

# CASUAL PAPERS

Cultural Resource Management

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THE COUNTY OF SAN DIEGO  
CULTURAL RESOURCE MANAGEMENT PROGRAM:  
A TEN-YEAR REVIEW OF POLICY AND POLITICS

Anna C. Noah  
County of San Diego

The California Environmental Quality Act (CEQA), enacted in 1970, provides the primary legal mandate through which cultural resources are given consideration during the land development process. The intent of CEQA is to assure a high-quality environment for present and future populations of California. In order to meet this goal, all agencies are required to give major consideration to the potential adverse environmental effects of any land-altering proposals over which they have discretionary permitting powers. In general, projects which would significantly affect the environment are to be denied unless specific measures can be taken to reduce the impact of the project to a level of insignificance.

It is interesting to note that until this year, CEQA and its implementing guidelines have included only brief mention of cultural resources. These relevant statements are quoted in the following paragraph.

CEQA (Public Resources Code, Division 14, Chapters 1 through 6) states, in part, that it is state policy to

". . . Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise." Division 14, Title 6, of the California Administrative Code (the State CEQA Guidelines) provides in Appendix G that any project which will ". . . disrupt or adversely affect a prehistoric archaeological site or a property of historic or cultural significance to a community or ethnic or social group . . ." will normally have a significant effect on the environment.

These two statements and sentence in CEQA requiring that governmental agencies develop procedures by which to assure protection of the environment form the framework through which the County of San Diego has evolved an organized system of cultural resource management. It is important to note, however, that without the presence of a local professional community and a few interested individuals in positions of influence during the early 1970s, cultural resource concerns would not have received the attention given them by the county government. This is evidenced by the many cases where the inexplicitness of state law has allowed local jurisdictions to virtually ignore cultural resources as an environmental concern.

The history of development of the county environmental review process, particularly as it concerns cultural resources, has been well presented in several earlier articles (May 1975, 1979, 1980; Fink 1980). Therefore, the present article will only briefly outline historical and procedural background to provide the reader with a basic understanding of how the process is changing in response to anti-environmental sentiments presently pervading all levels of government.

The California Environmental Quality Act was originally interpreted as applying only to actions involving publicly owned lands. In 1972, however, the Friends of Mammoth decision of the California Supreme Court extended CEQA jurisdiction to private land development.

Protection of environmental resources had become subject to study by the County of San Diego prior to this landmark court decision. In response to numerous citizen complaints that off-road vehicle activity was damaging the environment, the county in 1970 formed the Off-Road Vehicle Advisory Committee, which included an archaeologist among its members. Almost simultaneously, the county was awarded a Ford Foundation Grant to develop a system by which protection of the environment could be achieved through the land development process. By 1972, then, when the provisions of CEQA were extended to all land development, the county was well on its

way to developing a rudimentary environmental review process, including policies for the treatment of cultural resources.

With the assistance of archaeology student interns from San Diego State University, the county prepared and adopted its first archaeological guidelines in 1974. Shortly, thereafter, a full-time archaeologist was hired. Since these beginnings the guidelines have been twice revised, and the county's environmental staff has increased to include a maximum of five archaeologists.

Beginning in the early 1970s and continuing to the present, the county has evaluated each discretionary permit application for its potential to negatively impact cultural resource sites. Initial screening is conducted by a staff archaeologist who, based on review of regional survey reports, archaeological site records, site physiography, and often a field investigation, determines whether a survey will be required. If so, the project applicant must retain a consulting archaeologist, qualified by County Guidelines, to perform a cultural resource survey of the parcel and prepare a written report for submittal to the county. When cultural resources are found on the property, the consulting archaeologist must evaluate their significance, determine what impact the project will have on them, and recommend mitigating measures, if necessary, to reduce negative impacts to an insignificant level.

An archaeological site is generally considered to be significant if it has the potential to yield information-- either singly or when considered with a group of sites--which will contribute to understanding local prehistory. Often such an evaluation requires some subsurface testing which, unless minimal, is subject to approval by the county prior to initiation.

To reduce the impact of a project on a significant archaeological site to an insignificant level, the county generally requires that the site be designated an Open Space Easement or that a data recovery program be completed. The latter can range from site mapping and collection and analysis of surface artifacts to full-scale salvage excavation.

All staff decisions regarding treatment of archaeological resources can be appealed to the Environmental Review Board. This panel makes final environmental recommendations to the Planning Commission and Board of Supervisors, the decision-making bodies of the county.

Procedures for the management of cultural resources in San Diego County may appear logical and straightforward in the above summary, but the county's relatively short history of environmental management has been fraught with difficulties. As early as 1974, when the first draft archaeological guidelines was distributed for public review, development



firms argued that adoption of proposed requirements would result in lengthy project delays and unreasonable expense. In fact, opinion was unanimous among construction companies submitting comments that the cost of mitigating impacts to archaeological resources should be borne by the county. Many felt that an archaeological survey should not be required unless previously recorded sites were present on the property, and that in the few cases where a survey was required, it should not be made mandatory until after the project, fully designed, had been approved.

Most of these arguments intensified as the decade progressed. An additional assertion has developed in the last few years that an archaeologist who surveys a property and then recommends additional testing is in conflict of interest in attempting only to increase his or her earnings.<sup>1</sup>

It is argued here that an archaeologist with such intent is rare, if even in existence, in San Diego County. It is true that an unprecedented number of archaeologists and technicians were employed on county-mandated projects during the late 1970s. However, this is seen primarily as a consequence of the equally unprecedented rate of development which has occurred in what is said to be the nation's most rapidly growing region.

Secondarily, the lack of an organized data base has made for minimal predictive abilities, perhaps resulting in more surveys and test excavations than may have been required otherwise. However, it must be noted that even had the data base of the early 1970s been organized and accessible, it would probably not have been statistically representative of San Diego County as a whole. In 1972, when the county initiated its cultural resource management program, a total of approximately 1,750 archaeological sites had been previously recorded, chiefly in and near the metropolitan areas; at present, primarily as a result of CEQA mandates, the number exceeds 11,000, many of which occupy the more rural areas of the county.

At the beginning of 1983, major changes to CEQA affecting consideration of cultural resources took effect. Given that the county's cultural resource management program has been considered by some archaeologists to be the best in the state (May 1979:1), it is probably no coincidence that these changes resulted from lobbying organized by San Diego County development industries.

In 1981, Small and Knust, Inc., a firm based in San Diego, solicited donations from major development companies in the county to prepare a study which would demonstrate that the amount of money which had been spent on archaeological research far outweighed benefits derived from such study.

The report was to be presented to the legislature as a petition to reduce, or eliminate, archaeological consideration from the California Environmental Quality Act. The study was completed and apparently widely distributed to members of the California legislature.

In 1981, Waddie Deddeh, a San Diego representative to the State Assembly, submitted Assembly Bill 952 to the legislature. This bill, which now forms Section 21083.2 of the Public Resources Code, severely restricts conditions under which an archaeological site can be considered an environmental resource. Sites which can be shown to possess a high level of research value will be considered resources and made subject to mitigation if there is a "demonstrable public interest" in the information which the site may yield. When an archaeological resource is shown to be of this level of significance, the developer will be required to contribute only one-half of the projected cost of mitigation up to certain maximum dollar amounts. Where the remaining cost of mitigation is to be acquired is not specified.

In 1982, prior to enactment of A. B. 952 and in response to recommendations presented by Small and Knust, Inc., the County of San Diego Board of Supervisors formed an Archaeological Task Force to revise the existing archaeological guidelines. The task force was made up of representatives of

the archaeological, development, and citizen planning communities. The resulting guidelines, not yet adopted by the county, represent a major departure from all earlier guidelines. If adopted, archaeological surveys will not in any case be required for projects where all proposed parcels are forty acres or larger in size; the consulting archaeologist will no longer write a survey report but will instead fill out a lengthy form; any site's research potential will be related to a preestablished set of "significant research questions"; and a statistical formula will be employed to ascertain how many units may be excavated in any given site. In addition, researchers who wish to be placed on the county's list of qualified archaeologists will be required to be members of the Society of Professional Archaeologists.

While there are certain problems with the proposed guidelines, there are several positive aspects. In the past, county guidelines have been less than explicit with regard to what qualifications are necessary to perform archaeological work in the county. This has resulted in misunderstandings on the part of individuals preparing to file applications for certification and in occasional cases of county staff reluctantly certifying individuals with questionable qualifications. Also unclear in existing guidelines is the level of detail necessary in archaeological reports. The proposed archaeological

survey form will assure that specific items of information will be included in all survey documents. The form will also facilitate development of a computerized data base, although a program of this nature is not presently under consideration. Finally, having a defined set of significant research questions will assist in assuring that important cultural resources continue to be given major consideration during the environmental review process.

Another imminent change in the county's environmental analysis procedure will be elimination of the five-member Environmental Review Board, which has for several years held weekly public meetings at which project specific environmental concerns have been aired and recommendations to decision-making bodies formulated. Ostensibly to reduce bureaucratic costs in response to the present economic recession, the Environmental Review Board will be disbanded on March 1, 1983, and replaced with a three-member board, one member of which may be an Environmental Management Specialist. The Planning and Environmental Review Board's responsibility will be to make environmental findings and approve or deny projects subject to several types of discretionary permits. Archaeologists and other environmentally conscious individuals are concerned, not without basis, that the county environmental review process

is becoming seriously diluted through this and other changes recently implemented by upper-level county management.

There are many challenges facing the archaeological community of the 1980s. Continued close monitoring of government policies, both explicit and implicit, is mandatory to assure that responsible cultural resource management is practiced; the county's present vast quantities of archaeological data need to be organized into an accessible data bank; a tentative model for predicting site locations and attributes from physiographic and other variables, presently feasible, is politically and practically essential; and students contemplating careers in cultural resource management should strive to become well versed in archaeological theory and practice, local prehistory, and state of the art archaeological research, both in their local area and the world in general.

