RESOURCE PROTECTION PLANNING PROCESS: MANAGEMENT REGIONS 1 AND 4

INTRODUCTION

From the densely forested Ouachita Mountains to the rolling grasslands of the Panhandle, Oklahomans derive strength from the diverse mineral, plant, and animal resources found within the Sooner state. However, nothing contributes more to Oklahoma's vibrant character than the people who call it "home". Descendents of native and resettled Indians, black slaves and freedmen, Italian miners, German farmers, and Anglo-American settlers are among the many who contribute to Oklahoma's growth and prosperity. The contributions of these diverse groups are recognized and appreciated by those attending such distinctly Oklahoma affairs as Yukon's Czech Festival, Salina's Oklahoma Historical Day, Anadarko's American Indian Exposition, and Beaver's Cimarron Territory Celebration. In addition, each year thousands of Oklahomans and out-of-state visitors stop and gain some understanding of the Oklahoma experience preserved at Ft. Gibson, Guthrie, Cheyenne, Claremore, Ft. Arbuckle, and Mangum.

Less well known are the locations used by Oklahoma's prehistoric people. Yet, there is substantial evidence that people have lived in the Sooner State for more than 11,000 years. Nearly 10,000 prehistoric sites are known, and they probably represent only 10% of the number present but unrecorded. These prehistoric camps, workshops, villages, and religious centers are exceptional clues to the successful lifeways and largely unknown pasts of Oklahoma's original settlers -- the Wichita, Caddo, Kiowa Apache, and perhaps the Osage, Kiowa, and Comanche. By preserving and carefully studying some of these sites and their remains, we have an opportunity to learn how earlier people developed distinct cultures and how they maintained themselves through several millennia.

Because marked climatic and ecological changes occurred during this period, and because these people's survival depended on their learning to adapt to these environmental changes, we may also gain insights on the problems of diminishing resources and how other people faced decisions that greatly changed their lives. Furthermore, just as we are proud of Oklahoma's historic Indian heritage, Oklahomans can be proud of the state's prehistoric heritage. Oklahoma contains prehistoric sites with remains that are unique to the nation. Some of these could be developed into interpretive parks that would enhance the economic, recreational, and educational opportunities of many Oklahoma communities.

Presently, however, urban expansion, industrialization, and other changes in land use threaten Oklahoma's archeological resources. To hopefully lessen such destruction and to preserve important sites for the enjoyment and enrichment of future Oklahomans, the staff of the Oklahoma Archeological Survey has undertaken to:

1. Identify its responsibilities and capabilities in a statewide cultural resource management program.
2. Identify what is known and what is unknown about prehistoric and early historic people in different regions of the state.
3. Identify and evaluate the archeological sites recorded throughout the state and make recommendations regarding the management of potentially important sites.
4. Propose and undertake a series of research goals that will enhance the understanding, appreciation, and management of the state's archeological resources.

Under current federal laws, rules, and guidelines, most federal and state agencies, local communities, and private businesses receiving federal

assistance (or operating under federal rules) are responsible for evaluating their proposed project's potential impact on archeological resources. Thus, the report we have prepared will not only help us gain a better understanding of Oklahoma archeology, but will serve as a procedural guide which defines and organizes information on archeological sites for decision-making, project recommendations, and preservation goals for those federal, state, and local government officials and private companies involved in the planning process.

This document has been developed from baseline information on archeological sites in six general regions of the state. Summaries of these resources, evaluations of potential significance, and future research goals are as perceived by the staff of the Oklahoma Archeological Survey. It is anticipated that this document will fulfill the directives established by the National Park Service for each state to prepare an overview for management purposes described as the Resource Protection Planning Process (RP3). This report when integrated with other aspects of cultural patterning such as ethnic group heritage, architecture, and folklife will comprise a comprehensive RP3 overview.

While some states have benefitted from the participation of the National Park Service in the preparation of the RP3, Oklahoma has not had the direct involvement of federal planners in establishing workshops and other program development tools. Consequently, this portion of the RP3 manual has drawn from the work the Archeological Survey has conducted in basic research over the past 15 years and from experience the staff has gained in functioning as a state review agency through the Community Assistance Program. Our views on archeological resource management reflect this work and our maintenance of the state site files.

The Archeological Survey - Basic Research

The Oklahoma Archeological Survey was initially established in October, 1968, as a research adjunct to the Oklahoma Indian Mounds Commission. During the year, Governor Bartlett requested that the University of Oklahoma obtain an archeologist who could devote full-time effort to investigating, evaluating, and providing recommendations concerning Oklahoma's archeological resources. The University of Oklahoma subsequently set up the Oklahoma Archeological Survey and the position of State Archeologist as part of its contribution to organized research and public service. In 1970, the state legislature passed enabling legislation (Senate Bill 623) creating the Oklahoma Archeological Survey. Among the goals and duties of the Oklahoma Archeological Survey were: 1) the conducting of fundamental research in Oklahoma archeology, 2) excavation of historical sites, ruins, and mounds for the purpose of securing data and objects relating to early man in Oklahoma, and 3) research into the study of anthropology and related social and physical sciences both prior to excavation and; thereafter, in order to plan and aid in the discovery of archeological sites and artifacts and in their proper assessment and preservation once discovered.

Since its inception, the Oklahoma Archeological Survey staff has conducted numerous surveys for the recording of archeological sites in Oklahoma. The Survey, during this time, also conducted major excavations at a number of sites, many of which were threatened with destruction. As a direct result of the Survey's efforts, over 10,000 archeological sites have been recorded in Oklahoma with considerable information accumulated on sites representing the major periods of prehistory and history. A summary of these accomplishments are presented in Table 0-1.

Table 0-1. Major Projects of the Oklahoma Archeological Survey.

County	Project
FY 1968-1969	
Garvin	Excavations of 700 year old burned house at Currie Site, an early farming settlement in Washita River Valley.
Murray	Test excavations at 16th century Lowrance Site with aid of Oklahoma Anthropological Society volunteers.
Sequoyah	Analysis of 600 year old Caddoan village uncovered at the Horton Site.
FY 1969-1970	
Garvin	Tested, with help from Oklahoma Anthropological Society volunteers, a 1200 year old camp at the Paul Site.
LeFlore	Excavated houses, refuse pits, and burials at the Moore Site, a 500 year old Caddoan village threatened by railroad relocation.
Love	Survey of archeological sites along Pumpkin Creek and study of 7000 year old camp found in the area.
Murray	Continued test work at Lowrance Site with volunteers from the Oklahoma Anthropological Society.
Ottawa & Delaware	Survey and preliminary evaluation of prehistoric mound and camp sites along Neosho and Spring rivers.
FY 1970-1971	
Bryan	Supervised excavation of 1840-1850 barrack and other ruins at historic Fort Washita for Oklahoma Historical Society.
Choctaw	Excavated one 1840s barrack ruin at historic Fort Towson for the Oklahoma Historical Society.
Haskell	Tested, with aid of Oklahoma Anthropological Society volunteers, the Otter Creek and Ross sites, two 800-1100 year old Caddoan camps and villages.
LeFlore	Test excavations to relocate positions of WPA-dug burial mounds at Spiro Mounds Park.
Oklahoma	With aid of local volunteers, surveyed and evaluated archeological sites in Crutcho Creek watershed, an area projected for urban development in southeast Oklahoma City.
Roger Mills	Directed O.U. Field School research at the Goodwin-Baker Site, a large 800 year old Plains village.
FY 1971-1972	
Bryan	Excavated selected ruins around parade ground of 19th century Fort Washita for Oklahoma Historical Society.
Choctaw	Analyzed materials excavated from 1840s barrack ruins at historic Fort Towson for Oklahoma Historical Society.
Cotton	Salvage excavations of 800 year old burials from quarrying threatening the Cotton Site.
Murray	Analysis of extensive materials from the Lowrance Site, a 16th century Indian camp near the Arbuckle Mountains.
Muskogee	Analysis of artifacts and refuse recovered from the Wybark Site, a 500 year old Caddoan village.

Table 0-1. (Continued)

County	Project
FY 1972-1973	
Latimer, Pittsburg McClain, Grady, Caddo, Custer, & Roger Mills	Study 191 archeological sites found along 330 miles of ARKLA Gas Company pipeline pipeline (Wilburton to Texas panhandle).
Murray	Completed analysis of test findings at Lowrance Site, a large 16th century camp visited by Wichita, Caddo, and, perhaps, Apache people.
Roger Mills	Excavation, with Oklahoma Anthropological Society volunteers, of a 900-1100 year old burned house at the Zimms Site, a large Plains village.
Seminole	Assisted by Oklahoma Anthropological Society volunteers, tested the Barkhiemer and Roulston-Rogers sites, camps inhabited by 2-3000 year old hunters-gatherers and 1000 year old farming people.
FY 1973-1974	
Bryan	Analyzed artifacts and findings from 1971 excavations at Fort Washita (1840-1870).
Comanche	Tested at Old Post Dump (1870-1890) area at Fort Sill Military Reservation with Oklahoma Anthropological Society volunteers.
Kay	Prepared base map of Deer Creek Site, an 18th century Wichita village.
Latimer, Pittsburg McClain, Grady, Caddo, Custer, & Roger Mills	Analyzed sites excavated along ARKLS Gas Company pipeline.
FY 1974-1975	
Latimer	Tested a 500 year old hunting camp (Lt-37) with Oklahoma Anthropological Society volunteers.
Latimer, Pittsburg, McClain, Grady, Caddo, Custer, & Roger Mills	Analyzed sites salvaged from route of ARKLA Gas Company.
LeFlore	Evaluated shoreline damage to archeological sites around Lake Wister.
Noble & Pawnee	Survey and testing of sites potentially affected by construction of Sooner Generating Plant.
FY 1975-1976	
Haskell	Tested Hs-74, a 1000 year old camp eroded by R.S. Kerr Reservoir.
McCurtain	Excavations at Mc-205, a 1500 year old camp in Red River Valley.
Noble & Pawnee	Survey, test, and excavate sites affected by proposed Sooner Generating Plant.
Pottawatomie, Creek, Lincoln, Cleveland, & McClain	Survey of proposed Oklahoma Natural Gas Company pipeline; salvage of information at a pre-pottery site (Pt-56) exposed during construction.

