Survey

Pedestrian survey (i.e., visual inspection of the ground surface) can be used with different subsurface survey methods, as follows:

- Pedestrian survey may be used with 90-meter or less interval shovel tests in areas where surface visibility exceeds 25 percent. Highly eroded areas, where subsoil is visible at or just below the surface, and recently plowed fields are the most common instances where such high visibility exists. The archaeologist's judgment concerning visibility is especially critical in fallow or dry fields, where close-interval (30 m) subsurface testing will often be necessary.
- If an area has greater than 25 percent surface visibility, but is in a dynamic depositional environment (e.g., the foot of a slope or adjacent to an aggrading waterway), then 30-meter interval subsurface testing is recommended.
- In general, pedestrian survey should be systematic. The maximum interval between surveyors should not normally exceed 30 meters.
- When pedestrian survey locates a site, subsurface testing will be necessary to determine the site's stratigraphy, assess artifact density, and help to determine boundaries.

b) Subsurface Survey

In most instances some type of subsurface investigation will be necessary to discover sites. Survey methods will depend on field conditions and the types of sites anticipated. Under most conditions, shovel testing is the preferred method.

- *Shovel tests* will be 30 × 30 cm or larger and placed at intervals no greater than 30 meters. All fill should be screened through ¼-inch hardware cloth. Tests are to be excavated to at least 80 cmbs (depth), or until impenetrable substrate (i.e., bedrock or clay), a known sterile subsoil, or the water table is reached.
- *Mechanical topsoil stripping* should not be used as a survey technique, in most cases.
- *Mechanical augers*, while not recommended, can be used in areas that have impregnable ground cover (e.g., urban areas with concrete, brick rubble, etc.). They are to be placed at intervals not greater than 30 meters. Fill should be screened. Auger tests should be documented in the same manner as shovel tests.
- *Mechanical deep testing* (e.g., backhoe trenches or coring) may be necessary in active depositional environments or in certain urban settings where the ground surface is otherwise inaccessible. All deep testing should comply with OSHA *Standards for Excavation Safety* (29 CFR 1926 Subpart P and appendices).

Rigid adherence to systematic sampling at fixed intervals may fail to yield optimal survey results, since fixed intervals may not uncover sites that would have been located using a judgmental technique. Thus, a combination of systematic and intuitive shovel testing is probably the most efficient method for site discovery.

4. Record Keeping

- The Principal Investigator or Project Archaeologist is responsible for maintaining daily notes and transferring survey data to master project maps.
- Each shovel test or test unit location should be recorded, noting its location, depth, soil profile, artifact yield, general conditions, and other pertinent information. For sterile shovel tests not within site boundaries, information on location and depth only are required. Each shovel test should be given a unique field designation, and materials recovered from it are to be analyzed and cataloged by discrete provenience.
- Photographs are to be taken of representative project environments and areas where different survey strategies were used. Photographs also should be taken of all sites identified during the survey.

5. Defining Sites During Archaeological Survey

When artifacts or features older than 50 years are discovered during field survey, the investigator will establish whether the resource is a site or an isolated find (see definitions in Section I-A). Site investigations should address physical integrity, horizontal and vertical boundaries, and the quantity and type of cultural materials present. The primary goal of recovering artifacts during an archaeological survey is to collect information about the spatial extent of the site, the period during which it was occupied, and what types of activities were carried out there. This goal should guide the sampling and collection strategy employed, regardless of the specific methods used to explore a site. Generally speaking, at least 60 meters should separate two distinct sites.

a) Surface Collection

- At the survey level, a complete surface artifact collection should not normally be made unless the site contains few artifacts, or is subject to active looting or vandalism. If a surface collection is made, an appropriate sampling method should be based on the investigator's assessment of field conditions as well as the type and density of visible artifacts. An investigator's collection strategy should be specified in field notes, for example all diagnostics and a representative sample of other materials, or measured dog-leash samples of every surface artifact in designated locations, or a minimum number of each type of historic ceramic and glass plus other diagnostic items.
- Surface visibility and topography alone do not sufficiently define a site. Although a surface collection may help to define horizontal site limits, it should be supplemented with subsurface testing, particularly when surface visibility is discontinuous or variable. Subsurface testing also provides information about stratigraphy, the vertical distribution of material, and site integrity, which cannot be obtained from pedestrian survey alone.