While 1983 is witnessing large-scale unemployment among archaeologists, theirs is not the only profession presently affected by the economic recession and a changed political philosophy. It has been said that our environment, which includes our cultural heritage, is a luxury and, hence, only of concern during periods of prosperity. Whether or not fully justified, this observation provides incentive to continue our quest for further knowledge of the nation's heritage while looking forward to the day that the populace is again of a mind to fully appreciate it.

NOTE

<sup>1</sup>This allegation was recently supported by the State of California Resources Agency, the governmental body responsible for preparation of the Guidelines for Implementation of the California Environmental Quality Act. The 1982 notice of proposed amendments to CEQA included sections meant to explain proposed changes. With regard to the proposed addition of Appendix K, Archaeological Impacts, the Resources Agency stated: ". . . The excavation plan would put a burden on the archaeologist to explain the importance of the site and to demonstrate how the proposed excavation would serve some public interest rather than simply providing employment for an archaeologist" (The Resources Agency of California 1982:176).

The presently popular suggestion that archaeologists are in conflict of interest in recommending data recovery programs on properties they have surveyed is lacking in justification. It is certainly no more warranted than to claim that conflict of interest is inherent in the physician examining one's throat and recommending a tonsillectomy, the mechanic performing a compression test and recommending a valve job, or the developer reviewing population growth rates and stating that more housing is needed.

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CALTRANS DISTRICT 11 AND THE TREATMENT  
OF CULTURAL RESOURCES

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Introduction

A recent report prepared by Alan Garfinkel entitled "A Historical Perspective on the Value of the California Department of Transportation Archaeology Program" (1982) offers a statewide overview of the development and nature of archaeological investigations associated with Caltrans transportation projects. The focus of the present essay is on the treatment of cultural resources within Caltrans District 11. District 11 encompasses San Diego, Imperial, and the eastern two-thirds of Riverside County. The State highway system within the District incorporates approximately 1,348 centerline miles of existing rights-of-way. The District hired its first permanent full-time archaeologist in 1978 and currently maintains a cultural resource staff which includes four permanent full-time positions and six part-time positions. The cultural resources staff works out of the District Office located in Old Town, San Diego. The staff is charged to assist in avoiding or minimizing adverse effects to cultural resources in the course of planning and developing transportation facilities.

### Compliance

Because the bulk of Caltrans transportation projects involves Federal funding, potential impacts to cultural resources are reviewed by the Federal Highway Administration, the State Office of Historic Preservation and, in certain cases, the Advisory Council on Historic Preservation in compliance with the National Historic Preservation Act of 1966, as amended, and 36 CFR 800.

### Projects

Transportation projects developed within the District range from major highway construction (e.g., Interstate 15) to small projects such as park and ride lots. Other kinds of projects include bridge replacements, bike paths, curve widenings, material borrow areas, etc.

### Cultural Resource Identification and Evaluation

Following background information research to identify any known cultural resources, systematic field surveys of proposed project areas are conducted in order to determine the presence or absence of locations associated with prehistoric archaeology, historical archaeology, historical architecture, history and ethnic group interests. If cultural resources are identified, they are then evaluated in terms of their potential eligibility

for inclusion in the National Register of Historic Places. Archaeological sites often require that a test excavation be conducted before a determination of eligibility can be made. There have been five test excavations conducted by the District cultural resource staff in the past two years.

All excavations conducted at prehistoric sites include a Native American observer contracted through the Native American Observer Training Association. Materials recovered from excavations are curated at the San Diego State University Cultural Resource Management Center. If a National Register eligible archaeological site were to be subjected to an adverse project effect, then data retrieval mitigation would likely be conducted. There have been no data retrieval mitigations in the District since 1973. Historical resource evaluations are conducted by staff in Caltrans Headquarters, Sacramento.

#### Recent and Current Projects

1. Hwy 94 - Sweetwater River Bridge Replacement - Sweetwater River Bridge determined eligible for inclusion in the National Register of Historic Places - determination of project effect not yet made.
2. Hwy 78 - Truck Climbing Lane - test excavation conducted at prehistoric site SDi-9473 - site determined to not be eligible for the National Register.

3. Hwy 54/94 - Lane Widening - test excavations conducted at prehistoric sites SDi-5066 and SDi-4763 - sites determined to not be eligible for the National Register.
4. Hwy 52 - New Freeway - Test excavation conducted at prehistoric site SDi-8646 - site believed to be not eligible for the National Register - official determination not yet made.
5. Hwy 67 - Truck Climbing Lane - test excavation conducted at prehistoric site SDi-5680 - site believed to be eligible for the National Register - official determination not yet made.
6. Hwy 76 - Intersection Safety Project - location of prehistoric site SDi-674 - test excavation may be conducted - site believed to be eligible for the National Register - official determination not yet made.
7. Hwy 76 - San Luis Rey River Bridge Replacement - bridge believed to be eligible for the National Register - official determination not yet made.
8. The sale of an excess parcel in Old Town involves an existing parking lot which probably covers the remains of the first private adobe dwelling in California. The sale is expected to be to the California Department of Parks and Recreation.

Resource Protection and Monitoring

Cultural resource locations in the vicinity of planned construction which are to be avoided are designated as "Environmentally Sensitive Areas" (ESA) on the project and are monitored by a staff archaeologist. The ESA program is being expanded to include all known sites within the right-of-way to protect them from accidental damage as a result of highway maintenance activities.

Summary

Caltrans District 11 in carrying out its primary mission of providing safe and efficient transportation to the public, at the same time recognizes its responsibility to avoid or minimize harm to the resources associated with our cultural past. Persons who know of locations of cultural resources within District 11 rights-of-way, or see or suspect that a cultural resource site is being purposely or inadvertently damaged, should contact the District at 237-6764 or 237-7654.

CULTURAL RESOURCE MANAGEMENT ON BUREAU OF LAND MANAGEMENT  
ADMINISTERED LANDS IN SAN DIEGO COUNTY, CALIFORNIA

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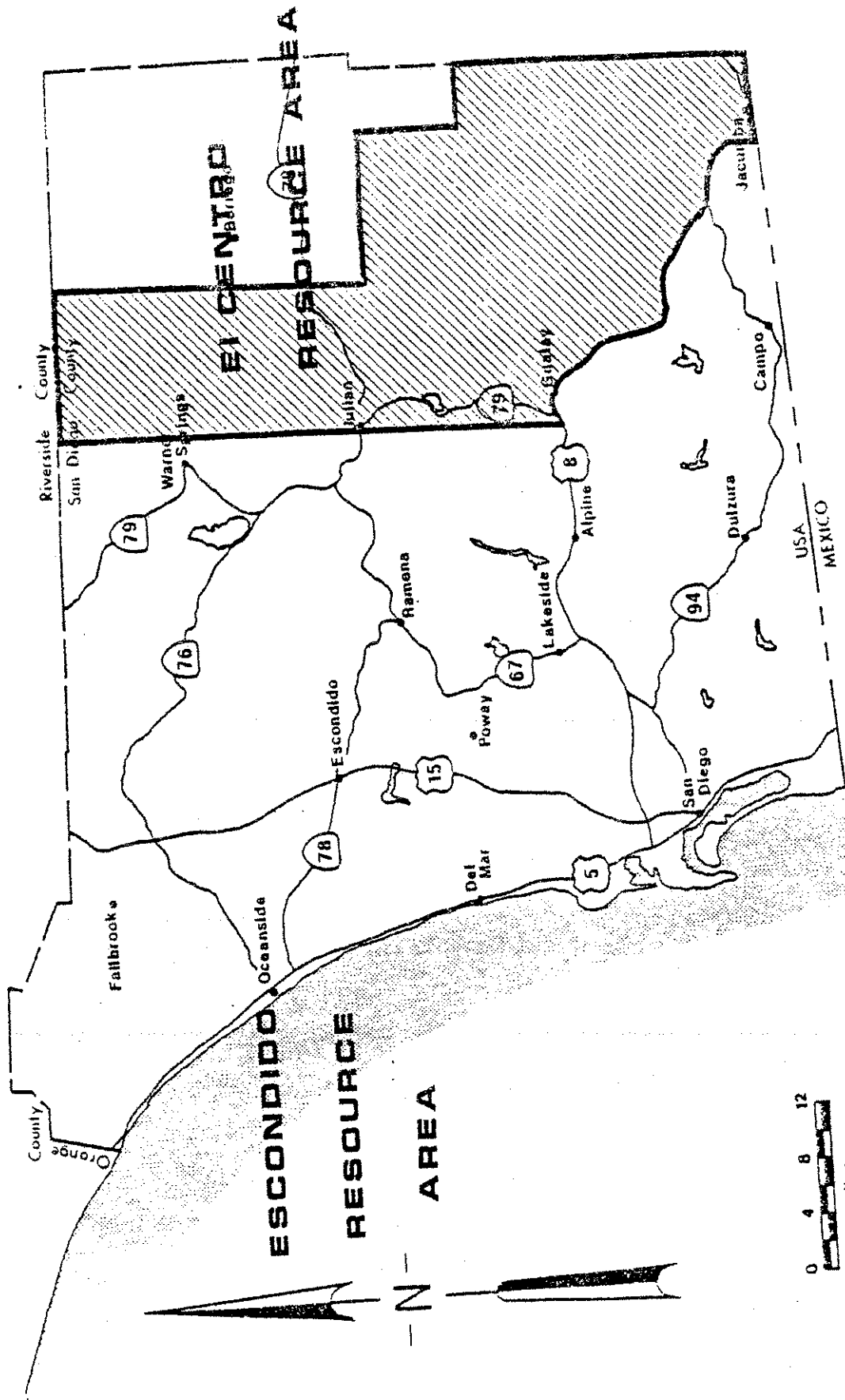
The Bureau of Land Management, an agency within the Department of Interior, is responsible for the administration and management of approximately 400 million acres of land within the United States. In San Diego County, the agency administers nearly one-quarter of a million acres divided unequally between the El Centro Resource Area and the Escondido Project Area. The El Centro Resource Area administers the McCain Valley area and the Julian/Banner-San Felipe Hills as well as the area of Jacumba, Oriflame Canyon, and Table Mountain/Mason Valley. Escondido administers large tracts near Hauser Mountain, Tecate Peak, Potrero Valley, Otay Mountain, El Capitain Mountain, Rodriguez Mountain, and Beauty Mountain as well as over 100 small, isolated parcels ranging in size from 5 acres to 1,600 acres.