Table O-1. (Continued)

County	Project
FY 1976-1977	
Latimer	First season of O.U. Field School research at McCutchan-McLaughlin Mound.
Muskogee	Survey of Greenleaf State Park locale.
Pushmataha, Latimer, & Pittsburg	Survey and testing of archeological sites to be affected by proposed Clayton Reservoir.
Rogers, Wagoner, Muskogee, Haskell, Sequoyah	Survey and testing of archeological sites on all Corps of Engineers property along Arkansas-Verdigris Navigational Canal.
FY 1977-1978	
Johnson	Testing of Jn-28, a prehistoric camp, with volunteers from Oklahoma Anthropological Society.
Latimer	Second season of O.U. Field School research at McCutchan-McLaughlin Mound.
LeFlore	Placed interpretive exhibits at Spiro Mounds State Park, Oklahoma's first archeological interpretive park.
Pushmataha	Collection of nearly 2000 year pollen record from Natural Lake, first dated vegetation record for Ouachita Mountains.
Sequoyah	Initiation of Phase I testing and survey program at Lee Creek Ceremonial Center.
FY 1978-1979	
Garvin	Analysis of Currie Site, an A.D. 1100 farming hamlet.
Johnson	Test excavations with Oklahoma Anthropological Society at Jn-28, a major prehistoric camp site.
Latimer	Analysis of McCutchan-McLaughlin Mound, a 2000 year old camp site.
McCurtain, Bryan, Choctaw, Beckham, Greer, & Harmon	Begun long-term study of archeological resources in Red River Basin; cooperative work with Museum of Red River (Idabel) for survey below Denison Dam; Survey staff initiating survey and planning in southwest Oklahoma.
Osage	Salt Creek survey of sites in major basin draining grasslands-Cross Timbers border.
Sequoyah	Completion of Phase I survey and excavations at Lee Creek Ceremonial Center.
FY 1979-1980	
Atoka & Pushmataha	Complete analyses of pollen cores from Natural Lake and Ferndale Bog to reconstruct a 2000-4000 year vegetation record for the Ouachita Mountains regions.
Beckham, Greer, & Kiowa	Survey sites and analyze collections to plan further research and management objectives for protohistoric sites in Red River Basin of southwest Oklahoma.
Garvin	Complete analysis of artifacts and remains from Currie Site.
Latimer	Stabilize eroding McCutchan-McLaughlin Mound and complete analysis of material recovered from this site.

Table O-1. (Continued)

County	Project
FY 1979-1980	
LeFlore	Continued fieldwork and analysis to determine what resources remain at Spiro Mounds and how best to preserve and use them in on-site interpretive program.
McCurtain, Bryan, & Choctaw	Continued cooperative research with Museum of Red River (Idabel) to survey and develop a preservation plan for cultural resources in Red River Valley.
Muskogee, Rogers, Tulsa, & Wagoner	Survey of cultural resources in region heavily affected by industrialization and urban expansion.
Sequoyah	Continued surveying and monitoring of archeological sites in Lee Creek Basin.
Whole state	Prepare summary book on Oklahoma's prehistoric people written for use in middle school courses on Oklahoma history.
FY 1980-1981	
Beckham	Magnetometer survey and field study of the Edwards Site (34Bk-2).
Cherokee & Muskogee	Survey of archeological resources in Bayou Manard Watershed.
Bryan	Survey of archeological resources in the Kemp Bottoms, Red River Valley.
Garvin	Conducted (in cooperation with the Oklahoma Anthropological Society) major excavations at the 600 year old Carpenter Site (34Gv-90).
LeFlore	Magnetometer survey of "Plaza" area and major testing of House Mound 5, Spiro Site (34Lf-46).
Marshall	Salvage excavations at the 1500 year old Ayers Site (34Ma-126).
McIntosh & Muskogee	Survey of the Honey Springs Battlefield.
	Development of a traveling exhibit on Southern Plains tribes and their Oklahoma heritage.
FY 1981-1982	
Beaver	Salvage excavations at the 700 year old Lonker Site (34Bv-4).
Custer & Roger Mills	Sample survey of archeological resources in the Quartermaster Creek Watershed, and area extensively disturbed by mechanized agriculture.
Garvin	Major salvage excavations at the 700 year old Arthur Site (34Gv-32).
LeFlore	Survey of archeological resources in the James Fork Watershed, an area affected by surface mining activities.
	Test excavation of the "Plaza" at the Spiro Site (34Lf-46).
Osage & Tulsa	Survey of archeological resources in the Bird Creek Watershed, an area affected by development and urbanization of the Tulsa Metro-complex.
Roger Mills	Analysis of excavated remains from the Zimms Site (34Rm-72).
Washita	Survey, mapping, and test excavation of the Duncan Site (34Wa-2).
	Analysis of remains from five small sites in the Cross Timbers.
	Coding of approximately 3500 archeological sites in the Cross Timbers region for computerization.
FY 1982-1983	
Beaver	Test excavation (in cooperation with the Oklahoma Anthropological Society) of the Laverty "Irrigation ditch" (34Bv-59).
Custer & Roger Mills	Continued sample survey of the Quartermaster Creek Watershed.
Garvin	Salvage excavations at the approximately 1200-1500 year old Austin Sand Pit Site (34Gv-139).
	Survey and mapping of the 600 year old Wilson Site (34Gv-34).
LeFlore	Continued survey of archeological resources in the James Fork Watershed.
	Test excavations at the Copple and Brown mounds at the Spiro Site (34Lf-46).
Texas	Salvage excavation of the 500 year old Lloyd Tucker Site (34Tx-71), a bison processing station.
Washita	Survey and mapping of the 600 year old Carl McLemore Site (34Wa-44).

THE NATURE OF ARCHEOLOGICAL RESEARCH

Laymen usually perceive archeologists as anyone interested in arrowheads, ancient pots, exotic figurines, and/or dinosaur bones. Despite Alley Oop's well intentioned cartoonist, dinosaurs were not contemporaries of people. Thus, as scientists who study the material remains of past human behavior, archeologists seek the locations, tools, ornaments, and trash left by past people, not the bones of Tyrannosaurus rex.

The tools and trash left by previous people are called artifacts. Despite being the principal material objects studied by archeologists, artifacts have little intrinsic importance or value. But when their locations or origins are known, artifacts begin to acquire significance. For example, a fluted stone spearpoint that lacks information about its origin is only a curiosity. Was it made two years ago by a Prichett, Colorado, flintknapper or found eroding from mammoth bones buried by 30 feet of alluvium in Caddo County, Oklahoma? Obviously, the more we know about its origin (archeologists prefer the terms "provenience" or "context"), the more information an artifact may yield about its age, its use, and its manufacture. For professional archeologists and many avocational archeologists, artifacts are not simply collectible things, but sources of information about past people's activities. The information potential of artifacts begins to be fulfilled when their proveniences are known and are carefully documented.

Because an artifact's information-yielding potential is related to where it was found, archeologists spend much time learning how to observe and record where tools, trash, and other traces of human habitation are found. Such locations are usually called sites. Ideally, a site can consist of a place where one or a few artifacts (a potsherd, 5 flakes, a rusty 1863 Colt Navy revolver, or even a discarded Model T car body) are found. However, most

Oklahoma archeologists call such places "find spots" or "find localities". The term site is reserved for locations of variable size that yield substantial clues to human habitation dating more than 50 years ago. With this definition, substantial refers to subjective considerations of these combined variables: size of location, degree of exposure, quantity of remains, and variety of remains. Thus, a site might consist of a 25 ft^2 hilltop where several cobbles were flaked, a single hearth surrounded by a few flakes and scattered tools, or many acres of terrace that contain traces of wattle-daub houses and a mound.

Although documenting where an artifact was found is as important as finding the artifact, archeologists are seldom content with just recording from which site an artifact was recovered. Instead, they try to document exactly where an artifact occurred in a site. This concern stems from the knowledge that each formerly inhabited location has some degree of structure. That is, the tools, trash, and habitation features (hearths, house floors, trash pits, log cabin remains, or root cellars) will occur in an arrangement that results in part from people's actions, and in part from nature. Because a site's arrangement of tools, trash, and habitation features will correlate at least partially with the activities of its previous inhabitants, careful recording of where artifacts are recovered provides a means of ascertaining site structure and to discovering clues about the site's inhabitants and what they did there.

Unfortunately, the structure of a site is usually very complex. Although a prehistoric camp may have been frequented by one group of people, tools may not occur where they were used or trash where it was produced. Both may have been gathered up and discarded in common nearby. In Oklahoma, clues are often found that sites have been inhabited more than once. Occasionally, the debris from each occupation is sealed from that of others by naturally deposited layers of sediments. In such instances, these stratified deposits are powerful

aids to establishing local sequences of cultures, to the identifying tool kits and activities of particular groups of people, and to studying these people's adaptations to changing local conditions. Usually, however, the debris from several occupations is mixed, and archeologists are confronted with the task of deciding whether or not they can effectively identify the tools and trash from each occupation so that they can acquire useful information about the people who created the site's mixed structure. Finally, erosion and/or historic land use often contribute in the rearrangement (disturbance) of previously deposited artifacts and features. Nearly all sites are disturbed to some degree, so archeologists are wary when examining a site to assess its potential for yielding information. Obviously, the problem of disturbance is the principal cause for concern at sites being bulldozed for construction, stripped of timber, or trenched for gas and water lines. Thus, if their structure is badly rearranged, even sites yielding very ancient or unusual artifacts may be uninformative, and consequently not worthy of further study.

