

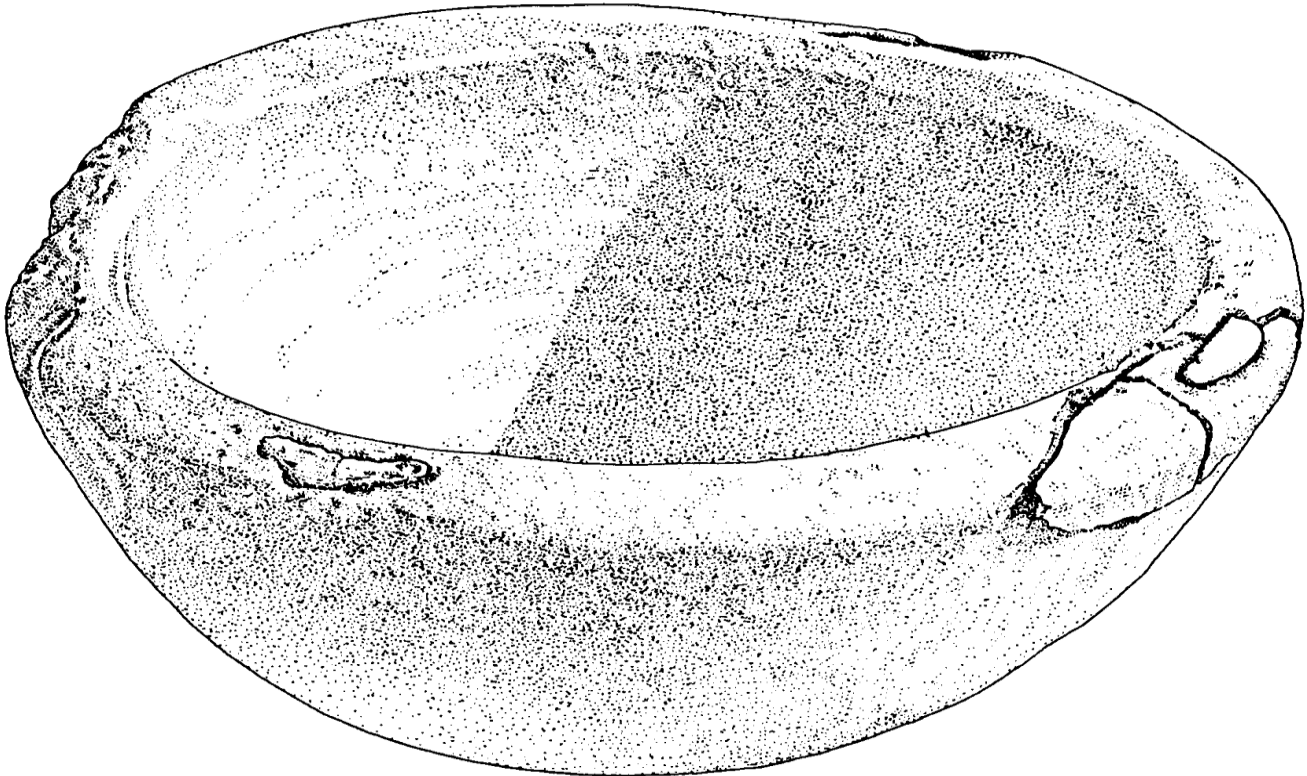
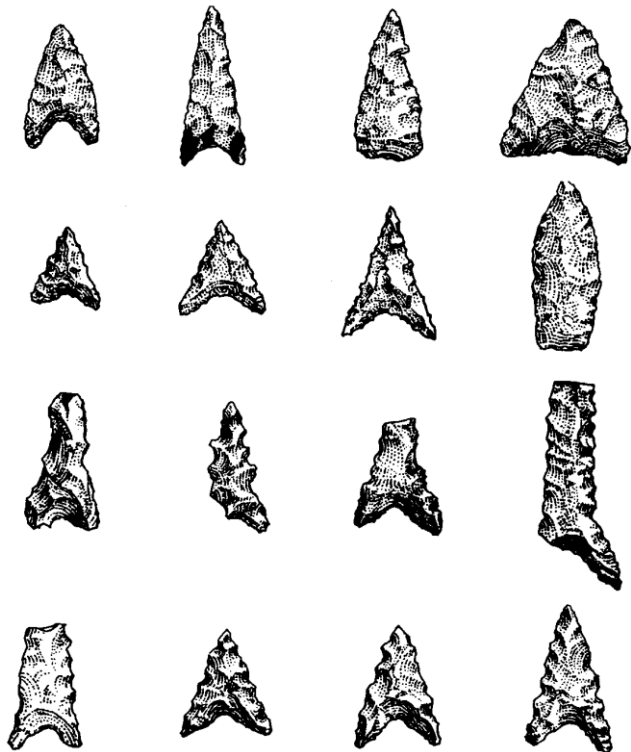
Cultural Resources