The goal of management in the El Centro Resource Area, as a part of the California Desert Conservation Area, is to

effectively manage the lands for public use. Escondido's primary goal is land tenure adjustment. Eventually, lands in the western portion of San Diego County will either be transferred to the U. S. Forest Service or to local jurisdictions, or will be sold through our Asset Management Program. It is the objective of the Bureau of Land Management to get out of land management in western San Diego County. Because of these differing objectives, archaeology is conducted somewhat differently in the two management units.

In 1978 Wirth Associates (Wirth 1978), under the supervision of Mr. Chris White, produced a Class I (literature search) overview of Inland San Diego County. This overview encompasses primarily the Escondido Project Area of San Diego County. Since that time, the study has not been updated (overviews should be updated every ten years according to policy set forth in the BLM 8100 Manual) but still forms the basis for BLM generalized statements about the archaeology on the public domain in the Escondido Project Area. The contract cost for the overview was nearly \$10,000.

The other major BLM sponsored study in San Diego County was awarded to Archaeological Systems Management in 1979. Cook and Fulmer (1981) completed a systematic 6% inventory for the McCain Valley Grazing Statement. Cook and Fulmer



This map indicates the two BLM management units in San Diego County, California.



encountered several dozen campsites and hundreds of agave roasting pits throughout the study area. Management prescriptions for the future administration of the area include nominations to the National Register of Historic Places, particularly in the Table Mountain area, careful use of lands which have delicate cultural resources, and predictions for the location of other cultural resources. The cost of the Cook and Fulmer study was approximately \$55,000. Over 200 sites were located.

Energy projects which are proposed by various utility companies supply an incredible amount of data on the public lands. Both archaeological and Native American elements of these studies, such as those completed by Woods (1982) for the APS/SDG&E Interconnect Project (Wirth 1981) or (RECON 1981), have provided specific locational data for sites within the designated route and predictions outside of the exact designated route.

Mitigation on affected sites is ongoing under the direction of Mr. Jamie Cleland and Ms. Jan Townsend. This mitigation will provide additional valuable information on San Diego County's prehistoric and historic resources. As a result of these studies and through the efforts of Area Archaeologist Patrick Welch, Tecate Peak was identified as a

sacred Kumeyaay site. A management plan was proposed and the Kumeyaay people now have permanent access to a site to which they had been denied access to for over two decades.

The Escondido Project Area does not have an archaeologist; however, the El Centro Resource Area has a San Diego State alumnus, Mr. Patrick Welch, who also serves as Area Archaeologist for eastern San Diego County. The function of the Area Archaeologist is to provide clearance for any project which might potentially impact cultural resources, provide advice to management concerning the protection and continuing management of cultural resources, coordinate with State and local agencies and archaeological groups, develop protection plans, and coordinate volunteer efforts at the resource area level. It is important that BLM archaeologists in any resource area maintain a good working relationship with the local archaeological and Native American community.

A key program for several years has been our volunteer program. Mr. Ronald May has been active in this program through the efforts of the San Diego County Archaeological Society (SDCAS). Through the last decade, May and SDCAS have located over 400 sites at a nominal cost to the federal government. Without his efforts, the Table Mountain area would still be virtually an unknown region of San Diego. May

as do all archaeologists, does his work under a federal antiquities permit which explains the obligations of the researcher. The BLM appreciates volunteer efforts such as that at Table Mountain.

In the western portion of the County, in an area slated to be administratively transferred to the Cleveland National Forest, initial perusal of tracts of land is conducted by a botanist who is informally trained in archaeology. Should the employee locate cultural resources, either the Escondido Project Manager or another qualified archaeologist then visits the site, conducts a formal survey, records the site and recommends future action. Only the Manager can make a decision as to the course of action which must occur. Those decisions are based upon the quality of the archaeological recommendation and the quality of the cultural resource as well as ensuring that all legal obligations are met under the guise of 36 CFR 800, the 1906 Antiquities Act, and the 1979 Archaeological Resources Protection Act.

Law enforcement is a critical element of the BLM cultural resource program. Since public education has not reached the entire population in regards to cultural resources, an effective law enforcement program is a necessity. Law enforcement authority is delegated to a force of 17 desert-wide rangers.

Enforcement is defined by the Federal Land Policy and Management Act (FLPMA) and is codified in Chapter 43 of the Code of Federal Regulations. But in San Diego County, the rangers can issue citations only in the eastern portion. In the western part of the County, they must rely upon Special Agents or the local sheriffs. This is because FLPMA only gave law enforcement authority to the rangers in the California Desert Conservation Area and in the McCain Valley Conservation Area. Law enforcement is and continues to be an integral part of the BLM's cultural resource program.

The BLM is budgeted each year by line items and activity codes. The funding for cultural resources has increased dramatically since 1976. The cultural resource program in the Desert District has an annual budget exceeding \$580,000 for fiscal year 1983 (October 1, 1982 - September 30, 1983). The problem is that archaeologists were, until recently, funded from other activities (such as geology, recreation, and wilderness) but with other activities decreasing their budget, archaeology has been forced to fund its own staff plus partially support a number of other activities including the ranger program, the wild horse and burro program, administration, geology, etc. In real dollars, archaeologists cost more than ever before because the budget goes for so many

other disciplines. In 1978, there were twelve archaeologists in the Desert District. Today there are only five. There are, though, two archaeologists working in other fields, one in management and one in our lands/right-of-way program.

Typical projects archaeologists perform include:

1. Clearance of a range fence line.
2. Clearance for a geothermal well.
3. Survey for a motorcycle race course.
4. Transects for a large Environmental Statement (ES).
5. Predictive modeling for an ES.
6. Development of cultural resource management plans in National Register Districts and within Areas of Critical Environmental Concerns (ACEC).
7. On-the-ground implementation of plans.
8. Review contractor reports and make recommendations.
9. Coordination with the Native American Community.
10. Complete paperwork for 36 CFR 800 compliances.
11. Monitor Antiquities Act Permits.
12. Give lectures to public interest groups on the cultural resources of the area.

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CULTURAL RESOURCE MANAGEMENT IN THE  
CLEVELAND NATIONAL FOREST  
REGION 5

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Background

In the 1890s, large blocks of land in Southern California were placed under Federal control primarily to protect the watershed of the burgeoning coastal strip. In 1897, President Grover Cleveland signed proclamations establishing forest preserves in Southern California. In the same year, the Forest Preserve Act provided for mining entry, fire protection, sale of timber and watershed protection on National Forest preserves. In 1908, President Theodore Roosevelt consolidated several Southern California forest preserves into a single unit named in honor of President Cleveland.

The first ranger station was built in 1911, at El Prado, Laguna Mountains in the Descanso District. The present-day boundaries of the Forest were established in 1915. During the first two decades of its existence, Cleveland National Forest was exclusively a watershed protection preserve; rangers fought fires in the summer and built fire access

roads in the winter. The local stockmen, and the Indians before them, had traditionally burned to clear away dead brush and promote new growth. From the beginning, the Forest Service officials took the stand that periodic burning ran counter to the purpose of Southern California's National Forests, which was to prevent forest fires and preserve the vegetative cover in order to minimize rapid runoff during rains. Since the 1970's and particularly after the disastrous Laguna fire of 1970, fire and resource management are more integrated, the benefits of controlled burning have been recognized. Today, protection of the watersheds remains the major goal of the Forest. However, a persistently growing demand for public recreation on Forest land and it, together with fire safety, forage production, and resource management are the major concerns of the Cleveland (Hall 1982:17-18).

The Cleveland National Forest is one of 18 forests in Region 5 which encompasses the State of California, Hawaii, and the Trust Territories. The Cleveland is divided into three Ranger Districts with the office of the Forest Supervisor in San Diego. Each District has as its administrative head a District Ranger and each has a District headquarters office as well as numerous field stations. The Districts are Trabuco, office in Santa Ana; Palomar office in Escondido; and Descanso office in Alpine. The Forest is in three counties:



Orange, Riverside, and San Diego. State and County parks, Indian reservations, and private land are all found within the Forest boundaries. Management of such a complex land base in a highly urbanized portion of the State makes for interesting administration.

The Forest covers 566,000 gross acres (420,054 net) and runs from Sierra Peak near Corona in the north to within five miles of the Mexican border in the south. Cultural Resource Management of this large and complex area requires coordination and cooperation with all other Forest resource managers, District Rangers, District archaeological technicians, and paraprofessionals.

#### Administrative Mandates

A decade ago, finding a cultural resource manager on a National Forest was a rarity indeed; today every Forest in Region 5 has at least a Forest Archaeologist and some have expanded staffs of District Archaeologists, Ethnologists, and Historians.