By knowing where an artifact was found, archeologists can begin to perceive the item's position within the site structure and its association with other tools and trash. This association may include other tools, as well as the debris from a specific task, thus enabling the archeologist to identify a people's "tool kits" and the restricted places ("activity areas") where such kits were used. In other instances, tools and/or debris from several tasks may be found together. At the least, this co-occurrence enables the archeologist to identify the material culture ("assemblage") used by a group during one period in their past. This assemblage may yield clues to resource uses, manufacturing methods and techniques, trade overall site function, and favored tool styles. These latter may be important for helping distinguish otherwise undated assemblages from earlier or later sites.

No matter what the research goal, documenting an artifact's occurrence (provenience) within a site is paramount to beginning to attain that goal. And, the more specific that artifact occurrences can be established, the more substantial becomes the evidence for resolving questions about resources, tools, and locations used by people at particular points in time. Habitation features, such as trash pits, caches, house floors, and burials, constructed and left by a site's past inhabitants are key settings ("primary contexts") within a site for ascertaining tool kits and assemblages used at a particular time. Because they are more susceptible to mixing by nature or people, middens, mound deposits, and grave fills comprise other settings ("secondary contexts") that sometimes yield clues to tool kits, assemblages, and the relative periods that a site was inhabited.

Archeological Research Orientations

Besides sharing an interest in studying artifacts from well-documented locations, archeologists ultimately share some interest in studying how past societies were maintained or changed as they interacted with other societies and the natural environment through time. Although they share these general interests, archeologists' actual research rationales and goals very greatly. This diversity stems from past, current, and emerging orientations for studying artifacts and sites in order to document and explain previous people's interaction with the environment and other groups. Each orientation is distinguished by certain research questions or objectives, by a framework of theories and assumptions for working toward these objectives, and by a range of analytical methodologies applicable for studying and evaluating findings pertinent to these questions or objectives. Because diverse research orientations are held by archeologists working in Oklahoma, they are briefly summarized.

Morphological Research. Basic to this orientation is the detailed study of artifacts and assemblages in order to describe their character and to document their similarities through time and space. Although interest centers on artifacts, the nature of morphological research is changing. Prior to the 1970s, most Oklahoma archeologists studied artifact morphologies by documenting the many characteristics (or traits, such as shape, decoration, material, size, etc.) of pottery, arrowpoints, spearpoints, other tools and ornaments, and habitation features. Such traits were then compared with those reported for nearby and distant sites. The objectives of such studies were to identify traits that were potentially diagnostic of particular culture, and/or time. Oklahoma examples of such studies include David A. Baerreis' 1957 study of ceremonial objects from Spiro; Robert E. Bell's numerous reports on different types of projectile points; and Fred Schneider's 1966 study of triangular side- and basal-notched arrowpoints.

The early morphological studies are valuable because they helped identify some artifacts that were characteristic of a particular area and general time. Thus, the recognized artifact types became useful for assigning a relative age to an assemblage or site and for discerning potential examples of trade or contact. In a real sense, most of the recognized artifact types became a sort of index fossil for archeologists. However, because things like Gary points, Harahey knives, and Neosho Punctate pottery were types constructed from archeologists' decisions about important trait combinations, the relevance of most actions has become increasingly questionable. Moreover, as radiocarbon dating became practical and inexpensive, the importance of defining and comparing artifact types for relative dating has diminished.

Since the late 1960s, archeologists have become more interested in artifacts as products of human behavior rather than as index fossils. Thus,

the objectives of morphological research have shifted from subjective classifications of artifacts as indicators of time and culture to ascertaining their raw material source and how they were made and used. To be informative, this new research orientation necessitates a systemic approach to studying artifacts, their material nature, the debris from their manufacture, the kinds of tools and steps required in their manufacture, traces of use wear, and the distributions of these artifacts, their debris, and their manufacturing tools over each site. Despite being more encompassing and expensive, these systemic studies are yielding new insight into socially diverse strategies for making similar tools. Also, they are yielding substantial information on site structure, site function, trade, and adaptive change. Noteworthy Oklahoma examples of such studies include Jack Hofman's work on Clear Fork gouge technologies, Charles Wallis' analyses of chipped stone materials from sites in the Lower Black Bear watershed (Payne and Pawnee counties), and Chris Lintz's research on a chipped stone cache from the Heerwald Site (Custer County).

Cultural History Research. Most archeological work in Oklahoma has consisted of studying the distributions of artifact types and other cultural traits in order to identify local cultures and to trace their respective histories. Using what is known as the McKern, or Midwestern, taxonomic system, Oklahoma archeologists used to designate each recognized local culture as a focus (such as the Washita River Focus, Spiro Focus, or Grove Focus), whereas apparently contemporaneous and related local cultures were grouped into a larger unit known as an aspect. For example, two late prehistoric cultures, the Ft. Coffee Focus and the Neosho Focus, were identified in northeast Oklahoma and were grouped with similar late prehistoric Caddoan-related cultures in Texas, Arkansas, and Louisiana into the Fulton Aspect. As these local and regional cultures were identified, archeologists studied how each

might have developed from earlier ones or into later ones. Occasionally, these latter were tentatively linked with native tribes known to have inhabited the region.

Since the mid-1960s, use of the McKern system has declined in Oklahoma. As noted, this system emphasized studies of trait distributions to help delineate local (a focus) and regional (an aspect) cultures. But as archeologists obtained more radiocarbon dates for artifacts recovered from house floors, trash pits, and burials, they became more concerned with identifying similar tools used at specific points in time rather than in space. Consequently, Oklahoma archeologists have gradually adopted use of the Willey and Phillips system wherein sites yielding contemporaneous, similar assemblages are assigned to a phase (rather than a focus).

Culture history was an intended goal of the already discussed cultural trait studies. Both helped archeologists establish cultural ties and dissimilarities through time and space. But an increasing number of radiocarbon dates and the improving ease of obtaining such dates have greatly enhanced archeologists' abilities to document chronological ties between earlier, contemporaneous, and later assemblages. Thus, while some researchers are still interested in studying and documenting the histories of particular native peoples, they spend less effort at detailed trait comparisons to establish local cultures and sequences. Examples of Oklahoma culture history research include Bell and Baerreis' 1951 introduction to Oklahoma archeology, Buck's 1959 study of the Custer Focus, Shaeffer's 1966 recognition of the Lawton Aspect, Wyckoff's 1967 summary of findings in the Broken Bow Reservoir area of McCurtain County, and Brown's 1971 report on the Spiro Site.

Social Patterns Research. Archeologists working from this orientation believe that artifacts, habitation features, and sites are distributed in

patterns that result from the structure of the society which produced them. Consequently, by carefully studying the character and distribution of archeological remains from a site, or several sites, archeologists can learn much about a past society's structure, how its many parts operated, and how these parts changed through time.

Social patterns research entails studying how tool, trash, feature, and site types and distributions relate to diverse task groups, families, leaders, bands, or other social groups. To gain such understanding, archeologists commonly review early historic French, Spanish, and English accounts of native people for archeologically recoverable clues to social, kinship, political, religious, or economic practices. For example, Wyckoff and Baugh compiled information from Spanish and French accounts to identify accouterments, tools, symbols, and buildings used by a hierarchy of religious-political leaders in the 1689-1721 society of Hasinai Caddos of east Texas. The resulting model of Hasinai elite's material culture may now be compared with archeological findings from early historic, and even prehistoric, sites. These comparisons may help explain the evolution of Caddoans' noteworthy religious-political structure. Other comparable research by Oklahoma archeologists includes Lopez's study of McLemore Site burials to ascertain the structure of a Plains Village society and Jim Brown's analysis of Spiro Site burials for clues to status in that Caddoan Villager society.

Geographical Research. Some archeologists are especially interested in studying settlement practices and patterns for clues to describing how past societies were organized and to explaining why this organization changed through time. Two assumptions are basic to this research: (1) that each site was the location of particular activities and (2) that these activities are identifiable from habitation features and their associated tools and trash.

For this research to yield noteworthy results, it is important to establish which sites were inhabited by one society and which were functionally different. Once contemporaneous sites are identified, the distributions of functionally different sites are potential clues to a society's economic, political, and social organizations. By comparing the distributions and character of sites inhabited during different periods, archeologists have gained insight to land use changes, territorial expansion and contraction, and the rise and fall of prehistorically important societies.

Few studies emphasizing settlement practices have been undertaken by archeologists working in Oklahoma. However, Muto recently used this approach to initially characterize prehistoric occupations in the lower Lee Creek Valley of Sequoyah County, and Brown, Bell, and Wyckoff studied site structure and distributions to discern social and economic changes for Caddoan villagers inhabiting northeast Oklahoma. Also, Lintz has studied site structure and distributions to delineate potential social and economic changes among the Plains Village inhabitants of the Oklahoma and Texas panhandles.

Ecological Research. Although somewhat similar to the geographical research discussed above, this approach entails studying archeological sites in a broader perspective. Ecologically oriented archeologists perceive contemporaneous sites as points in a network of locations where prehistoric people interacted with the natural environment. In this orientation, the natural environment includes the climate, geomorphic settings, soils, plants, animals, minerals, and other societies. As in geographical research, the archeologist's initial tasks entail documenting the character, function, and location of contemporaneous sites. In addition, evidence for the use of specific soils, plants, animals, and minerals is compiled for each site. Also, clues to trade with neighboring or distant societies are recorded. By

comparing the evidence for site locations, site functions, and resource uses during sequent periods, archeologists have delineated continuity and change in the ways prehistoric people inhabited a region and exploited its natural resources.