Archaeological Services

Architectural History

Cultural Resources Consultation
and Agreement Documents

Laser Scanning and Lidar



Archaeological Services



ECORP's cultural resources staff provides all services required for the identification, evaluation, and treatment of archaeological resources as needed for compliance with federal, state, and local regulations. ECORP archaeologists carry out field surveys to identify prehistoric sites including village sites, temporary camps, roasting pits/hearths, lithic (stone) tools and flakes, milling features and groundstone artifacts, petroglyphs/rock art, geoglyphs, fish traps, and burials/cremations. ECORP archaeologists also identify historic archaeological sites including homesteads; agricultural or ranching features; mining-related features; water storage and conveyance features such as culverts, reservoirs, and dams; and refuse concentrations. ECORP archaeologists excavate archaeological sites in order to evaluate their significance and to recover data as mitigation of impacts.

Services Provided

- Field surveys, sample survey strategy designs, and predictive models
- Detailed recordation of archaeological sites, using Global Positioning Systems (GPS) technology for site mapping
- Preparation of California Department of Parks and Recreation (DPR) 523 site forms
- Test excavations of prehistoric and historic-period archaeological sites
- Laboratory sorting, cataloging, and analysis of artifacts
- Site evaluations using the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR) eligibility criteria
- Impact assessments and development of mitigation measures
- Data recovery for mitigation
- Construction monitoring
- Ground-based laser scanning and mapping of sites
- Three-dimensional scanning of artifacts
- Geoarchaeology



Architectural History



ECORP provides all services required for the identification, evaluation, and treatment of historic-period architectural resources such as houses, cabins, barns, lighthouses, churches, post offices, commercial buildings, meeting halls, city or government offices, bridges, and early military structures such as guard houses, warehouses, barracks, hangars, gun batteries, administrative offices, and other structures or facilities. Identification, evaluation, and treatment of architectural resources are carried out in compliance with Section 106 of the National Historic Preservation Act and/or the California Environmental Quality Act.

Services Provided

- Literature reviews, archival research, and oral interviews to provide the history of the building
- Structure inventories to identify historic-age buildings and objects within a project area
- Detailed recordation of historic structures, including photo-documentation
- Preparation of California Department of Parks and Recreation (DPR) 523 Building, Structure, and Object forms
- Structure evaluations using the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR) eligibility criteria
- Impact assessments and development of mitigation measures
- Historic American Building Survey (HABS)-level documentation
- Preparation of Memoranda of Agreement, Treatment Plans, and Technical Reports
- Coordination/consultation with federal agencies and the State Historic Preservation Officer (SHPO)



Cultural Resources Consultation and Agreement Documents



ECORP's experienced cultural resources staff can assist clients with consultation with federal agencies, State Historic Preservation Officers (SHPO), and Native American groups and organizations, as required, based on project needs.