It is generally known that the major motivating forces for the addition of cultural resource people to Forest Service personnel were the National Historic Preservation Act of 1966 (now amended), Executive Order 11593, and the Environmental Quality of 1969. Numerous subsequent acts reinforce the motivation. But what is probably not generally known is

that the Organic Administration Act of 1897 authorizes the Secretary of Agriculture to regulate occupancy and use of the National Forests and classifies special interest areas which should be managed for recreation use substantially in their natural condition (36 CFR 294.1a). It is a Forest Service objective to protect and where appropriate, foster public use and enjoyment of areas of scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics. It is recognized that there are in the National Forest systems areas of unusual scenic, historic, prehistoric, scientific, natural, or other special interest which merit special attention and management (FSM 2360, 3--1). Administration of special interest areas is placed under the Recreation Staff Officer. Therefore, since cultural resources fall into the categories of historic/prehistoric/paleontological in the above definitions, administratively, cultural resources are supervised by the Forest Recreation Officer. Logical? It depends on your point of view.

Other acts applying specifically to the Forest Service and affecting policy and attitudes toward cultural resources are the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the National Forest Management Act of 1976. These together require the Forests to prepare Forest Land

Management Plans which "...must assess the impact of management direction for one resource, say timber or recreation, in terms of the effect on other resources (Shands 1980:6). In other words, all resources must be given equal consideration in land management planning. This provides further impetus to the commitment to managing cultural resources.

Laws require rules and regulations and these are spelled out for Forest Cultural Resource Managers in Part 2361 of the Forest Service Manual. Directives break down into four general categories: Inventory, Evaluation, Enhancement, and Protection.

Inventory is the very basis of the cultural resource program. This is the identification of archaeological sites, historic structures, and historic documents and entering that information into the regional data base. Archaeological survey is an essential element in the accomplishment of this task and is ongoing. An ARR or Archaeological Reconnaissance Report is done for every project proposed on the Forest and is an integral part of each Environmental Assessment Report. Sites that are located and recorded are then integrated into the State Inventory through the Regional Clearinghouses. The Cleveland National Forest has a wealth of historic documents and photographs with great potential for research use.

Inventorying and cataloguing these collections is a fascinating and challenging facet of the data base compilation.

After sites and structures have been recorded, the evaluation process takes place. It is here that the State Historic Preservation Officer and the Advisory Council on Historic Preservation Act compliance takes place. Significance is assessed, eligibility is determined, and nomination to the National Register of Historic Places can follow for those properties that meet the Criteria of Eligibility. Also, mitigation of adverse effect recommendations are made during the process.

Public use of cultural resources is encouraged where it can occur without damage to the resource. Such enhancement for the public benefit is usually through visitor information centers where displays, self-guided trails, and brochures are available. Scientific research and data recovery program reports, if recommended as a result of the evaluation process, are available for appropriate use. Site locational information is, of course, confidential and exempt from the Freedom of Information Act.

Cultural resources are often fragile and subject to deterioration due to both natural and human forces. Protection from the human force in an "urban forest" such as the Cleveland is a major factor. Although no "busts" have

yet been made on the Cleveland, sites that are especially vulnerable to vandalism and casual collection are monitored and law enforcement is fully aware of its role in exercising "Prohibitions and Rewards and Impoundments" (36 CR 261) as it pertains to cultural resources. "A Cultural Resource Protection and Management Action Plan for the Cleveland National Forest" was drafted in the Fall of 1982. It is expected that it will be put into final form in the Spring of 1983 and will provide long-range planning for cultural resource protection and managing.

#### Responsibilities

A primary responsibility of the Forest Archaeologist is to insure that cultural resources are given consideration in every proposed or ongoing project that the Cleveland is undertaking. This includes not only ground disturbing activities but administrative actions as well. An example of the latter is land exchange. When the Forest Service transfers or exchanges National Forest lands, that land which is going out of Federal jurisdiction must be surveyed, any extant cultural resources evaluated in consultation with the State Historic Preservation Office and the Advisory Council on Historic Preservation and any adverse effects mitigated. Incoming lands

must also be inventoried. Other examples of administrative actions are Forest Service land and resource management plans and congressionally initiated studies for legislative proposals such as Wild and Scenic River Studies, Wilderness Studies, Research Natural Areas designations, National Recreation Area Plans and Natural History Resource Areas (FSM2361, FSM4063, FSM2362). Actions and activities initiated and undertaken by others but authorized or supported by the Forest Service are also subject to the same set of requirements. Selected examples are issuance of special use permits, leases, easements, sponsorship of scientific research and human resource programs.

Included also are Forest Service initiated and/or funded activities on non-National Forest system lands. A good example of this is the Pacific Crest Trail which passes through both the Palomar and Descanso Districts of the Cleveland National Forest. On the intervening private/public lands, the Forest Service is charged with the responsibility for all aspects of the trail including environmental considerations. Environmental considerations cover visual quality, identification of threatened and endangered plant and animal species and identification and management of the cultural resources.

Perhaps the more common actions, activities and projects are those undertaken directly by the Forest Service on Forest

Service lands. These are typically road, trail, and camp-ground construction, facility modification and construction, timber stand improvement, and chaparral management. Since the Southern California forests are largely chaparral forests, management of brush is a major consideration on the Cleveland. As a result of the disastrous Laguna Fire of 1970, which burned 175,425 acres of watershed cover, 1,200 structures, claimed 6 lives and cost tens of millions of dollars in fire suppression, a Laguna-Morena Demonstration Area was established (Newell 1979: Overview). This is a cooperative program among land management and fire control agencies for development and demonstration of currently available fire management techniques. Forest Service land involvement is on the Descanso District. Techniques range from control of vegetation through prescribed burning, mechanical vegetation modification to grazing goats. One vegetation management technique that has been recently in the news is chaparral utilization for energy production, or brush densification, to produce long-burning wood briquettes. One stated objective for all demonstration units is "Protect and enhance rare, sensitive, threatened or endangered plants, animals, niches, archaeological, and natural heritage value" (Newell 1979: exhibit 6). Therefore, management of the cultural resources that may be affected is mandatory.

It is within the on-Forest project context that the Forest Archaeologist has the greatest opportunity to work directly with the on-the-ground situation. All ARRs must be given professional review. This requires either personal survey and report writing or inspection of sites and reports done by others.

Record keeping is essential and all sites are plotted on the master file Cultural Resource Atlas in the Forest Supervisor's Office. This consists of a bound set of USGS Quads with mylar overlays--one for site locations and one for land ownership patterns. Each District Office has a duplicate of the Atlas for the Quads lying within the District. The data is also entered into a FORPLAN computerized data base developed in the course of the land management planning process.

Long-range planning for Forest resources and allocation of monetary resources is done during the land management and resources planning processes. Because future budgets are formulated for cultural resources during this time, input from the Forest Archaeologist is mandatory. Archaeology is currently facing austere times and Federal agencies are not exempt from this. Participation in LMP and RPA are time consuming and seemingly a deterrent to what an archaeologist wants to be doing, dirt archaeology. But without adequate



funding for cultural resources, a future for "real" archeology cannot be assured. Consequently, a major responsibility is supplying needed information to the core planning team.

Managers of other resources, engineers, fire technicians, and administrative officers are not cultural resource managers nor should they be. It is therefore the responsibility of the archaeologist to inform those engaged in "running the Forest" regarding cultural resources and their values. The challenge can be met in one on one situations, group presentations, and in print. Whatever the medium, the challenge is always there. Program building takes some time and the Cleveland and the Angeles Forests were the last in the Region to hire Forest Archaeologists. The program has been in place on these two Forests barely two years. It is interesting and fertile growing grounds in which to plant concepts toward cultural resource research on the many prehistoric and historic resources in existence on the Forest.

#### Opportunities

Cultural resource management can only be effective through knowledge of quantity, quality, and location of the resources (Hall 1983:23). Protection of sites cannot be divorced from other aspects of cultural resource management.

For cultural resources to be protected, they must be identified. To make decisions on how they should be protected, they must be evaluated. Evaluation classifies them for selection of an appropriate specific treatment for their then enhancement and protection (Hall 1983:20). The rich prehistoric, historic, and ethnographic heritage of the land, that, on part, the Cleveland lies has left a legacy of material culture and sacred values. Challenge and opportunity rest in these.

The Forest Service classifies cultural properties according to their significance measured against the criteria of eligibility for the National Register of Historic Places. Class Is meet the criteria and Class IIIs do not. Class IIs remain to be evaluated. To date, the Cleveland has one Class I property--Bear Valley Archaeological Site. The challenge is to complete the nomination process on properties that have been identified as having the potential for meeting the National Register criteria. The opportunity is to enhance the environment when the nomination or eligibility determination process is complete.

Use and enjoyment of cultural resources for the public benefit can be promoted through interpretation, and that is opportunity indeed. The existing Forest Service campgrounds on Laguna Mountain and at Boulder Oaks on Descanso District

have had complete survey. The entire Laguna Mountain Recreation Area has been surveyed. On Palomar, Dripping Springs Campground and Indian Flats Campground are in progress. El Cariso and Tenaja Campgrounds on Trabuco have had their surveys completed. There are already information centers at El Cariso and Laguna Mountain. The opportunity to reach and educate the public through the use of displays, brochures, self-guided trails and signing is there where people, facilities, and cultural resources come together. Whenever a campground rehabilitation is planned heritage interpretation is an integral part of the plan. This is an important step in informing the public regarding the life-ways of peoples in the past and the laws protecting their cultural heritage.

Research opportunities come in several guises. To provide background data for preparing cultural resources for quality public interpretation, analysis and research are necessary. Adaptive reuse of any historic structure or building requires research in adherence to the Secretary of the Interior Standards for Historic Preservation Projects. Cataloguing historic photographs, tapes, and documents has intrinsic research value while making them available as research tools to those outside the Forest Service.