As a result of ecological studies, archeologists often discern changes in prehistoric people's resource use that appear linked to past climatic fluctuations or long-term environmental change. In order to clarify and correlate cultural changes with those in the environment, these archeologists frequently co-sponsor or undertake studies of alluvial and/or soil sequences, pollen records, tree-ring records, and even snail or mussel shell deposits that might yield additional information on the character and timing of past environmental changes.

Since 1975, ecological studies have become prevalent in Oklahoma archeology. This orientation has enabled University of Tulsa archeologists Henry, Prewitt, and Reid to develop reliable information on late Archaic, Woodland, and Prehistoric Village occupations in the Hominy, Birch Creek, and Copan reservoir areas of north-central Oklahoma. Likewise, North Texas State University archeologist, Ferring has recorded an interesting sequence of habitation and environmental change in the upper Delaware Creek drainage of Caddo County. Comparable studies have also been fostered in the nearby Carnegie Creek and Cedar Creek drainages by Oklahoma Conservation Commission archeologists, Wallis and Lintz. Finally, Wyckoff recently used an ecological orientation to document and explain 1000 years of Caddoan Villager prehistory in the Arkansas Basin of eastern Oklahoma.

In summary, five research orientations are identifiable in the history of Oklahoma archeology. Although morphological and culture history studies have been dominant since 1945, ecological studies now are emerging as the principal

approach to synthesize information on site contents and distributions and to examine how and why Oklahoma's prehistoric cultures changed. Because the findings from morphological and cultural history studies are not always relevant to ecological or other research orientations, many opportunities exist for re-examining reported sites and collections in order to gain new insights to Oklahoma's past.

ARCHEOLOGICAL RESOURCE MANAGEMENT

Introduction

The concept of archeological resource management expresses basic conservation and preservation principles and implies that some control is maintained over what happens to the resources. In managing the state's archeological resources, recommendations for preservation are made in consideration of 1) the total resource base, and 2) the greatest public good. Although archeologists are not usually the ones who make the final decision regarding the preservation of an archeological site, they are the experts who must initially evaluate a specific site or set of sites for their preservation merit.

In dealing with archeological resources, archeologists have three obligations. First, the state of anthropological/archeological knowledge must be advanced by the pursuit of explicit research questions which are in turn disseminated to the archeological community. Second, in resource management, archeologists must provide clients and state or federal agencies with the information they need for proper treatment of the resource base consistent with federal laws and regulations. Finally, a product or preservation goal must be provided which is useful and responsive to the general public's wide ranging interest in archeology and the antiquity of man. These obligations are equally important and all must be considered in preservation and management activities.

Oklahoma's growing population and expanding industry clearly threatens many archeological sites. Thus, it is more imperative than ever that archeologists, preservationists, and other concerned citizens communicate and work together in programs that will enhance preservation and conservation of the state's long and richly varied cultural heritage. The seeds for such cooperation were first planted when the Oklahoma Historical Society was founded in 1895, 12 years before statehood. This cooperation expanded in the mid-1930s when citizens disturbed by vandalism of archeological sites banded together to see that the Spiro Mounds and other notable prehistoric sites were preserved and properly studied. Outgrowths of this action included passage (1936) of Oklahoma's first antiquities legislation and the 1936 formation of the Oklahoma State Archeological Society. Although this group disbanded during World War II, their goals and interests were largely adopted in 1952 by professional and avocational anthropologists who formed the Oklahoma Anthropological Society. Now, some 15 years after the implementation of current federal laws for preservation of archeological resources, it is necessary that goals and objectives be reassessed and redefined. As Oklahoma strives toward future economic and population growth, is it possible to continue and expand Oklahoma's interest and efforts in preserving the state's cultural heritage? Attempts to improve upon current preservation and management programs must document the need for such programs and the soundness of the evaluation of archeological resources for preservation.

The Need for Preservation of Archeological Resources

In dealing with archeological sites, the most important consideration is that these are non-renewable resources. Unlike natural resources such as vegetation, streams, or even endangered species, an archeological site cannot be regenerated. Preservation and conservation are the two primary strategies

for preventing the irretrievable loss of information concerning our nation's cultural heritage. In preservation, the archeological site is kept in reserve by avoiding its disturbance from land-altering activities. These archeological reserves may take the form of parks or simply reserved public and private lands. However, the important point is that at least part of the site is kept intact for future generations. In contrast, conservation emphasizes saving the information from sites that, for various reasons, cannot be preserved. The most common technique in the conservation strategy is excavation and analysis of a substantial portion of the site's information base.

Since 1936, vast sums of money and incalculable hours of labor have been spent identifying and studying the nation's historic and prehistoric archeological resources in preservation and conservation programs. Just since 1962, over 1.5 million federal dollars and .75 million state dollars were spent in Oklahoma looking for, excavating, and reporting on archeological sites and materials. Considering the billions spent on various state programs, the funds expended on Oklahoma's archeological resources are modest, and, like some programs, they have provided training and employment opportunities for a number of citizens. Besides the potentially justifiable use of these dollars to gainfully employ a few, why bother spending them on studying and preserving archeological sites and artifacts? Why are these locations of past human activities and their contents so important?

Depending on who is asked this question, the response may vary tremendously. Artifact collectors probably would view each site as a place to hunt arrowheads, thus, a place to pursue their hobby. Recreational planners might save some archeological sites as points of special interest that could be incorporated into a state or regional park system, thus, upgrading the quality of life for today's citizen. Civic leaders might perceive nearby archeological

parks as a place that would attract tourists, and thus dollars. A tourist might think that an archeological park is an interesting place to visit while vacationing from a hectic job. More than likely, some people would contend that these sites aren't important at all, except perhaps as points of minor curiosity. Archeologists, of course, view archeological sites as places to do research for answering questions about human nature, human history, and the changing environment.

In a real sense, a prehistoric or historic archeological site has no intrinsic value. It acquires significance or importance as its character or contents become meaningful to people. Although the rolling countryside around Gettysburg is picturesque, this locale gained prominence because of a critical battle in American history. In fact, this locality's importance was appreciated by only a few (including an eloquent President Lincoln) of the thousands who gathered there to honor the slain on November 19, 1863. But through the years, Gettysburg has achieved national significance as Americans increasingly have come to appreciate the results of this bloody Civil War battle and President Lincoln's perception of it. In a somewhat similar manner, prehistoric sites also may acquire national or even international interest and importance. Examples of such sites are the Cahokia Mounds in East St. Louis or the Great Serpent Mound in southern Ohio. Thousands of people yearly also visit Mesa Verde National Park in southwest Colorado. Here, too, is a naturally beautiful setting. But what makes it unique are the hundreds of prehistoric ruins that dot the mesa top and lie hidden in shadowy cliffs. These ruins are the silent reminders of a society that successfully farmed the mesa for some 500 years. Then, due to droughts, deforestation, and population pressure, they left their multi-room pueblos, rock-lined reservoirs, and extensive erosion controls, eventually moving to the Rio Grande Basin of New

Mexico. Although the ancient Puebloans are not our ancestors, we have learned to admire their accomplishments and to ponder their failures.

In developing strong arguments for archeological preservation, there are two major themes. The first of these is that there is a strong conviction toward saving our nation's cultural heritage for posterity. Secondly, there are numerous benefits to be accrued in the field of education from studying the state of Oklahoma's, as well as the nation's, prehistory and early history.

Preservation for the Future

Oklahoma doesn't have abandoned pueblos like Mesa Verde, but it does have thousands of unstudied archeological sites. Like Mesa Verde, these bear witness to the successes and failures of different Native American groups. Despite their limited technologies and relatively simple organizations, these once vibrant societies offer some 550 generations of human learning that can benefit us.

Even with our unprecendented scientific abilities and advanced technologies, we ultimately depend on the same natural resources as prehistoric and early historic residents of Oklahoma. Water is vital for our health and survival. The quality of the land is crucial for farm products. Trees and plants provide the raw materials for shelter and clothing, and minerals our energy, building materials, and tools. If we are to maintain our way of life for centuries, as many prehistoric societies did, it behooves us to responsibly plan and manage use of these basic natural resources. In part, our ability to do this can be enhanced by understanding what happened in the past. For example, why did Caddoan villagers seemingly abandon valleys in the Ozark and Ouachita mountains? Did their clearing and farming practices contribute to nutrient loss and erosion of arable soils? Or did the climate fluctuate adversely so that erosion increased or crops could not be raised dependably?

Perhaps no factor is more important to our society's well being than a favorable climate. For example, even now Oklahoma City and Tulsa must resort to water rationing when spring rains fail to replenish reservoirs, including those strategically built in normally wet Ozark and Ouachita mountain settings. Meanwhile, western farmers and communities suffer because fall and spring droughts ruin wheat crops and because irrigation from the continuously lowered Ogallala aquifer becomes too costly. In addition, long hot summers drastically increase our consumption of energy, seriously straining energy production capabilities as well as consumers' pocketbooks. Given these existing problems, what will happen if we undergo droughts and heat like that of the 1930s? How will enough water be obtained to sustain Oklahoma's increasing population? How would southeastern Oklahoma's economy and people be affected if 10 years of reduced precipitation greatly damaged the thousands of acres of "super pine" being raised commercially there?

Paleoecological findings already support the conclusion that Oklahoma's past is characterized by noteworthy climatic fluctuations, changes that persisted for more than 10 years. Some were undoubtedly more severe and prolonged than Oklahomans experienced 50 years ago. Through coordinated archeological and paleoecological research, it may be possible to better establish the sequence (regularity) of past short-term climatic changes and the degree that they affected habitats and people. Such findings could help us prepare for the future. But such findings will only result if archeological sites are preserved that will yield clues to the plants, animals, and settings exploited by Oklahoma's prehistoric people.

In addition to preserving potential information on paleoenvironmental changes and prehistoric peoples' adaptations to these changes, the preservation of archeological sites must also be responsive to developments in the future.

