



"It is entirely predictable that if an area surveyed 20 years ago were surveyed again today, many archeological sites not noted in the first survey would be discovered." Thomas F. King 1978

An Old Problem

Many state and federal agencies rely on information gathered during archaeological surveys that are decades old. Many of these older surveys were done prior to state and federal standards that help ensure the adequacy of these studies, such as the survey transect interval or width as it applies to the definition of a 100-percent, intensive survey, or the definition of what constitutes an archaeological site. Thus, many of these older surveys may not be adequate under current standards for archaeological investigations (see **Appendix A**). In addition, our knowledge about the archaeology of many areas throughout Arizona has grown dramatically during past decades. For example, our knowledge about Archaic-period use and occupation of areas such as the Tucson Basin, the location of deeply buried sites based upon recent geomorphological studies and data, and the importance of certain topographical features for the location of prehistoric deposits (based upon excavation results), are only a few of the significant research domains that have been discovered and pursued recently.

The State Historic Preservation Office (SHPO) is concerned that many of the older (e.g., 10 years or older) surveys may no longer constitute adequate representations of the archaeology of a given area.

How to Evaluate Old Surveys

SHPO realizes that not all older surveys are inadequate, either from the perspective of meeting state and federal standards or from a knowledge standpoint. However, we recommend that, for any plan or undertaking located within an area for which the only archaeological survey is old, particularly over ten years old, the following guidelines be followed:

Site Identification

- Ascertain if more recent surveys completed in or around the project area resulted in the identification of different site types, site components, or settlement patterns from those discussed in the old survey report. If they did, then it may be necessary to re-survey some or all of the old project area in an effort to identify these possibly under-represented properties.

- Ascertain if recent geomorphological or botanical studies in or around the project area resulted in the correlation of certain site types with landforms or plant communities that could help archaeologists locate sites in areas that were previously not considered sensitive (e.g., deeply buried sites). If they did, it may be necessary to re-survey these sensitive areas.
- Ascertain if the integrity of previously recorded sites has likely changed since the site was recorded. A site may have suffered damaging erosion, or erosion may have exposed new features or artifacts, such as Archaic or Paleo-Indian aspects, that may have an important bearing on its State or National Register-eligibility status. If the integrity has changed, then it may be necessary to re-record the site's characteristics and re-evaluate its Register-eligibility status.

Survey Methods

In order to evaluate the adequacy of an old survey, ascertain if the methods used meet current standards for an intensive survey (see **Appendix A**). Specific questions to ask about old surveys include:

- 1) Was the survey transect interval too wide, so that sites may have been missed?
- 2) Was the survey conducted on foot, on horseback, or through the windshield of a moving vehicle? These methods have widely different degrees of reliability.
- 3) What site definition was used during the survey, and how does it compare to current site definitions?
- 4) How were isolated artifact and/or feature occurrences (IOs) treated, and is it possible that materials originally recorded as IOs meet current site definitions?
- 5) Were identified sites plotted accurately? With the advent of Global Positioning Satellite technology, re-identifying sites and getting precise plots is essential for management purposes, as well as the preservation of those sites.
- 6) Were site numbers assigned to all identified sites?
- 7) Were State or National Register-eligibility recommendations provided for the identified sites?

Survey Personnel

Ascertain the professional qualifications of the individuals that performed the old survey. Did the surveyor or principal investigator meet state or federal professional qualification standards? Surveys conducted mostly with volunteers with little or no experience may be suspect.

Temporal Threshold

Ascertain if properties are likely present in the project area that are now 50 years old or older that were not that old when the survey was completed. Historic-period maps and records could be checked and ground-truthed, if necessary. Some sample re-survey may also be necessary to obtain data on whether such sites might be present.

Tribal Consultation

Ascertain if tribal consultations were involved in the previous identification effort in conjunction with the archaeological survey (unlikely for undertakings over 10 years old). If consultations did occur, do they need updating? If tribal consultations did not occur, do the tribes with whom the agency usually consults feel that they need to be consulted on the new undertaking regarding the identification of properties significant to them, such as Traditional Cultural Places or sacred sites?

Summary

Although not all older surveys need to be re-surveyed using current techniques and levels of knowledge, each new plan or undertaking needs to evaluate (at a minimum, using the criteria presented above) whether or not older surveys for that area are adequate. If one or more of the criteria are not met, then some type of re-survey (either sample or complete) may be necessary. Ground-truthing or some sample re-survey may be necessary if survey adequacy is in question.

Each project needs to be evaluated on a case-by-case basis, and at a minimum, old survey data should be updated and reflected in various databases. Even if sample or complete re-surveys show little difference in survey results, this information is important to show an Agency's diligence in verifying old data.

SHPO Position

We recommend Agency officials determine if any of their older surveys are candidates for some type of re-survey and then try to get funds allocated in the near future to allow this important work to be accomplished. Re-survey, if necessary, and site visits/checks of older surveys should be an integral part of an Agency's planning process. The important issue of the adequacy and accuracy of old surveys should be addressed in consultations between agencies, SHPO, and consulting parties.

Prepared by SHPO Staff/ah
Approved by James Garrison, State Historic Preservation Officer

APPENDIX A: List of Selected Survey Standards and Guidelines

The importance of determining which survey and reporting standards must be met for a particular project cannot be stressed enough. Differences between state and federal laws and differences among land-managing agencies result in a patchwork of requirements. The list of standards and guidelines presented below should be considered a starting point, however, it is not exhaustive.

Arizona Standards and Guidelines

- Standards for Conducting and Reporting Cultural Resource Surveys on State Land (and for State Agencies), in the State Historic Preservation Act Guidelines, 2001
- Arizona State Museum Site Definition (Appendix A in the ASM Archaeological Site Recording Manual), 1993
- Arizona State Museum Revised Site Definition Policy, 1995

Federal Standards and Guidelines

- Secretary of the Interior's Standards and Guidelines for Identification
- Secretary of the Interior's Standards and Guidelines for Archeological Documentation
- National Park Service's Guidelines for Evaluating and Registering Archeological Properties
- National Park Service's Guidelines for Evaluating and Registering Historical Archeological Sites and Districts
- National Park Service's Bulletin on How to Apply the National Register Criteria for Evaluation
- National Park Service's Bulletin on Defining Boundaries for National Register Properties.

Professional Guidance

King, Thomas F.
1978 *The Archaeological Survey: Methods and Uses*. Reprinted in Reference Manual and Study Guide for the California Department of Forestry Archaeological Training Program, 2003. Online at www.indiana.edu/~e472/cdf/suggest/archsurveymethods.pdf

Neumann, Thomas W., and Robert M. Sanford
2001 *Practicing Archaeology: A training manual for cultural resources archaeology*. AltaMira Press, Walnut Creek, California.