Mitigation of adverse effect on archaeological sites has scientific research as its instrument.

An important part of the evaluation and assessment process is to not only classify individual sites or groups of sites with eligible or ineligible classes but to make recommendations regarding their disposition once they have been classified. If, for example, data recovery is the recommended mitigation of an adverse effect on the cultural resource, then the resource has been utilized for scientific study. If, after data recovery, the site becomes a feature of an interpretive trail, it has also served the purpose of public use and enjoyment. If, on the other hand, a resource is deemed to have enough significance to be preserved intact and in place, or to be rehabilitated for reuse, it must be protected by some other organized plan of events (Hall 1982:22). In any of these circumstances, research has been served.

Simple avoidance of sites after identification does not truly address the issue of resource management. It increases the data base through recordation and at the same time increases Class II: Unclassified. While this is the initial target and is necessary and indeed imperative, the management objective must go beyond that for credibility (Hall 1982:22).

Several areas on the Forest have been ultimately targeted for this kind of management but the most eminent is the Laguna Mountain Recreation area. Surveyed under contract in 1981, as funds are made available for the development of recreation, so will funds be made available for cultural resource research, data recovery, adaptive reuse and interpretation.

In the meantime, another kind of opportunity exists, the opportunity to recruit and utilize volunteers. In this era of Federal cutbacks, the opportunity can become a challenge.

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THE SO-CALLED "BURIAL LAW"

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Native American Heritage  
Commission  
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Senate Bill 297, Chapter 1492, became effective in part on January 1, 1983. The bill was authored by Senator John Garamendi and sponsored by the California Native American Heritage Commission. Before going into the details of the law, it is necessary to express my answer to the question asked most about the impact of this legislation. That question being: "Will this law bring an end to archaeology in California?" The answer to that, based on my own perception, is "No!"

Despite my own feelings about this, lobbyists for the University of California have argued that the University as well as students will suffer fiscal impacts as a result of SB-297 because students will be forced to go to other states in order to satisfy curriculum requirements in the field of archaeology. This argument could only be made from the premise that all archaeological sites are burial sites or that a person who wishes to become an archaeologist must excavate Native American human remains. I have never understood this

to be true. In fact, SB-297 does not preclude archaeology at all. The major core of SB-297 is: Section 7050.5 of the Health and Safety Code, Part (a), which reads:

*7050.5. (a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (1) of Section 5097.94 of the Public Resources Code or to any person authorized to implement the provisions of Section 5097.98 of the Public Resources Code.*

The first important issue of fact is that this section is applicable to all human remains, not just Native Americans, which are located in places other than a dedicated cemetery.

Secondly, those provisions 5097.94 (1) and 5097.98 of the Public Resources Code do apply to Native Americans and read as follows:

*5097.94. The commission shall have the following powers and duties:*

*(1) To assist interested landowners in developing agreements with appropriate Native American groups for treating or disposing, with appropriate dignity, of the human remains and any items associated with Native American burials.*

*5097.98 (a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or*



disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

(b) Whenever the commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(c) Notwithstanding the provisions of Section 5097.9, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section and any action taken to implement an agreement developed pursuant to subdivision (1) of Section 5097.94, shall be exempt from the requirements of the California Environmental Quality Act (Division 13 [commencing with Section 21000]).

(d) Notwithstanding the provisions of Section 30244, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (1) of Section 5097.94 shall be exempt from the requirements of the California Coastal Act of 1976 (Division 20 [commencing with Section 30000]).

Especially note that section which states:

\*\*\* The recommendation may include the scientific removal and non-destructive analysis of human remains and items associated with Native American burials.

This particular section gives way to the fact that not all Native Americans are opposed to the study of their ancestors.

It does, however, give Native Americans a voice in determining disposition of their ancestors. Such agreements and recommendations have occurred prior to SB-207, some of those instances being Warm Springs Dam, New Melones Dam, Anza Borrego, Hillsdale site, Santee Greens, Angel Island, and many others. Some of these agreements have led to permanent curation of artifacts, held as significant by both parties.

Many archaeologists have charged that SB-297 will lead to wholesale destruction of archaeological sites. Regrettably for some people, the reality of the complexity of this situation becomes evident at this point. In the case of salvage excavations, only a percentage of site materials are retrieved by archaeologists, usually to the extent that enough information can be gained about the site through that percentage of material recovery. So the scientist is satisfied, and often times the remainder of the site is destroyed. What about cultural values?

Cultural values based on traditional beliefs will now have an important role in determining final disposition and in some cases future disposition of human remains. The site of model complexity is of course the Stockton burial site. The site, a known burial site, fell through the cracks of the environmental review process--written off by archaeologists,

desecrated by non-California Indians, pot hunted by locals, and eventually an issue in the courts. Of all the burial issues within the State of California, the Stockton site shared almost every aspect of those issues.

Archaeologists were arguing in terms of its significance, unrelated Indians were seeking notoriety as well as monetary gain, traditionalists were demanding dignity, neighboring property owners used skulls as candle holders, the owner of the property successfully argued in the courts that Indians were not accorded protection under California cemetery laws.

The City of Stockton fell within the district of Senator John Garamendi. He played an active role in trying to resolve this issue, thereby gaining first-hand knowledge in burial problems. Those claims by archaeologists that they were not treated fairly by the Senator are totally unfounded. He spent hours trying to negotiate an equitable statute taking into consideration everyone's concerns. The truth of the matter is that each time it appeared we had reached agreement, representatives of the archaeological community would launch into another series of arguments dealing with the "what ifs."

It was at this point that the Senator took control of the situation and dealt out what he considered to be a balance, requiring concessions by Indians as well as archaeologists, and developed SB-297 into its present form.

The law protects the rights of the private property owner, the Indians, and is truthfully the only law which legally allows (through agreement) archaeologists to take possession of human remains. In essence, the language under 7050.5 of the Public Resources Code referring to "without authority of law" is that portion of law which would have devastated the archaeological community if it were not for Senator Garamendi and his decision to allow a provision dealing with archaeology. A quirk of fact: archaeologists have never had the authority of law to take into possession human remains.

It was also the Senator's decision not to make current collections illegal, so I do not understand how it could be said that he was unfair. Admittedly, it was there that I felt the provision that he set forth was unfair to Indians. This provision being 5097.99 of the Public Resources Code, which reads:

*5097.99. No person shall obtain or possess any Native American artifact or human remains which are taken from a Native American grave or cairn on or after January 1, 1984, except as otherwise provided by law or in accordance with an agreement reached pursuant to subdivision (1) of Section 5097.94 or pursuant to the provisions of Section 5097.98.*

SB-297 will be a real test to see if archaeologists, Native Americans, and property owners can work together. It has already been expressed by some archaeologists that they

do not want this test and will seek revisions in the law.

It should be noted that given the sentiments of the courts, the matter of public opinion, and the fact that archaeology can now be found in the "yellow pages," that a premature attempt at revision would more than likely fail.

Discussions should begin though, with the Native American Heritage Commission to see if a mechanism can be established for allowing "appropriate archaeologists" an opportunity to visit sites as they are discovered and noticed to the NAHC office.

## IMPROVING SHELLFISH ANALYSIS

Susan M. Hector  
Regional Environmental Consultants

Although shellfish remains are unspectacular, they can be used to test hypotheses about seasonality, food exploitation systems, territory and social relations, as well as the length and time of human occupation. This paper explores some of the ways that we can improve our analyses of this cultural material. Although almost all archaeologists save the shellfish remains from their excavations, many fail to obtain useful information from these remains. For example, the shell is generally quantified in some manner, and species present are described, and then nothing more is heard of these data. An implicit goal of the shellfish analysis may be to demonstrate that the site is from the La Jolla horizon, accomplished merely by the presence of the shell remains. We know that the native people ate shellfish, but few archaeologists explore what these past diets were, or how the shellfish were obtained, or what all of this indicates about the group who occupied the site. Taking a cultural ecology approach, shell remains can be analyzed in several ways to test hypotheses about human subsistence and occupation patterns.

### Species Identification

Most reports give a list of species (or genera) present in the sample. The type of shell exploited may provide information about where a given group was going to obtain this food source. For example, at a late prehistoric site near Jamul currently under investigation by the author, the collection is dominated by mussel and abalone shells. This evidence suggests that the occupants of the site visited a rocky shore for their resources. Since the site is 20 miles inland, either their territory extended to the coast, which is unlikely since there are several late prehistoric sites between this site and the ocean, or a complex relationship, perhaps through fictive or actual kinship, existed between the late prehistoric site occupants and the inhabitants of the intervening lands. Like constructing hypothetical trade routes based on the presence of imported stone tool materials, this aspect of shell analysis presents an argument for intricate intersocial interactions during the late prehistoric period. Was this true of all time periods in all locales or just the Jamul/Otay region?

### Quantification

Unfortunately, some studies merely give a count of the number of shell fragments or the minimum number of individuals

represented (by counting the hinges on the fragments). Although this surely requires a great amount of effort, it tells us nothing except that the screeners were skilled in picking out shell pieces. Shell species should be weighed to generate relative frequencies as comparative data. One piece of shell can be broken into ten smaller pieces, thus increasing the shell count ten times, but those ten pieces will always weigh the same, together or broken. The calculated frequencies obtained by species weights can be used to examine changes in shell species representation through time, which may be evidence for occupation by different cultural groups at a site (Hector 1981) or overexploitation of an environment (Botkin 1980). A recent study has presented tantalizing evidence that shellfish can be used to relatively date sites along the coast through a recognizable pattern of changes in species exploitation through time (Norwood et al., 1982).