It would be a grave error for us to assume that archeological research capability has reached its zenith. New theories and questions concerning the evolution of past societies are constantly being developed. Field and laboratory techniques are also constantly being improved. These new questions and new techniques will undoubtedly require radically different information than that which we currently recover. Consequently, sites examined or excavated today may be inadequate for answering questions posed by tomorrow's archeologists. The only way in which we can properly save information for future recovery is by preserving archeological sites.

Educational Benefits of Preservation

Besides helping us prepare for the future, Oklahoma's archeological resources can improve our understanding and appreciation of the past. Few states have citizens more vocal about their heritage than Oklahoma. Oklahoma's history, those 442 years since Coronado's entrada, is rich and colorful. But those 442 years comprise only a twenty-sixth of the time that people have lived here. At least 11,000 years of cultural developments are ignored or minimally presented by our history and social studies teachers. Consequently, few Oklahomans can name the tribes that are native (that weren't moved here) to the state. (The Plains Apache, Caddo, and Wichita have cultural heritages that go back some 1400 years.) Likewise, most of our citizens are unaware that:

1. From A.D. 900 to 1400, horticulturalists (ancestors of the Wichita?) settled the Arkansas Basin of eastern Oklahoma where they controlled trade between the Plains and the Southeast and played a key role in fostering the rituals, paraphernalia, and theology of a religion that swept the Southeast.
2. For 200 years (A.D. 1200-1400), bison-hunting farmers adapted masonry architecture to build farmsteads and pueblo-like hamlets while

settling along the Canadian, North Canadian, and Cimarron rivers in the High Plains.

3. People have been farming in Oklahoma for some 1800 years.
4. Mining has been an important industry in Oklahoma for at least 4000 years, as evidence by prehistoric flint quarries in Kay, Ottawa, and Pontotoc counties.
5. Some 11,200 years ago, hunters armed with stone-tipped spears were successfully killing elephants (mammoths) in Oklahoma, perhaps to the extent that they contributed to the animal's extinction by 9000 years ago.

These are only a few of the interesting details that have been learned from careful studies of Oklahoma's archeological sites. Others are mentioned in discussions of the six management regions and even more will be forthcoming as future researchers refine and resolve the questions posed for various study units. Fifty years of archeological research has already revealed that Oklahoma has a complex, intriguing past. Its Native American residents developed diverse cultures and underwent marked changes as they spent nearly 600 generations adapting to the state's varied settings and oscillating climate. Continued research will greatly help flesh out details about these Native American's achievements. Such information should help reduce misunderstanding and increase appreciation of the state's Native American heritage.

While Oklahoma's archeological sites are important for understanding the state's past, they also contain clues needed for explaining developments beyond the state. For example, between 1540 and 1750, European explorers reported the sedentary, horticultural Arikara, Pawnee, Wichita, Kichai, and Caddo people as living from northern Nebraska south to northwest Louisiana. Although having

similar economies, these groups had different material cultures and diverse social and political organizations. Despite being spread over thousands of square miles, these bands and tribes all spoke variations of one language (Caddoan), and anthropologists believe that at one time they must have comprised a single society. Because most Caddoan speakers (the Kichai, Caddo, and many Wichita) historically lived on the Southern Plains or their eastern border, Oklahoma was probably part of the region that figured prominently in the origin, evolution, and spread of these people. Thus, Oklahoma archeological sites will probably yield information integral to tracing and explaining when, where, how, and why Caddoan groups separated, emigrated, and adopted diverse cultures.

These topics are obviously of interest to educational programs in the state. Sites containing information on these topics should be preserved for future educational development. One manner in which this can be achieved is by their inclusion in a state park system. A current focus within Tourism and Recreation is the interpretation of the state's natural and cultural heritage for recreational as well as educational purposes. In many areas of Oklahoma, parks primarily function as recreation centers for sportsmen. The addition of archeological sites (both prehistoric and historic) and interpretive programs as parks in such areas as the Panhandle could create a new economic, educational, and recreational focus.

A second consideration in preservation for educational purposes is that only through the educational system can we produce a more responsive attitude toward archeological resources. The presentation of lectures and seminars and the publication of non-technical reports are excellent mechanisms for dispensing information on archeological preservation. An equally valid approach is the development of parks or preserved sites where the educational

importance of these resources can be visually as well as graphically portrayed. Once the public is attuned to the existence of these sites as important resources, preservation can be more successfully accomplished.

Site Evaluation for Preservation

Thus far, discussions of preservation have focused on why we need to preserve archeological resources. The subject of how to preserve the information base has also been touched upon. However, nothing has been said of the procedure for determining what sites are to be preserved. How do we determine whether one site or another merits preservation for future generations? The procedure for this determination is generally described as site evaluation. Evaluation consists of assessing each site's importance or significance to a set of relative criteria.

Although almost 10,000 archeological sites have been recorded for the state (and probably 10 times that number exist but have not been recorded), only a small portion of the total have been thoroughly evaluated. This is because many recorded sites are not currently threatened by destruction. Much of our attention is directed to sites which require evaluation due to their pending or potential loss. Part of the Survey's Community Assistance Program is the evaluation of archeological resources which may be disturbed by either state or federally funded projects. Sites which are endangered by private projects (land leveling, clear cutting, agricultural terracing, etc.) are evaluated with landowner permission when the staff is notified of such projects. Thus, a mechanism does exist for handling evaluation of archeological sites which are currently threatened with destruction. Efforts are also being made to evaluate sites in areas where various types of land-alteration activities may impact sites in the near future. This evaluation takes the form of documenting the significance of the site.

The concept of archeological significance is important because it directly affects, and in a large measure determines, what conservation or preservation actions should be taken according to current federal law and regulations. Because archeological sites and their contents are our only clues to prehistoric, and in some cases, early historic human behavior, most if not all sites can be perceived as containing information that makes them potentially significant. However, in practice, the significance of an archeological site is usually determined by reference to some set of relative criteria such as temporal or geographical domains, or specific research problems. Before discussing these criteria though, it must be established that remains at a site are adequate for addressing these relative criteria. The following points cover some of the criteria concerns that may arise:

1. Do cultural deposits at the site have integrity? That is, are they undisturbed enough that they will yield reliable information that will answer unresolved questions? If the deposits are thoroughly disturbed it is questionable whether further work should be undertaken.
2. Does the site contain material such as carbon, fired clay, etc., which will permit accurate placement of the site in time? If such materials are absent, the range of questions which might be addressed are limited. In fact, the chronological placement of the information is viewed by some archeologists as the most important attribute in addressing the question of potential for significant information.
3. Does the artifact assemblage contain sufficient variability for thorough analysis? It is a general assumption that the greater the range of variability in artifact classes, the greater the potential of the site for answering diverse research questions.

4. Do habitation features such as houses, trash pits, and fireplaces exist? Data recovered from such features typically have more dicrete contexts than general midden or unit-level findings. For this reason, such contexts offer more opportunities to substantiate social and cultural patterning. The lack of features severely limits the information potential of a site or set of sites.

5. Does the site contain discrete spatial patterns in artifacts and/or features that, when studied, will enhance understanding patterns of behavior? Most analyses and interpretations of archeological data depend upon discerning patterns in the disposition of these materials. If there is no potential patterning to the remains, then the understanding of activities taking place at the site are severely constrained.

All of the above concerns are important and must be considered either prior to or in conjunction with a determination of significance.

As mentioned earlier, site significance is usually evaluated according to some set of relative criteria. These criteria generally pertain to some regional level of knowledge. There are also two basic kinds of significance. The first of these is a significance evaluation that relates to the cultural heritage of the archeological site. Specific sites can have historical, political, emotional, and/or religious value to a particular ethnic group within a region. For Oklahoma, archeological sites of early white settlers and Native Americans are frequently considered to be significant due to their value to local people who take great pride in these reminders of their heritage. A second kind of significance is the site's value or importance from a scientific perspective. In scientific significance, the value of the site lies in the potential information it contains which would enhance our understanding of

various aspects of past human behavior. In various sections of this study, a number of research topics are formulated. If an archeological site has the necessary prerequisites of integrity, etc., and contains information for researching these questions, then it would be considered to have scientific significance. Obviously, many more scientific questions could be posed than the ones formulated in this document. However, morphological studies, culture history, behavioral, and ecological research can be viewed as basic and essential problem domains. Almost any scientific research question can be subsummed under oe of these areas. In evaluating an archeological site, there may be considerable overlap between the application of cultural heritage and scientific significance. Other types of general criteria for significance (size, uniqueness, depth, etc.) have been employed in the past. However, most of these criteria are no longer utilized. Today, significance evaluations are most commonly couched in terms of the scientific information potential or the cultural heritage value of a site at local, state, or national levels.

The National Register of Historic Places

The National Register of Historic Places is our primary means for documenting the significance of a prehistoric or historic archeological site. The National Register is essentially an inventory of historic and archeological properties considered to have importance at the local, state, or national levels. This inventory is maintained by the Keeper of the National Register, National Park Service, under the auspices of the Secretary of the Interior.

If a site is thought to contain valuable information, it is often nominated to the National Register. This procedure involves completion of a National Register eligibility form. However, the procedure varies somewhat depending on whether the site is on private property or lands involved in a federal project. For sites that are on private property and are not affected

by federal involvement, the information provided on the nomination form is reviewed by the State Historic Preservation Officer and an initial determination of eligibility is made. Sites which are considered eligible by the State Historic Preservation Officer are forwarded to the Keeper of the National Register for a formal determination of eligibility. If the Keeper concurs with the recommendation, the site is placed on the National Register. In cases where an archeological site is located on federal property or on lands to be affected by a federal project, the responsible federal agency contacts the State Historic Preservation Officer and requests an initial determination of eligibility. If the Preservation Officer considers the site to be eligible, the agency forwards the nomination form to the Keeper of the National Register for a formal determination of eligibility. If the Keeper of the Register and/or the other parties are in agreement on eligibility, the site is placed on the National Register. The determinations of eligibility performed by the State Historic Preservation Officer and the Keeper of the National Register are based on the following criteria:

1) associations with events that have significantly contributed to broad patterns of our history;
2) associations with the lives of important persons in our nation's past;
3) embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possess high artistic values, or that represents a significant and distinct entity whose components may lack individual distinction; and
4) has yielded or potentially may yield information of value in history and prehistory.