b) Subsurface Testing

- Systematic subsurface testing, alone or in combination with surface inspection, is necessary to establish both the horizontal and vertical extent of a site.
- Site boundaries are to be established by excavating radial shovel tests in no less than four directions. Thirty-meter interval shovel tests can be used to establish the general boundaries, with two consecutive negative shovel tests establishing the edge of the site. Thus, the interval between two distinct sites will be at least 60 meters. A 10-meter testing interval along each axis is recommended at the outer limits of the site to establish more accurate boundaries. Site boundaries can be tentatively established when at least two consecutive negative shovel tests are excavated using 10-meter intervals.

c) Site Documentation and Demarcation

- A Georgia Archaeological Site Form should be completed for all sites found within the project area. Only official site numbers can be reported in drafts and final reports. If a site has been previously recorded, a revisit form will be completed noting the current site conditions and any new information. All site forms must be submitted to the Georgia Archaeological Site File before completion of the final report.
- Site boundaries are to be accurately located on USGS 7.5' quadrangles and a site sketch map. If possible, the boundaries (perimeter) and center of all sites and undocumented cemeteries (i.e., those not located on USGS topographic maps) should be recorded using a Global Positioning System (GPS) receiver capable of 5-meter or better accuracy. For sites less than ¼ acre (1,000 m²) in size, a single set of coordinates taken at the site's center will suffice.
- Site sketch maps should depict the location of all positive and negative shovel tests located within the site and used to define the site boundaries.
- Photographs of sites should be taken with archivally stable media (e.g., black and white print film).

E. Field Methods for Evaluative Testing

Sometimes it is impossible to make definitive site eligibility assessments using archaeological survey methods. In this case, sites are considered potentially eligible for inclusion in the NRHP, and additional site testing is usually necessary. Site testing strategies should be designed to provide not only information about site eligibility, but also information that will help in mitigation planning (if ultimately necessary). However, site testing methods should be designed to minimize destruction of the site. Evaluative testing methods can include:

- Site Map and Permanent Datum: The site map should depict site boundaries, datum, surface features, excavation units, and topography. An easy-to-relocate, permanent datum should be established and clearly identified with the state site number. The UTM of the datum should be established using a GPS unit with sub-5 meter accuracy.
- Controlled Surface Collection: Where possible, a controlled surface collection can provide valuable information to guide subsurface testing. If a complete collection of surface artifacts is impractical or inappropriate, a systematic sampling scheme should be considered. Any such collections are to be provenienced according to some type of coordinate system.
- Remote Sensing: Metal detectors are useful for investigating historic sites. Other forms of remote sensing, such as ground penetrating radar, electrical resistivity, and magnetometer are also useful.
- Shovel Tests: If additional shovel tests are necessary at this stage to guide the placement of test units, they are to be at least 30 × 30 cm and screened through ¼-inch (or smaller) mesh. Shovel test placement will depend on the research design.