An important by-product of proper quantification of recovered shell is an assessment of the reliance of the site occupants on shellfish as a major food resource. Excavators may remark that a great amount of shell is being found, by calculating the amount of meat represented by each shell species, the dietary contribution of shellfish as a food source can be determined (Hector 1979, 1982; Tartaglia 1976). Shell middens like those at Malibu and Mugu may represent



the remains of tons of consumed meat, while a typical coastal or lagoon site in San Diego may represent a scant few pounds of meat protein. With these realizations, the analyst is forced to consider the complete resource exploitation system rather than just the preserved portion.

Some shells, like clams, possess far more shell weight than meat weight; others, such as scallop, have lighter shells. Therefore, 100 grams of scallop shell represents more available meat than 100 grams of Chione sp. or Tivela stultorum. When doing least cost analyses, this type of data is important, since more meat per unit of effort would be obtainable from scallops than from heavier shelled molluscs.

#### Dating

As mentioned above, shellfish analysis may be valuable in relatively dating a deposit. More directly, radiocarbon dates from shell can assist us in reconstructing a local chronology. Associations between dated levels and artifact types and attributes may resolve long standing questions about cultural sequences.

#### Seasonality

Certain shells such as Chione sp. or Tivela stultorm (e.g., Weide 1969) can be analyzed, if whole shells are present in quantity, to determine which season they were taken. If corroborated by other supporting evidence, such as faunal

material or a reconstructed seasonal schedule, these data could be used to find out if a site was occupied seasonally or year-round.

Even after reading this paper and acknowledging the worth of shellfish analysis, the archaeologist may still feel that it is too much work. There are two ways to reduce the amount of shell to be analyzed and still gain the same valuable information.

If a great amount of shell is present, the collection can be subsampled by taking a standardized amount of shell from the total shell weight of each level. This smaller amount, for example, four samples of 200 grams each, is then analyzed and extrapolated back to the unit level. This approach, pioneered by Charles Bull at a North County (San Diego) site, has produced 95 percent confidence with a precision of 2 percent of the mean when compared with conventional analyses of larger samples.

Another manageable way of obtaining these data is to take column samples from each completed unit rather than saving the shell from each screened level. These samples should be taken from the bottom of the unit to the top to avoid contamination and should be a standardized weight or quantity, for example  $10^3$  centimeters of soil. The soil from each sample

can be analyzed by flotation or separated by using a graduated screening process. Besides collecting samples of the shell from each level, the column samples can also yield macro and micro flora and fauna for additional ecological analyses. As with the above method of subsampling, the data from the column sample can be extrapolated back to the unit level.

This paper has discussed but a few of the ways shellfish remains can be systematically analyzed to provide important data for cultural studies. By recognizing the types of information obtainable from these remains, we can begin viewing them as a valuable addition to the evidence collected from a site.

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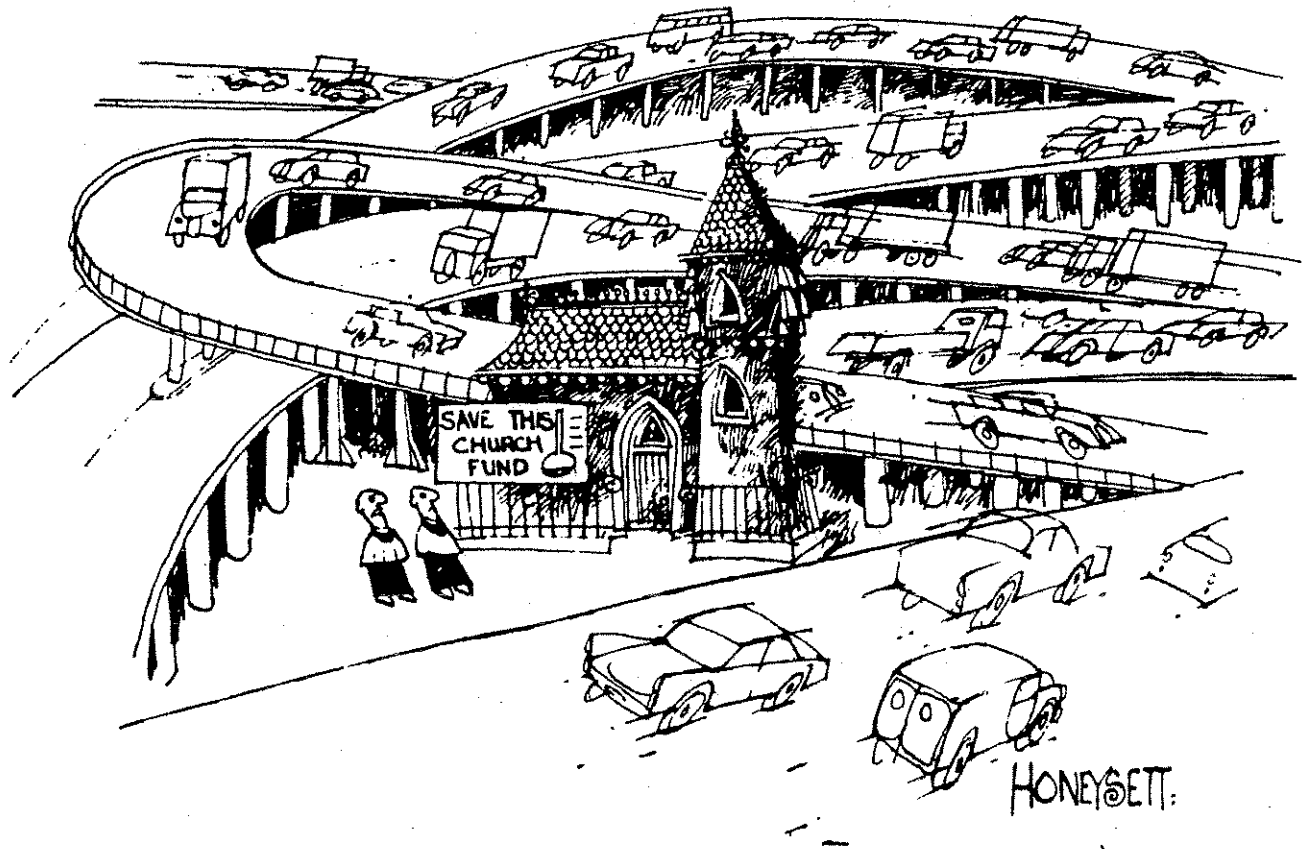
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*"Sometimes, Carstairs, I wonder if it's worth it."*

DATA

FISCAL YEAR 1982 APPORTIONMENTS TO THE  
STATES, TERRITORIES, AND THE NATIONAL TRUST  
FROM THE HISTORIC PRESERVATION FUND UNDER P.L. 97-100

<u>State</u>	<u>Amount</u>	<u>State</u>	<u>Amount</u>
Alabama	\$288,511	Nebraska	\$ 196,820
Alaska	252,092	Nevada	160,993
Am. Samoa	26,583	New Hampshire	279,184
Arizona	235,709	New Jersey	298,860
Arkansas	364,852	New Mexico	330,350
California	506,216	New York	414,622
Colorado	280,909	North Carolina	483,175
Connecticut	271,405	North Dakota	163,649
Delaware	239,069	C.N.M.I.	89,629
District of Columbia	179,443	Ohio	449,955
Florida	351,494	Oklahoma	233,544
Georgia	353,876	Oregon	219,057
Guam	113,826	Pennsylvania	459,844
Hawaii	168,326	Puerto Rico	189,425
Idaho	318,811	Rhode Island	388,684
Illinois	304,400	South Carolina	371,312
Indiana	213,730	South Dakota	311,074
Iowa	270,125	Tennessee	272,651
Kansas	136,302	Texas	364,882
Kentucky	368,967	Trust Territory	169,034
Louisiana	236,483	Utah	329,820
Maine	259,051	Vermont	293,865
Maryland	389,222	Virginia	345,522
Massachusetts	400,387	Virgin Islands	174,508
Michigan	344,357	Washington	328,105
Minnesota	376,271	West Virginia	256,014
Mississippi	234,038	Wisconsin	347,989
Missouri	344,005	Wyoming	132,680
Montana	257,863		
		subtotal	\$16,141,570
		<u>National Trust</u>	<u>3,701,430</u>
		TOTAL	\$19,843,000

A SELECTED BIBLIOGRAPHY OF CULTURAL CHRONOLOGICAL  
DOCUMENTS IN SAN DIEGO COUNTY

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This is not meant to be an exhaustive treatment of culture history in San Diego County. Environmental Impact Statements and archaeological survey reports from the County offer a veritable spate of culture history research. A recent critical review of the history of cultural chronological research in San Diego County has been written by Charles Bull (1980): further critique is not offered here.

Titles given to the four general stages of local pre-history are in essence identical except for the latest period-- "Late Prehistoric," "Late Archaic," "Kumeyaay/Northern Diegueño-Luiseño," "Hakataya and Shoshonean Traditions," and "Patayan Ceramic Tradition." These designations all refer to the same cultural groups and time periods.

Again, this is not meant to be an exhaustive list. Many of the publications listed here will lead, through the bibliographic sections, to a more extensive field of material. The Wirth Associates' document (1978) has a particularly extensive bibliography, but most others would be equally adequate for project specific activities.



Following is an annotated bibliography including a short description of various publications. This format should allow a non-archaeologically trained planner as well as the professional archaeologist to derive a fairly comprehensive picture of the culture history in San Diego County.

Regional designations are presented where applicable: Coastal, including lagoons and bays; Inland, from the coastal region to and including the crest of the Peninsular Ranges; and Desert, east of the crest. These regional distinctions are frequently arbitrary and many "culture histories" are directed toward the County, or Southern California, as a whole.

A few of the entries (i.e., McGuire, Waters), although focused on western Arizona, are excellent recent treatments of culture historical problems. Waters' (1982) examination of Lowland, Patayan ceramics is a valuable tool for archaeologists working in the eastern portion of San Diego County and western Imperial County.