If a site is believed to meet any of the above criteria (particularly the broad range of #4), it merits inclusion on the listing of properties.

As noted above, a site considered eligible for the National Register and which is located on federal property, or on state or private property to be affected by federally funded or monitored activities, receives some protection from actions that can disturb or destroy it. According to Section 106 of the National Historic Preservation Act, any federal agency having direct or indirect jurisdiction over a proposed project must take into account the effect of that project on any properties listed or considered eligible for the National Register. In most instances, appropriate mitigation measures are undertaken. These measures can include preservation of the site by avoidance, or retrieval of the site's information through a data recovery program. Unfortunately, a National Register site on private property which is to be disturbed by a private individual or company's action receives no such protection. The determination of eligibility also has its negative aspect. It is possible that important sites may not currently exhibit the necessary criteria for inclusion on the Register's inventory. In such cases, they would not be protected from any type of potential disturbance or destruction. For this reason, it is critical that adequate documentation be compiled prior to completion of the nomination form.

In Oklahoma, 53 prehistoric and historic archeological sites are currently listed on the National Register of Historic Places (Figure 0-1). Between 1976 and 1980, the Oklahoma Archeological Survey reexamined previously recorded sties in Beaver, Caddo, Cimarron, Ellis, Harper, McIntosh, Muskogee, Oklahoma, Roger Mills, and Texas counties for the purpose of gathering data on sites potentially eligible for nomination. Most recently, the Survey completed a review of previously recorded sites in Pontotoc and Pottawatomie counties.

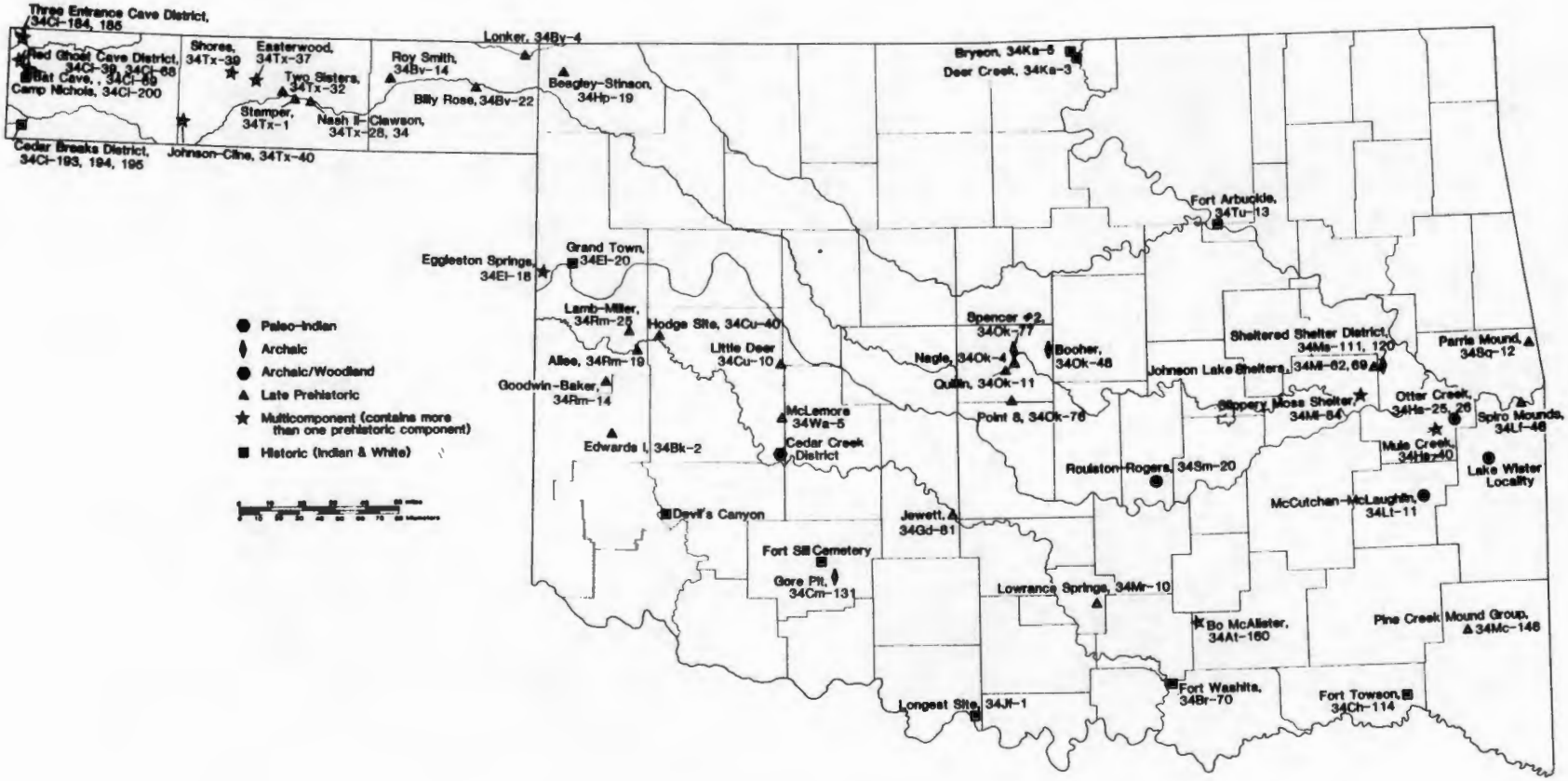


Figure 0-1. Prehistoric and early historic archeological sites currently listed on the National Register.

Similar county reviews are planned for the remainder of the state. These reviews will undoubtedly increase the number of sites being protected (if they are placed on the Register) as well as providing new information on impacts to archeological sites.

In addition to sites currently listed on or being reviewed for the National Register, 82 prehistoric and historic archeological sites are listed on the Oklahoma Landmarks Inventory. These are sites which the State Historic Preservation Officer has determined are significant for understanding Oklahoma's cultural heritage. All of the sites listed on the National Register are also on the Oklahoma Landmarks Inventory. However, for a variety of reasons, many Oklahoma Landmarks Inventory sites have not been nominated to the National Register. Others were not viewed as eligible by the Advisory Council on Historic Preservation and were not placed in the inventory. Most of these sites do not receive any formal protection. Listed sites on state lands are protected from disturbance by the State Antiquities Act. This act makes it unlawful to destroy or damage archeological sites on state, local, or municipal property. A few sites such as Parris Mound (34Sq-12) are owned or leased by the Oklahoma Historical Society, thus providing some measure of protection. Sites on the Oklahoma Landmarks Inventory are reviewed periodically and may be nominated or renominated to the National Register with updated information. The Archeological Survey's review of previously recorded sites is geared toward gathering information for nomination to the Oklahoma Landmarks Inventory as well as the National Register. Sites on the Oklahoma Landmarks Inventory are valuable for the information they contain regarding Oklahoma's prehistory and early history and are given special attention in the review of federal, state, local, and private projects.

The Review Process

Preservation of archeological sites cannot be accomplished without coordination between the various state and federal agencies and concerned citizens. Federal and state governments have passed a number of laws and departmental regulations to facilitate this coordinated effort. The more important of these laws are presented in Table O-2.

In Oklahoma, two agencies directly involved in reviewing federal projects for their potential impact on archeological sites are in the State Historic Preservation Office and the Oklahoma Archeological Survey. The archeological representative for the State Historic Preservation Officer and the State Archeologist (or his Community Assistance Program staff) in the Oklahoma Archeological Survey routinely review proposed federal projects circulated through the State A-95 Clearinghouse. (The State Clearinghouse is responsible for ensuring that potential environmental impacts are considered prior to project implementation.) This review process is graphically presented in Figure O-2.

The primary intent in the review process is to ensure that significant archeological sites are not destroyed without some measures being taken. It is standard policy for both the State Historic Preservation Office and the Oklahoma Archeological Survey to recommend avoidance of any archeological site within a proposed project area. This is consistent with the concept of preserving sites with future, but as yet unrealized, research potential. In many cases though, the preservation of archeological sites in a project area is not possible. In these instances, it is necessary to evaluate the sites to determine their significance. If they are considered to have potential significance (by National Register standards), they can be either preserved in

Table O-2. Relevant Federal and State Laws and Regulations Regarding Archeological Resources.