- Test Units: Site characteristics and conditions will govern test unit size. Unit placement will depend on the results of shovel testing and, if applicable, the results of surface collection. Test units should be excavated by natural or cultural strata, but can include arbitrary levels within strata. Although the plowzone may be excavated as a single vertical level, regardless of thickness, it is usually advisable to excavate the interface between plowzone and unplowed soils as a separate level.
- Screening: Soil will be screened through hardware cloth no larger than ¼ inch. Flotation or soil samples will require finer screens. Because recovery rates for all classes of materials, particularly faunal and botanical, increase as screen size decreases, investigators are encouraged to estimate relative recovery rates by systematically using finer mesh to sample soils. The choice of dry screening, water screening, and mechanical screening depends on the research design and the specific factors at each site.
- Disposition of Artifacts: Artifacts are to be bagged by discrete provenience (i.e., unit and level). Typically, all artifacts are collected. However, any material not collected—such as brick, mortar, shell, or fire-cracked rock—may be counted, measured (when appropriate), weighed, sampled by provenience, and discarded in the field.
- Features: Features identified during excavation are to be mapped, drawn to scale, and photographed. A representative sample of features should be bisected to reveal profiles and recover cultural materials.
- Records: All above- and below-ground features and subsurface tests are to be mapped, drawn to scale, and photographed. Appropriate notes and forms will be maintained for all field investigations, a Munsell chart will be used to record soil colors, and USDA soil texture classifications will be used to characterize soil texture.
- Specialized Studies: If flotation, soil, radiocarbon, or other samples will be obtained, consultation with a specialist is recommended prior to retrieval.
- Geoarchaeological Studies: Consultation with a geomorphologist is recommended during evaluative testing to interpret site formation processes and help identify areas likely to contain intact archaeological deposits.
- Heavy Machinery: Site areas should not be stripped before a controlled surface collection is made and/or shovel tests and test units are excavated. Heavy machinery also should not be used to remove sub-plowzone cultural deposits. However, the use of heavy machinery for limited stripping of surface deposits is encouraged, since this can often indicate whether or not cultural features are present.

IV. ARTIFACT PROCESSING, DATA ANALYSIS, AND CURATION

While minimum standards for artifact processing, analyses, and curation are outlined below, investigators should tailor their activities to the unique aspects of each project. Overall, it is advisable to consult with SHPO, the curatorial facility, and any specialists early in the planning process.

Processing, analyzing, and curating artifacts must occur in secure and safe environments to prevent loss of significant data. The Principal Investigator (PI) and Project Archaeologist (PA) are ultimately responsible for ensuring that artifact data and integrity are preserved. The laboratory staff responsible for basic artifact processing and analysis must have sufficient knowledge to do the job, have access to appropriate comparative collections, and have access to experts when needed. Additionally, laboratory staff and/or the Project Archaeologist should have training in basic curatorial procedures.

A. Field Tracking

The choice of a system for tracking artifacts in the field is at the discretion of the investigator. However, the tracking system should be consistently applied throughout the project. During fieldwork, the recorder will enter a preliminary description of the artifacts in field notes and forms before placing them in labeled containers that fully protect them from damage. Artifacts can then be brought back to the laboratory for cleaning and analysis.

B. Processing

Before cleaning each artifact, the recorder will check its condition (e.g., for friability) and analyze its surface for easily lost information (e.g., pseudomorphs, organic materials, pigments, etc.). Artifacts should then be cleaned in a manner that preserves the information they contain. After they are clean, all diagnostic artifacts will be labeled to record site number, provenience, and catalog number. Care should be taken to ensure that important features like edge wear are not obscured during labeling.

Numbers written on artifacts are to be sealed with an appropriate sealant such as 10–15 percent solution of Acryloid B-72 in acetone or toluene. A small labeling area should be chosen, and an undercoat of the Acryloid B-72 placed on only this area of the artifact. The artifact will then be labeled on this area using black or white India ink. After allowing sufficient time for drying, an additional coat of the sealant is to be applied over the label. As an alternative to the white ink, white Acryloid B-72 is available commercially and may be substituted for the undercoat (a clear overcoat is still needed). Clear fingernail polish as a sealant is not acceptable.

All artifacts will be bagged individually or by type in self-sealing polyethylene bags at least 4 mil thick. Those available as food storage bags are not acceptable as they are often not polyethylene. A descriptive tag should be enclosed in each individual/type artifact bag. This tag should give provenience, description, and count for the contents. Artifacts may be bagged by prove-

nience or type (i.e., ceramics, lithics, etc., from all proveniences stored together, or all types of artifacts bagged by excavation provenience) based on the analysis needed. However, the laboratory methods section of the report will detail this information. The researcher should strive to curate all artifacts in a manner that will allow future researchers to duplicate their methods.