All of the manuscripts listed are either on file at the Cultural Resource Management Center, Department of Anthropology, San Diego State University, or are in published form.

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*This is a good history of research in the region.*

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*Describes excavations at a coastal lagoon in northern San Diego County and discusses the placement of the sites in an early milling (La Jollan) context.*

Irwin-Williams, Cynthia

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*As with McGuire, this article contains valuable data for specialists in Southern California, as well as the Southwest.*

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## RESEARCH NOTE

During initial field examination at the Ruiz-Alvarado Adobe near Sorrento Valley, San Diego, a number of surface soil samples were taken for analysis of organic and inorganic constituents. Samples were taken from the following Locations: Standing adobe block walls (2), mud mortar (2), melted, puddle adobe (1), and surrounding site soil (3), and analyzed using a Hellige-Truog Combination Soil Tester. The results of these preliminary tests are presented in Tables 1 and 2 below. Further soil analyses are planned.

Table 1

### MUNSELL READINGS

<u>Sample</u>	<u>Munsell Hue, Value/Chroma</u>		<u>Soil Color Name</u>
Adobe block Type 1	5 YR	3/4	Dark reddish brown
Adobe block Type 2	10 YR	3/1	Very dark grey
Puddle adobe melt	10 YR	4/3	Dark yellowish brown
Surrounding soil	10 YR	4/4	Dark yellowish brown

Table 2

PRELIMINARY RESULTS OF 8 SOILS SAMPLE TESTS  
 RUIZ-ALVARADO ADOBE  
 SAN DIEGO, CA  
 DECEMBER 1982

<u>Sample</u>	<u>pH</u>	<u>Phosphorus</u>	<u>Potassium</u>	<u>Calcium</u>	<u>Ammonia</u>	<u>Organic Soil Nitrogen</u>
S. W. Front Wall Adobe (Black)	8.1	V.Hi-200	Hi-240	Hi-4000	Hi 50,312,250	Hi-300
S.W. Front Wall Adobe (Red)	8.0	V.Lo-40	V.Hi-320	Hi-4000	V.Hi 100,625,500	Hi-300
Mortar	7.0	Hi-125	V.Hi-320	Lo-1000	V.Hi 100,625,500	Med-225
Adobe MeIt	8.0	Hi-125	V.Hi-320	Med-2000	V.Hi 100,625,500	Hi-300
Soil #1	8.0	V.Hi-200	V.Hi-320	Med-2000	Med 25,156,125	Lo-150
Soil #2	7.0	Hi-125	V.Hi-320	Med-2000	Lo 15,93,75	V.Lo-75
Soil #3	7.0	Hi-125	V.Hi-320	Lo-1000	Med 25,156,123	Lo-150

## RESEARCH NOTE

Caltrans District 11 recently received the results of x-ray fluorescence analysis of 21 obsidian artifacts from archaeological sites CA-SDi-799 (N=20) and CA -SDi-9473 (N=1). All 21 specimens were manufactured from obsidian originating at the Obsidian Butte (Salton Sea) source in Imperial County. The analysis was conducted at the Department of Geology and Geophysics, UC Berkeley by Richard Hughes, Sonoma State University Academic Foundation. SDi-799 is adjacent to the San Luis Rey River north and west of Warners Hot Springs. SDi - 9743 is located in Oceanside near Buena Vista Lagoon.



## RESEARCH REPORT

### DISCUSSION AND PRELIMINARY RESULTS OF A FAUNAL ANALYSIS ON LARGE MAMMAL REMAINS FROM THE PRESIDIO OF SAN DIEGO

Dayle M. Cheever  
San Diego State University

The recovery of faunal remains during an archaeological excavation has been problematic for many researchers. One author has noted that "bone lacks the emotional appeal of pottery, stone, statuettes, and architecture" (Reed 1963: 204). Faunal remains are often relegated to a "second-class" status during the analytic phase of archaeological research, primarily because few archaeologists feel qualified to undertake even the initial identification phase of a faunal analysis. As a result of this professional apprehension, valuable information and inference which might otherwise be gleaned from faunal data is lost.

On those occasions when faunal data have been incorporated in archaeological site reports, the end result is generally little more than a "laundry listing" of the recovered skeletal elements and the Genera they represent (Olsen 1971). While these shortcomings are equally applicable to historic and prehistoric site reports, analyses of historical faunal

samples have concentrated on general statements concerning the butchering of domesticates like cattle and sheep. Research begun in 1982 by the author focuses on an historic faunal assemblage recovered during subsurface testing at the San Diego Royal Presidio.

The San Diego Royal Presidio represents one of the most important historical resources in San Diego County. Archaeological and historical research focused on this Spanish fortification has been ongoing since the 1960's. The first formal archaeologically based research at the site was begun in 1965, under the auspices of the San Diego Historical Society and the direction of Dr. Paul Ezell. During eleven years of excavation, 1965-1976, more than 95% of the Presidio's "chapel complex" was unearthed.

A second large scale archaeological program was begun in 1976 on an area of the Presidio site roughly to the west of the chapel excavation. This project known as the "gateway search" was designed to test hypotheses concerning the location of the Presidio's main entrance or gateway. Another facet to the gateway search involved excavation of a grassy area, west of the architectural features, where a subsurface test had indicated "undisturbed" Presidio era refuse (Barbolla 1976).

From 1976 through 1982, ten sample units (5x5 ft.) were excavated in the refuse area. One sample pit was excavated to sterile soil at a depth of over 14 feet while a second has been sampled to a depth of 8.25 ft and is still productive. Among the many thousands of Spanish, Mexican, and aboriginal artifacts recovered during this 8 year period, is a faunal assemblage estimated roughly at well over 100,000 grams. A very rough estimate of total bone pieces would also fall in the 100,000 range.

A subsample of the faunal assemblage attributable to large mammals was statistically analysed with the explicit purpose of illucidating the types of large mammals utilized at the San Diego Presidio, the manner of said utilization, and the cultural and economic factors which might have influenced or caused changes in an established method of large mammal dismemberment, preparation, and deposition. A second facet of this research involved the comparison of the faunal assemblage from the San Diego Presidio with similar Spanish colonial borderland sites.

Tentative, preliminary results show that 77.7% of the faunal subsample was identifiable to at least a generic level. 72% of the total subsample was identified as cattle (Bos sp.) while 5.4% was attributable to sheep (ovis aries). 65% of the assemblage showed signs of dismemberment. Bone

was sawed, hacked, spiral fractured, and shattered. 4.5% of the sample showed signs of having been burned. Almost all of this burned bone was extremely fragmented and un-identifiable to a generic level. Some experimental research is planned which would quantify the temperature and length of heat exposure required to burn large mammal bone.

One of the more interesting preliminary results involves the degree to which the large mammal skeletal elements were fragmented. During the initial stages of this analysis, at which time 2,300 cases were entered on specially designed code sheets, not one whole humerus, radius, ulna, femur, tibia, scapula, rib, innominate, or calvaria attributed to Bos sp. was encountered. The diaphyses or shafts of the major long bones were reduced to small bone flakes while the epiphyses or ends of the large long bones were sawed, hacked, or battered. Scapulae were found to be broken variously along the blade and spine with the glenoid fossa cut or roughly hacked through. Ribs were cut below the proximal articulation and again just above the distal end so that many of the rib fragments are middle portions.

The pelvic girdle was highly fragmented such that the most often identified portion of an innominate was the acetabulum. Cranial remains representing cattle were differentiated as calvaria or lower jaw (mandible). The

only parts of the cranial vault which were not highly fragmented were those associated with the dentition of the upper jaw. The mandible fared better in overall preservation, but many were broken or cut through between the canine and the first lower premolar. A working hypothesis states that the condition of the cattle mandibles is a direct result of tongue extraction.

Not surprisingly, the lower leg bones (front and rear) were in the most complete condition. Seventeen whole metapodials (metacarpals and metatarsals), 127 whole ankle and wrist components, and 152 phalanges were dispersed throughout the ten wrist sample. Many of these whole elements had thin skinning lines on surfaces which would be easily cut by a sharp blade, as the lower leg region has very little tissue separating the skeletal mass from the hide. Both cattle and sheep remains exhibited skinning lines. The only recovered deer humerus showed two skinning lines across the medial aspect of the distal portion.

More detailed information concerning the age at which these animals were butchered, the ratio of domestic stock utilization to indigenous resources, changes in butchering during the occupation of the site, and economic factors influencing the utilization of large mammals is needed

before any more conclusive statements about the condition of the faunal assemblage can be made. Comparative faunal data from other California presidios is also being compiled so that the treatment of large mammal at the San Diego site can be evaluated for consistency or variation in light of similar social and economic environments.

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## DISCUSSION AND CRITICISM

Historical Site Archaeology in San Diego County: Tapping the Resource. JEROME SCHAEFER. In Cultural Resource Management, Casual Papers 1(1): 1-4. Cultural Resource Management Center, San Diego State University.

Reviewed by M. Steven Shackley  
Wirth Associates  
San Diego, California

*Before I begin the specific review of Schaefer's article, I would like to make a few general statements about the first Casual Papers of the Cultural Resource Management Center. The publication of a casual journal from the local university is a long overdue and welcome addition to the local archaeological community resources.*

*Fred Kidder's presentation of previously unreported data from San Clemente Island curated at the University is an important contribution and hopefully a forerunner of future articles of this kind. San Diego State's curation facility is a storehouse of archaeological material, as evident in the list of collections housed at the University.*

*Roy Pettus' treatment of San Diego's submerged cultural resources is another example of the informative data that can be transmitted through this publication. The current research section is another valuable presentation, aiding the dissemination and sharing of data in one of the most active CRM arenas in the world.*

*The Cultural Resource Management Center is to be congratulated for a capital idea, and a job well done.*



Historical Site Archaeology in San Diego County: Tapping  
the Resource

Jerome Schaefer's well organized and appropriately titled essay on San Diego's history is an excellent introduction to historic research in San Diego County. The identification of the Archaeology of Imperialism is compelling, and emphasizes the prospect of a neo-Marxist or cultural materialist approach, a perspective rare in historic research (see Leone 1982 and Price 1982).