Title	Legal Definition	Summary of Content
OKLAHOMA ANTIQUITIES LAW	Oklahoma Statute Title 70, § 3309 (1971)	This statute defines regulations under which archaeological investigations may be conducted on public lands. The Department of Anthropology of the University of Oklahoma is designated as the sole agency which may issue permits to explore, excavate, etc., from public lands any archaeological site or antiquity. Furthermore, no one may destroy or deface any such site or antiquity on public lands.
ANTIQUITIES ACT OF 1906	PUBLIC LAW 209 16 U.S.C. 431-33 (1970)	This act provides for the protection of all historic and prehistoric ruins or monuments on Federal lands. It prohibits any excavation or destruction of such antiquities with permission of the Secretary of the Department having jurisdiction. It authorizes the Secretaries of the Interior, Agriculture, and War to give permission for excavation to reputable institutions for increasing knowledge and for permanent preservation in public museums. It also authorizes the President to declare areas of public lands as national monuments and to reserve lands for that purpose.
ARCHAEOLOGICAL RESOURCES PROTECTION ACT	PUBLIC LAW 96-95 16 U.S.C. Section 470aa *et seq.*	This act supercedes the Antiquities Act of 1906. Additional provisions in this law make violations a criminal offense with prescribed penalties.
HISTORIC SITES ACT OF 1935	PUBLIC LAW 74-292 U.S.C. 461-67 (1970)	This act declared as national policy the preservation for public use of historic sites, buildings, and objects. It led to the establishment of the Historic Sites Survey, the Historic American Building Survey, and the Historic American Engineering Record, by giving the Secretary of the Interior the power to make historic surveys, to secure and preserve data on historic sites, and to acquire and preserve archeological and historic sites. The National Historic Landmarks program and its Advisory Board were also established under this act to designate properties having exceptional value as commemorating or illustrating the history of the United States. The National Historic Landmarks program was the beginning of the National Register program.
NATIONAL HISTORIC PRESERVATION ACT OF 1966	PUBLIC LAW 89-665 16 U.S.C. 470-470m (1970) as amended 16 U.S.C.A. 470h, 4701, 4701-470n (Supp. 1973)	This act provided for an expanded National Register of Historic Places to register districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, and culture. It provided for a program of matching grants-in-aid to the States for historical surveys and planning and for preservation, acquisition, restoration, and development projects. The act also established the Adivsory Council on Historic Preservation, appointed by the President, to advise the President and the Congress on matters relating to historic preservation. The Advisory Council is authorized to secure information it may need from Federal agencies in order to carry out its responsibilities.
NATIONAL HISTORIC PRESERVATION ACT OF 1980	PUBLIC LAW 96-515	This amendment strengthens the existing legislation and provides the states with greater responsibility in preservation planning.

Table O-2 (continued)

Title	Legal Definition	Summary of Content
PROCEDURES OF THE ADVISORY COUNCIL ON HISTORIC PRESERVATION	36 CRF 800	The Advisory Council on Historic Preservation has established procedures for compliance with the National Historic Preservation Act of 1966, Executive order 11593 and the National Environmental Policy Act requirements regarding historic preservation. If a Federal agency finds that any undertaking will have any adverse effect on a property on or determined by the Secretary of Interior to be eligible for the National Register, that agency must allow the Advisory Council opportunity to comment on the undertaking. Although Advisory Council comments and recommendations are not binding on the Federal agencies, the consultation and negotiation procedure and the full Advisory Council hearings may prevent preservation controversies from arising by bringing the interests to light early in the project planning stages and providing a high level forum for the ventilation of the more complex controversies. The prestigious composition of the Advisory Council and its position as advisor to the President and the Congress on historic preservation matters provide an incentive to Federal agencies to comply with Advisory Council recommendations.
EXECUTIVE ORDER 11593, PROTECTION AND ENHANCEMENT OF THE CULTURAL ENVIRONMENT	16 U.S.C. 470 (Supp. 1, 1971)	This order requires Federal agencies to take a leadership role in preservation in two particular ways. First, for all property under Federal jurisdiction or control, the agencies must survey and nominate all historic properties to the National Register. These historic properties must also be maintained and preserved by the agency. Second, for every action funded, licensed or executed by the Federal government, the agency involved must ask the Secretary of the Interior to determine if any property in the environmental impact area is eligible for the National Register. The determination of eligibility process is faster than the nomination process and gives the same protection as nomination to the National Register. If the Federal action will substantially alter or destroy a historic property, the agency must have the property recorded by the Historic American Buildings Survey or the Historic American Engineering Record.
NATIONAL ENVIRONMENTAL POLICY ACT	PUBLIC LAW 91-190 42 U.S.C. 4321 *et seq.* (1970)	The legislation obligates Federal agencies to prepare an environmental impact statement for every major Federal action which affects the human environment. The environment is defined to include cultural as well as physical resources. The environmental impact statement must include the comments of the Advisory Council on Historic Preservation. Community Development Block Grant funds may be used for the preparation of environmental impact statements. The statements are to be prepared so as to fulfill requirements under the National Historic Preservation Act and Executive Order 11593. This is probably the most important legislation offering protection to cultural properties.

Table 0-2 (continued)

Title	Legal Definition	Summary of Content
THE ARCHEOLOGICAL AND HISTORIC PRESERVATION ACT OF 1974	PUBLIC LAW 93-921	Enacted May 24, 1974, the act is directed to the preservation of historic and archeological data that would otherwise be lost as a result of Federal construction or other federally licensed or aided activities. It authorizes the Secretary of the Interior, or the agency itself, to undertake recovery, protection, and preservation of such data. Where the Federal government financially aids in activity that may cause irreparable damage, the Secretary of the Interior may survey the data and undertake recovery and preservation. Archeological salvage or recording by the Historic American Buildings Survey or the Historic American Engineering Record are among the alternatives available to the Secretary. When the activity takes place on private land, the Secretary must compensate the owner for any resultant delays or loss of use of the land. This act presents two innovations over previous law: (1) only dams were covered; now all federal projects are; (2) up to one percent of project funds may be used for this purpose.
HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1974	PUBLIC LAW 93-383: ENVIRONMENTAL REVIEW PROCEDURES FOR THE COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM (40 CFR 58)	This act replaces the Department of Housing and Urban Development categorical grant programs that previously funded urban renewal, planning and other federally assisted community development activities with a comprehensive block grant program. Every community over 50,000 population and every community that has been participating in HUD programs superceded by this program will be entitled to funds. Other communities may be eligble but are not guranteed funds. Communities receiving funds must comply with Federal laws and regulations protecting cultural resources; HUD has delegated these responsibilities directly to the recipients who now function as Federal officers. Furthermore, local governments are authorized, at their own descretion, to use block grant funds for a broad range of community development activities. The acquisition, rehabilitation, preservation, and restoration of historic properties, historic preservation planning and surveys, and adaptive use of historic resources may be funded with block grants. Funds under the program may be used as the match for grant money from the National Park Service.
THE DEPARTMENT OF TRANSPORTATION ACT OF 1966	PUBLIC LAW 89-670	This act directs the Secretary of Transportation not to approve any program or project which required the use of land from a cultural site of National, State, or local significance as determined by Federal, State, or local officials having jurisdiction thereof unless (1) there is no feasible and prudent althenative to the use of such land, and (2) such program includes all possible planning to minimize harm to such cultural property. This means that in particular the Federal Highway Administration, the Federal Aviation, and the U.S. Coast Guard must be careful of their projects even if the historic resource affected is not yet on or determined to be eligible for the National Register.
OKLAHOMA STATE REGISTER OF HISTORIC PLACES ACT	OKLAHOMA STATUTE TITLE X (1983)	This statute provides for an official state listing of those districts, buildings, sites and objects of historic, archeological, and/or architectural significance. The law also stipulates that the Executive Director of the Oklahoma Historical Society shall serve as the State Historic Preservation Officer.

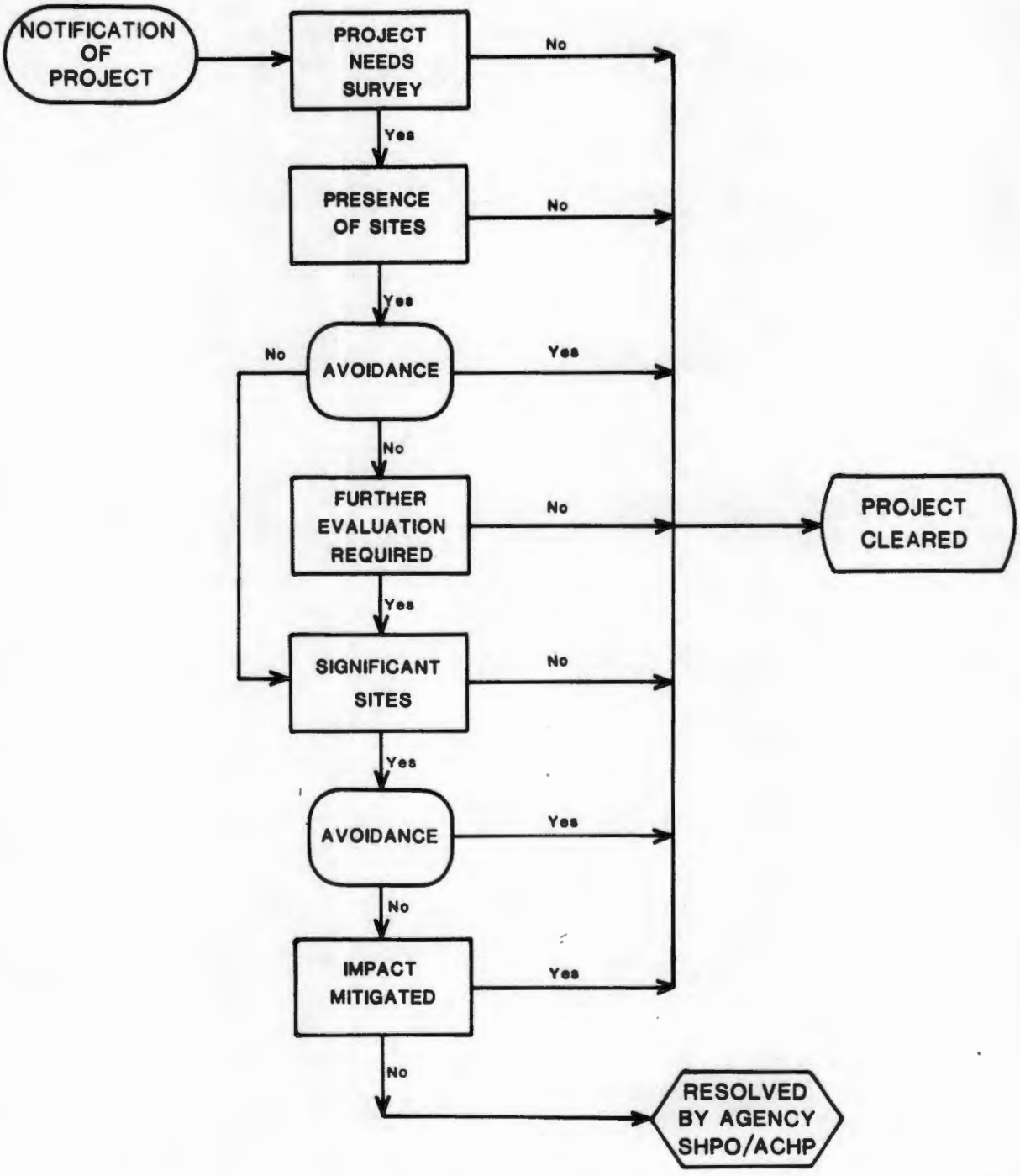


Figure O-2. Flowchart of review and compliance procedures. NOTE: SHPO stands for State Historic Preservation Officer and ACHP stands for Advisory Council for Historic Preservation.

some fashion (sealed, capped, etc.), or the information can be retrieved in a data recovery program (excavated).