Identification tags for boxes or bags will be prepared. Tags will be made of an inert, waterproof, archivally sound material (e.g., Nalgene, Tyvek, polyweave, etc., or an acid-free paper tag inserted into an appropriately sized polyethylene self-sealing bag) and marked with ink that is fade-proof, waterproof, and archivally sound. The bags containing the artifacts will be labeled as well. All information on the exterior of the bag will be repeated on an internal tag of the type described above.

Laboratory staff should be aware of curation policies of the various repositories. Additionally, all artifacts should be handled to the standards of SHA/SSA/AIA and 36 CFR Part 79.

C. Analysis

If detailed analysis of certain archaeological materials is planned, it is advisable to include appropriate specialists as early in the project as possible.

Because most archaeological sites are valuable primarily because of their research potential, artifact analysis generally should follow well-established classification schemes and typologies. The choice of a specific system will depend on the investigator's goals and should be fully defined and referenced in the project report. Regardless of which classification system one uses, certain basic descriptions and analyses must be included in the report:

- Artifact identification number or provenience.
- Material (e.g., lithic, ceramic, glass).
- Class (e.g., projectile point, sherd, bead).
- Count and/or weight, as appropriate.
- Dimensions, if appropriate.
- Type (e.g., Clovis, Creamware, etc.).
- Noteworthy attributes (e.g., form, decoration, method of use, internal or external dating).

A laboratory or catalog sheet printed on archival paper with archivally sound, waterproof ink should be used to record the analyst's observations. In addition, the analyst may keep a diary of any observations, impressions, drawings, and any special analyses performed on the artifacts. This will become part of the official record when the collection is curated.

D. Conservation and Curation

Curatorial facilities should meet the standards outlined in 36 CFR Part 79. Selection of a facility is best made early in the project and, minimally, before the laboratory analysis has begun. The designated curation facility should be identified in the project report. All pertinent field, laboratory, and report documentation should be archivally prepared and remitted to the curation facility with the artifacts. For projects where no artifacts were recovered, notes and other project materials should be prepared for curation. This should include any photographic material and electronic media including any artifact databases. If these databases are coded, a copy of the coding system should be supplied to the curation facility.

V. REPORTING RESULTS

A summary of the minimum standards for archaeological survey reports appears below. For in-depth treatment of reporting standards, see Secretary of the Interior's "Standards and Guidelines," *Federal Register*, 48:44734–44737; McGimsey and Davis 1977; and Bense et al. 1986. For matters of style refer to the "Style Guide" for *American Antiquity* (1988).

Timeliness of reporting is important for the preservation and dissemination of archaeological data and knowledge. Accordingly, reports for all archaeological studies conducted in Georgia should be completed within 10 years of completion of field studies.

A. Report Content

Although the exact format and content of the report is usually a decision reached by the agency, client/applicant, and consultant, reports should minimally contain the following information:

1. Title Page

- a) Report title (including type of investigation and project location).
- b) Author(s).
- c) Principal Investigator(s)'s name, affiliation, address, telephone number, and signature.
- d) Name and address of client for whom report was prepared.
- e) Name of lead state and/or federal agency, as well as contract number, permit or State Clearinghouse number.
- f) Report date.
- g) Report status (e.g., Draft, Revised Draft, or Final).

2. Management Summary

- a) Brief description of project and its purpose.
- b) Concise summary of findings, evaluations, and management recommendations.
- c) A clear presentation of the number of sites located, the component(s) associated with the sites, and recommendations on their eligibility for the NRHP. A summary table can be used to provide this information.