Schaefer's identification of the generation of inadequate historical CRM research designs in the region, due to "the competitive nature of the CRM proposal process" is a point well taken. The author further suggests a possible remedy for the situation by encouraging greater monitoring of the proposal process and facilitating a greater information flow between SHPO, development agencies, and federal granting agencies, and federal granting agencies, such as the Department of Housing and Urban Development.

Schaefer's identification of research domains and research questions within the domains is an intrinsically valuable contribution. He identifies Rural Studies, Urban Studies, and Industry and Transportation, as well as the previously mentioned Archaeology of Imperialism, as important domains for research. Within the domain of Rural Studies, Schaefer

suggests a variety of possible research orientation, none of which have been systematically investigated. These research problems focus on the effects of the Anglo population on resident Native American (see Cuero 1970), Hispanic, and "Californio" populations; the effects of expanded marketing networks on hinterland communities; and the general effects of urbanization and population growth on rural culture. Most of the suggested research orientations are prime subjects for thesis level research. Equally important, as suggested by Schaefer, is the consideration of the research domains and orientations when making cultural resource assessments and recommending mitigation measures.

Schaefer's final and perhaps most important recommendation for improving local historical research involves the better use of current theory and method in historical archaeology.

"There is still a tendency to view historical archaeology as an adjunct to the descriptive chronicle rather than as a means to apply anthropological, economic, or geographical theory." As emphasized by Schaefer, although the quality of historical reports has steadily improved, these improvements are small compared to the potential that exists. Much of Schaefer's subtle criticism of this point is appropriate for local prehistoric archaeology as well.

The only important lack in Schaefer's essay is the "bibliography in possession of the author." Fortunately, most of the references are commonly available. Overall, Schaefer presents a perspective that could initiate a valuable and creative direction for historic archaeology in the region.

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## COMMENTS

*In response to a request from the State Office of Historic Preservation, the San Diego Office of the California Archaeological Site Survey prepared a broad-based overview dealing with archaeological practice in San Diego County. This was partially accomplished by the distribution of a questionnaire dealing exclusively with the practice of Cultural Resource Management in the County. Written comments were also solicited from respondents. Included below are a series of responses by Dr. Delbert L. True of the University of California at Davis, taken from a letter he sent in November of 1980, although his thoughts are quite current.*

Thank you for the opportunity to respond to your questionnaire on San Diego County. As you may already know, I tend to be pessimistic about many aspects of CRM work so I hardly expect you to agree with my responses. I think the questionnaire itself personifies the nature of the larger problem in that it assumes that most archaeological problems can be dealt with as percentages, yes or no answers, etc. In almost every category, the grey areas overwhelm the black and white. There are no good answers to many questions. I do not pretend to know what we should do about it, but I have a very strong feeling that what we are doing in the area of CRM is not very satisfying. With this as an introduction, I would like to respond to several of the specific points you raise in your questionnaire.

- Q. Certification or licensing procedure should be required for cultural resource management practitioners.
- A. Certification. This may be a partial answer, but is fraught with complications and hazards. Set up by whom? Managed by whom? Who gets let in on the basis of experience in lieu of education, or vice versa, etc., etc.... Just having experience does not make an archaeologist and just having education does not make an archaeologist. Once certified, however, a person would have a license to destroy the world. . . I liken this to termite inspectors.
- Q. A qualifying test for cultural resource managers should be required as a means of assuring high standards of work.
- A. Qualification test. The idea of course makes sense, but you cannot legislate morality or ethics, and I suspect the system would collapse in short order. In the first place, any idiot can memorize sets of data and test requirements, so that in a short while the whole thing would be worthless. Who is going to write the test? Who is going to read it? The whole idea here, assumes, that archaeology can be reduced to a set of standardized notions, and this is basically what is wrong with CRM work in general.

Q. Cultural resource management techniques are in need of more standardization?

A. Standardization. This too is an idea that sounds good, and in the abstract at least has been a goal of archaeology for many decades. As represented in the present circumstances, however, it is an idea that probably will not work. There are all kinds of reasons why it is difficult, if not impossible, to standardize archaeological treatment of resources, and some considerable reason not to try at all. This issue must deal with such matters as sample sizes, site significance, comparability of data, comparability of data treatment, etc., etc. . . . and the real problem in archaeology is that these things probably should not be standardized. In my opinion, the real problem is bureaucratic rather than scientific, and the issue is primarily motivation. Why is archaeologist "A" doing archaeology at "Site 13"? I am not referring here to the stated reasons, which as often as not refer to abstract notions about non-renewable resources, mankind, and the ultimate welfare of the world, but rather to the specific motivation of each participant. How many people working in San Diego County today have an actual and documented interest in the local prehistory

(in a research sense)? In my opinion, unless the person doing the work has this kind of motivation, the reason for working a site deteriorates rather quickly to a question of making money, perpetuating jobs (to continue making money), and enhancing one's position with respect to future jobs (so that said person would be eligible for even more money). There is nothing wrong with making money, and maybe there is nothing wrong with making money doing archaeology (under some circumstances), but the nature of archaeology as a discipline is such that it does not lend itself to mechanical treatment. People who are digging for wages can hardly be expected to relate to the data and the matrix from which the data are being removed, etc., in the same way that a person who is digging for information and has a vested professional interest in these data. I think the point I am trying to make is well enough understood that there is no need to elaborate ad infinitum. The idea that if there existed a set of standards that cover all possibilities in archaeological data recovery and interpretation, it would be possible for any mechanic to do archaeology, in my opinion, indicates a poor understanding of the nature of archaeology itself. There are then, in my opinion, two issues



here. The first is whether or not it is desirable to standardize archaeological procedures and the basis for interpretation. The second is whether or not anyone should believe in the results if such standardization were implemented. What good are standardized survey intervals, if the surveyor is not looking? Who says that any given surveyor actually used the standard interval (as opposed to reporting that it was used)? Until we figure some way to standardize motivation, ethics, experience and training, I see no way to standardize procedures in any meaningful way. A person who lacks a real and abiding concern for the local pre-history, could, if pressured for time and desperate for money, develop a site report that would satisfy most bureaucratic standards without ever leaving the office. Once the requirements (checklist), are known, anyone who worked at it could fulfill any reasonable set of standards and still do terrible archaeology. Standardization without focused motivation and a genuine interest in the research of the area will accomplish nothing, and could in fact be detrimental. It would be a serious mistake (I think) to standardize sample sizes, for example. Each site, each feature and each artifact must be examined

in terms of a lot of tangible and intangible factors, and a responsible archaeologist must decide what these mean, or do not mean for each specific situation. . . .

- Q. There should be a standardized method for determining the significance of an archaeological site in San Diego County.
- A. Standardized significance, etc. This question represents the essence of everything that is wrong with CRM archaeology. The fact that the question was even asked tells more about the nature of public archaeology than a 20 page discussion. Not only is this probably impossible, it is probably the last thing in the world we should even want to do. . . . It is necessary to consider this only because non-archaeologists are trying to do archaeology. . . . Setting up arbitrary significance standards would be the biggest mistake ever and we already have a few good ones on the record. Three critical flakes and one point base in one context, might be three times as significant as a whole village in another. . . it all depends on the flakes, context, circumstances, etc. . . . The criteria listed all require critical judgements. Who decides heritage value? Who decides how much area

is important, how will most people even know the age? How often can we be sure of the integrity? All of these are important to varying degrees, in different situations. . . .

Q. Current site impacts mitigation procedures are making a significant contribution to research.

A. I see minimal contributions to research. Most reports are developed to satisfy bureaucratic requirements rather than research requirements. These, are, far too often, marked by careless scholarship and other indications that the author was not really all that concerned with research related issues. . . . How meaningful are the data recovered by a crew with no commitment to the area, and no reason to think they will ever be responsible for the results.

Q. There is a need to develop more public awareness toward San Diego County archaeological site preservation efforts.

A. Public Awareness. The idea of selling archaeology and its values to the general public, of course, sounds good. However, as a direct result of more than a few poorly considered acts made in the name of "science" over the past several years, there is more public awareness

already than I think safe. Twenty years ago, being an archaeologist was a respected profession. Today, it is far from that, and in some circumstances could be downright dangerous.

Q. If you could change one aspect in the way cultural resource management is being presently practiced in San Diego, what would it be?

A. My response here is the same for SD County, Sacramento, or Washington, D.C. The problem is tied to the practice of archaeology as a profession by non-archaeologists. What you are proposing, I think, is a way for non-archaeologists to do archaeology, mainly so that it looks right. If all you care about is how it looks, it will work. If you care about the end product, I see no immediate solutions to the problems. . . .

I realize that my thinking on these matters is out of line with many archaeologists today. I have, however, thought about all of these problems in depth, and for several years . . . I see no way out (at the present time) except to muddle along. . . as always. . . .

D. L. True  
University of California, Davis

NEXT ISSUE---

We invite your participation in this publication and solicit your comments on all sections of this paper. We will publish discussion, criticism, original papers, and contributions to the Current Research Section in subsequent issues.

Manuscripts submitted for consideration for the May 1983 issue must be received no later than APRIL 30, 1983. Papers should be in the format presented here.

Manuscripts, correspondence, criticism, letters, etc., should be addressed to:

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