The Historic Preservation Office and the Archeological Survey cooperates in an effort to survey counties, drainage basins, and other areas where future land-modification activities are expected. These surveys are designed to discover previously unrecorded sites and to establish a representative archeological data base for the state. The goal of this work is the preservation of a representative cross-section of archeological sites for the various cultural periods and regions of the state.

The Archeological Survey also works through an informal review process to preserve important sites on private property that may be destroyed by private activities. The Survey actively seeks cooperation from landowners in protecting and preserving sites on their property. These sites are periodically re-visited to determine what effects erosion, cultivation, etc., are having on the site's context. The Survey also works with landowners to be on-hand if land-modification activities are planned which may effect a site. In addition, the State Archeologist and Survey staff responds to calls from concerned citizens regarding archeological materials that have been unearthed and need proper excavation to recover the remains. During the past two years, three Plains Village sites have been examined and mapped with some level of data recovery. Approximately 20 smaller projects have also taken place during this time.

BASELINE DATA AND THE DEVELOPMENT OF MANAGEMENT REGIONS

Like most states, Oklahoma does not have comprehensive knowledge of its archeological resources. In lieu of such information, gained from a thorough state-wide survey, we have compiled and evaluated the available information on

Oklahoma's prehistoric and historic archeological sites. In 1979, nearly 8000 archeological sites were recorded in the University of Oklahoma Archeological Site File. Four years later, this number had grown to nearly 10,000 sites. These site records provide us baseline data for ascertaining the extent and findings from previous research as well as clues about the kinds of information available across the state. Given the likelihood that ten times the number of recorded sites exist in Oklahoma, current and future urban expansion, industrial development, energy plant construction, surface mining, proposed reservoirs, and transportation projects will clearly damage or destroy many archeological sites. However, because funds are limited, only a few localities and sites can be thoroughly studied and preserved. Hopefully, many of these sites can be included in a long-termed management program that focuses on preservation and interpretive development. Archeological parks and preserves are increasingly providing important economic, recreational, and educational benefits to nearby communities and their visitors.

To facilitate assessing what we know about Oklahoma's archeological resources, we have organized information on archeological sites, previous research, and threatening land use programs according to six management regions (Figure 0-3). These regions are consistent with major biotic districts established for the state. These ecological regions comprise a reasonable basis for organizing archeological information because Oklahoma's prehistoric and early historic people developed differential cultural adaptations as they used the diverse combinations of plants, animals, soils, and minerals found within each district. For example, the limited rainfall and associated plant and animal communities found in the Short Grass Prairie (Management Region 1) led to much different adaptations during the Village

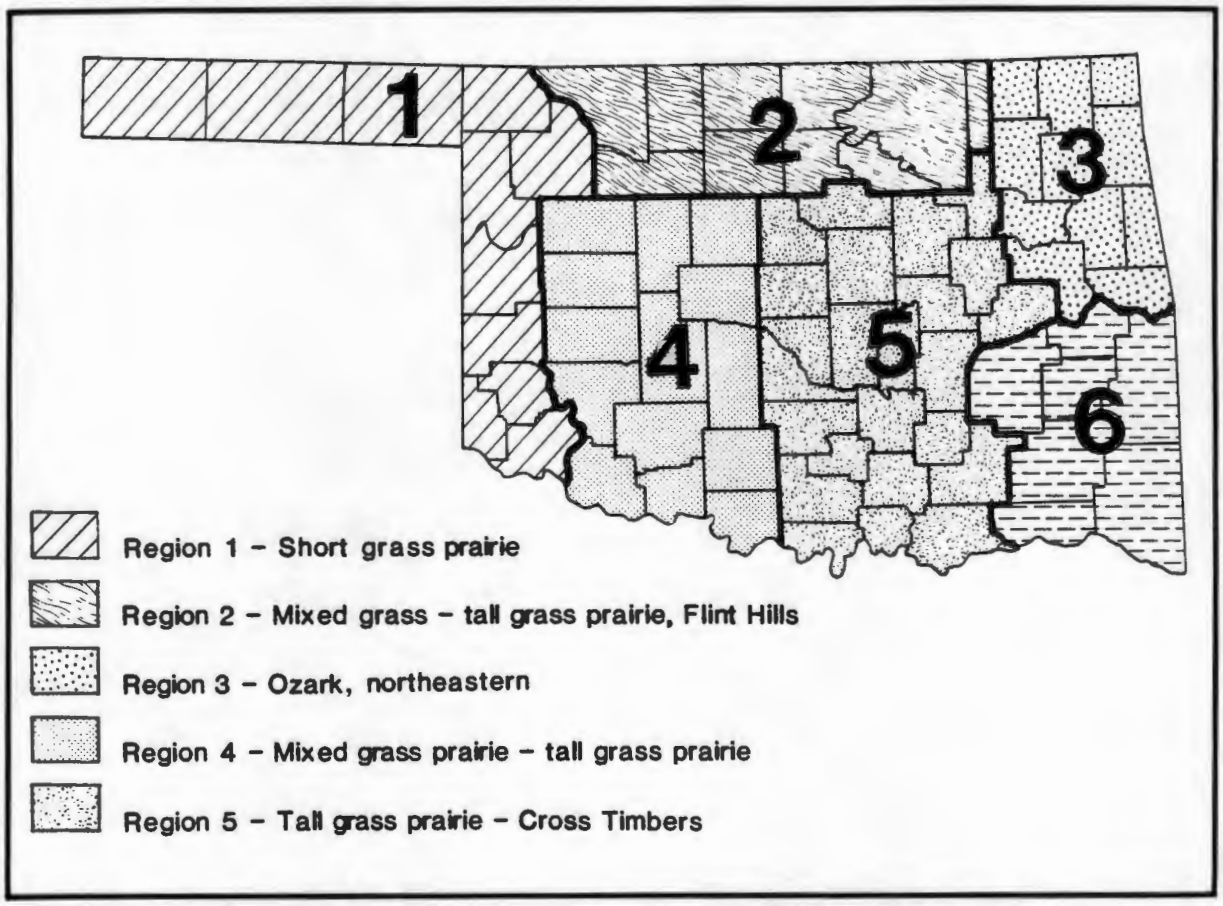


Figure 0-3. Management regions recognized for Oklahoma.

Farming Period than those found in the wetter climate and wooded conditions of the Ouachita Mountains of southeastern Oklahoma (Management Region 6).

In our attempt to summarize Oklahoma's archeological resources, the management region serves as the primary factor in distinguishing the various periods of culture history in a geographic sense. Our study uses the management region as the organizing framework within which are incorporated the different cultural patterns for each cultural-historical period (the study unit).

STUDY UNITS

A study unit can be conceptualized as a resource or cultural unit that has a distinct identity and has temporal and spatial limits. Some recent studies have attempted to conceptualize it as a socio-cultural system. This scheme works well when examing historic resources or contemporary cultural systems. However, it is much more difficult to establish the socio-cultural system operating in prehistoric or ethno-historic times. For this reason, study units defined here will relate to basic cultural stages of development commonly addressed in archeological research: the Paleo-Indian, Archaic, Woodland, Village Farming, and Proto-Historic, periods. As noted in previous discussions, differences in ecological conditions from one region to another have created subtle yet important distinctions between study units for the various regions. For example, the material inventory, economic activities, and rituals that comprise the Village Farming period in Management Region 6 were somewhat different from those found for this manifestation in Management Region 1.

As utilized in this framework, the study unit is essentially the cultural period. Basic to the identification of the study unit will be discussions of

basic characteristics, geographical distributions, chronological limits, and potential for answering research questions. Basic characteristics were derived from data collected on the attributes of these cultural patterns over the past 50 years and includes information on technology, subsistence practices, and social organization. The primary reflection of these aspects of the study unit is the settlement or site and their distributions. The site is also the marker used in identifying the geographic extent of the culture(s) within the region. Temporal boundaries have generally been derived from absolute dating of radiocarbon samples from sites and from relative dating of materials such as projectile point or pottery styles. Research questions have been developed around four problem orientations: morphological research, cultural history, social patterning, and ecological adaptations. Morphological research is concerned with artifacts and assemblages and their similarities through time and space. Studies in cultural history deal with the identification of local cultures and documenting their relationship to contemporaneous groups, their predecessors, and their descendents. Behavioral research relates to social and ritualistic activities of cultural groups at various levels of organization while ecological adaptations focus on how various cultures adjusted to changes in climatic conditions. Although an almost infinite number of research questions could be formulated with these basic orientations, the Archeological Survey had proposed a number of questions which we will address for the various study units. Treatment of archeological resources for each study unit have been proposed based on the general characteristics of the resources, their potential significance, and projected land disturbances.

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