3. Table of Contents

4. List of Figures, Plates, and/or Tables

5. Introduction

- a) Purpose of report and nature of the undertaking.
- b) Legislation or regulations governing the work.
- c) Name(s) of project sponsors, contract/permit numbers, and other appropriate agency-specific information.
- d) Description of undertaking, including area of potential effect (APE), project footprint, and nature and extent of anticipated disturbance. Identify and describe undertaking's features or facilities. Give size of undertaking in acres/hectares or linear distance and width (e.g., road corridor). If the size of an area surveyed is different from the total undertaking, state the survey area in acres/hectares.
- e) 7.5' USGS quadrangle that clearly delineates undertaking's boundaries, as well as type of survey done in each area (i.e., pedestrian survey, shovel testing, etc.). Figures should include quad name, bar scale, and north arrow.
- f) Dates when work was conducted and a list of personnel.

6. Environmental Setting

Include physiographic province, landform type, nearby drainages and water sources, roads, dominant soil association, and current land use. If limiting factors affected the survey, describe and discuss them. Include representative photographs of the general project area. The paleoenvironmental also should be discussed.

7. Cultural Context and Previous Archaeological Investigations

This section includes an overview of cultural history of the project region. Length and detail of discussion should be appropriate to the level of investigation and materials recovered. This section should also include a review of previous archaeological investigations in the project area and its vicinity (e.g., drainage or county as appropriate), as well as a description of all archaeological sites within a reasonable distance from the project area. Author(s) also should describe their historical research, including a list or description of all resources reviewed, repositories and specific collections consulted, and a list of persons interviewed.

8. Research Design

Research designs present explicit statements of theoretical and methodological approaches followed in a particular cultural resource study, and, therefore, are to be included in most reports. The nature and level of detail in this discussion will be consistent with the undertaking and type of investigation. If a research design has been previously

developed for a specific geographic region, type of investigation, or type of resource, the author(s) should reference and discuss it.

9. Field Methods

Field methods should be described in a way that lets reviewers and future researchers easily reconstruct what was done and why.

- a) Maps should depict pedestrian survey areas, subsurface tests and/or excavations, and any relevant field descriptions (e.g., vegetative cover, disturbed areas, etc.). The locations of shovel tests should be noted on all site maps. For projects where different survey coverage was applied, maps should indicate where each was employed. All maps should include a north arrow (magnetic north, true north, or grid north), a map scale (e.g., 1:24,000), and a bar scale. For sites located using GPS, the type of equipment and its error range should be indicated.
- b) Surface survey techniques should be described and justified for both the general project area and for each individual site (if different from the general methodology). Note locations examined, intervals between transects, surface visibility, and methods of collection.
- c) Subsurface survey techniques should be described, including shovel test and test unit dimensions, depths, transect intervals, and method of artifact recovery. The total number of excavated shovel tests should be included in the report.
- d) Remote sensing techniques will be described and evaluated when used.
- e) Discuss constraints on fieldwork, if not already described, such as limited access, poor ground visibility, and adverse weather conditions. Note which areas of the project area were not examined or received limited examination.
- f) When field methods deviate from the recommended standards, explicitly discuss how and why such was the case.
- g) Disposition of field notes, artifacts, and other records.

10. Artifact Description and Analysis

- a) Describe classification scheme. If a previously defined typology is being used, provide a brief description along with a reference.
- b) Describe assemblage. Provide a complete description of recovered artifacts by provenience in the text. If the site is large, a summary table should be provided, with specific information on each shovel test possibly placed in an appendix. Detailed artifact descriptions, measurements, and attributes can be provided in tabu-

lar form as an appendix, but also should include provenience information. Typically, artifact descriptions should include material, class, and type of artifacts recovered, along with counts, weights, and any measured attributes of diagnostic material (e.g., projectile points, ceramics, beads, etc.).