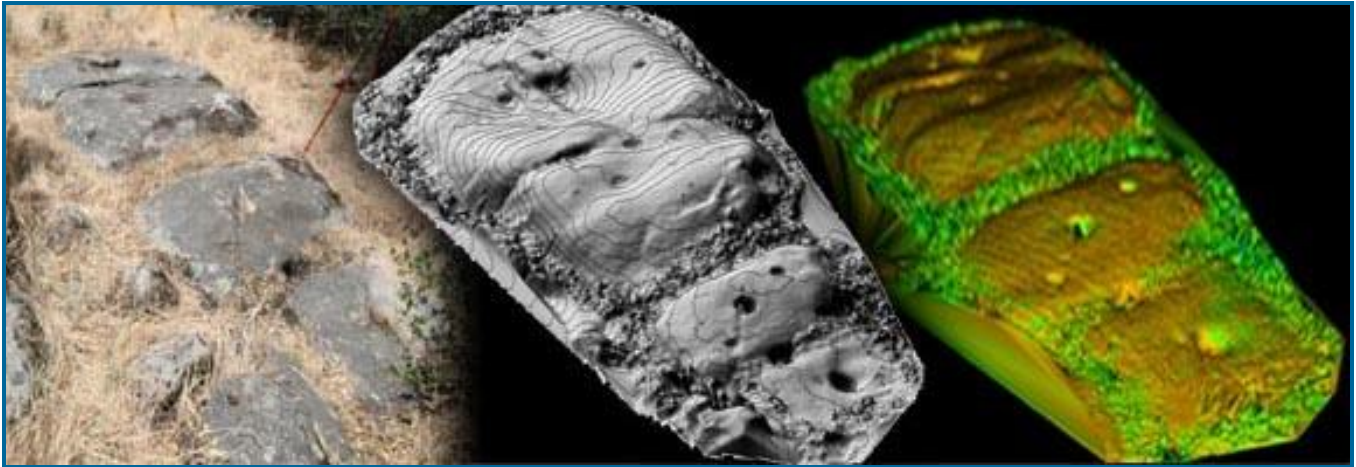
The staff is well-versed in the preparation of agreement documents and management plans for the management or treatment of historic properties (i.e., properties listed on or determined eligible for listing on the National Register of Historic Places) or historical resources (i.e., properties listed on or determined eligible for listing on the California Register of Historical Resources).

Services Provided

- Coordination/consultation with federal agencies and SHPO
- Native American consultation and interviews with tribal representatives/elders regarding tribal cultural resources issues or concerns
- Preparation of Cultural Resources Management Plans (CRMP) and Historic Preservation Plans (HPP) for land managers that summarize the federal, state, and local regulations that apply to the management of cultural resources on their land, identify known resources within their boundaries, and provide management recommendations for compliance procedures, program priorities, and implementation recommendations
- Preparation of Memoranda of Agreement (MOA) among a project proponent, SHPO, and the lead federal agency for Section 106 mitigation measures
- Research designs, test plans, and data recovery plans



Laser Scanning and Lidar



ECORP strives to utilize the most current mapping technology and data collection processes. One of the most powerful and promising new data collection technologies is known as Laser Imaging Detection and Ranging (lidar). Lidar data collection relies on an aircraft-mounted, computer-controlled laser that records high precision distance measurements, synchronized with a precision survey grade Global Positioning System (GPS) unit and inertia measurement system. As the aircraft passes over the study site, it has the potential to record high density x,y,z measurements that can later be interpolated into high density digital terrain models (DTMs), topographic contour data, and vegetation height maps. DTMs interpolated from lidar data provide an accurate data source for spatial analysis, terrain modeling, and change analysis.

ECORP provides access to lidar data collection for our clients by being the point of contact and liaison between the data collection vendor, ground survey crew, and aerial imagery provider. Also, ECORP can potentially help decrease our clients' costs by combining collection orders to create bulk rate flights with lower project origination fees and aircraft ferry charges. Lidar vendors used by ECORP produce elevation coordinates that meet or exceed National Map Accuracy Standards. Lidar technology provides a cost-effective data collection method for documenting medium to large-scale archaeological features such as bedrock mortar complexes, mine tailings, water conveyance systems, and historic landscapes.

On a smaller scale, ECORP possesses desktop laser scanning capabilities to create three-dimensional models of artifacts, which can then be transformed into plastic models for use as educational tools, in interpretive displays, and to contribute toward preservation of information as part of a data recovery effort. These models can be scaled up or down to meet the needs of the client, and can be painted to replicate material type.

Services Provided

- Client consultation for lidar data collection
- Pre-flight project data preparation
- Lidar data analysis and modeling
- Topographic contour development and map production
- Ground-based laser scanning and mapping of sites
- Three-dimensional scanning of artifacts
- Artifact and site replicas for interpretive displays
- Virtual exhibits for kiosks