- c) Provide hand-drawn illustrations and/or photographs of representative or important artifacts.
- d) Present results of special studies. Describe any special analytical methods used. For radiocarbon dates the following information should be included:
 - (1) Site number and provenience
 - (2) Laboratory number
 - (3) Material dated
 - (4) Method of dating (e.g., extended counting, AMS, etc.)
 - (5) Conventional C-14 age expressed in radiocarbon years before present plus or minus one sigma error (e.g. 2420 \pm 60 BP).
 - (6) Calibrated C-14 age expressed in calendar years (range) within one sigma of error. NOTE: Please include all intercepts (e.g., cal b.c.755–685 and cal b.c. 540–400).
 - (7) Calibrated C-14 age expressed in calendar years (range) within two sigmas of error (e.g., cal b.c. 780–380).
 - (8) Citation for calibrated results (e.g., Stuiver et al. 1993)
 - (9) Associated artifacts, particularly diagnostic artifacts
 - (10) Comments

11. Results and Site Descriptions

- a) Describe all isolated finds and include locations on a project map.
- b) Site Description
 - (1) Describe each site in narrative form including dimensions, stratigraphy, present conditions, quantity of artifacts, and features. Include discussion of shovel tests, soil cores, and test units, as appropriate. For test units, include drawings and photographs of representative wall profiles. A written description of soil stratigraphy (including color Munsell Soil Color Chart)

should be provided for a representative sample of shovel tests and for each test unit.

- (2) Sketch maps for each site must be included in the report. The sketch maps should depict general topographic characteristics, placement of subsurface tests, and features. These maps must include a north arrow, date, bar scale, legend, and site number.
- (3) Photographs if, for example, the site contains structural remains, significant disturbance, etc.
- (4) Enumerate, describe, and interpret artifacts. Describe and interpret features, including those above ground. Include drawings and photographs of representative features.
- (5) For historic archaeological sites, summarize results of the archival research. For larger projects, most of the archival research can be included as a separate background section, and only site-specific information needs to be presented in this section. All archival and oral history should be referenced in a systematic manner that lends itself to source relocation.

c) Site Significance

- (1) A statement of significance must be presented for each identified site, with reference to specific NRHP criteria listed at 36 CFR 60.4. Because most archaeological sites are recommended as eligible under Criterion D, they should be evaluated for their potential to contribute information about specific research objectives. This process should be documented in sufficient detail for the reader to judge how the investigator reached these conclusions.
- (2) If a site is recommended as not eligible, state the rationale.
- (3) If a site is recommended as eligible or potentially eligible, present supporting evidence, including research topics that might be addressed. Discuss types of data known to be or thought to be present, and indicate information that can be inferred from these data.
- (4) If there is not enough information to evaluate a site's eligibility, state this explicitly.

d) Site Integrity - Identify and explain any factors that have or may have affected site integrity.

- e) Project Impacts - If known, identify and describe potential project impacts for each site.

12. Summary and Recommendations

- a) Summarize and list sites recommended as eligible or potentially eligible for the NRHP. If site eligibility is indeterminate and the archaeological work was conducted at a survey level, appropriate recommendations for further work might include site testing to determine NRHP eligibility. For evaluative testing, recommendations might include site avoidance mitigation of adverse effects through data recovery. Please outline the nature and extent of any recommended additional work.
- b) Summarize and list sites that are recommended as not eligible for the NRHP. A recommendation of no further work at such sites is appropriate.
- c) State whether additional work may be necessary in portions of the project area not adequately surveyed during your fieldwork.
- d) Evaluate your survey and/or testing in reference to the research design. Discuss how constraints on the investigation may have influenced the reliability and value of the information.
- e) List the location of the curation facility in final report.

13. References Cited

14. Appendices and Attachments

- a) Vitae of key staff should be included in the draft report that is to undergo review. Vitae may be removed from the final report.
- b) Site forms for archaeological sites should be included in the draft report that is to undergo review. The forms can be removed from the final report.
- c) Artifact Catalog, if not presented elsewhere in the report.
- d) Specialist Analyses, including radiocarbon and OCR, if not presented elsewhere in the report.

VI. BIBLIOGRAPHY

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