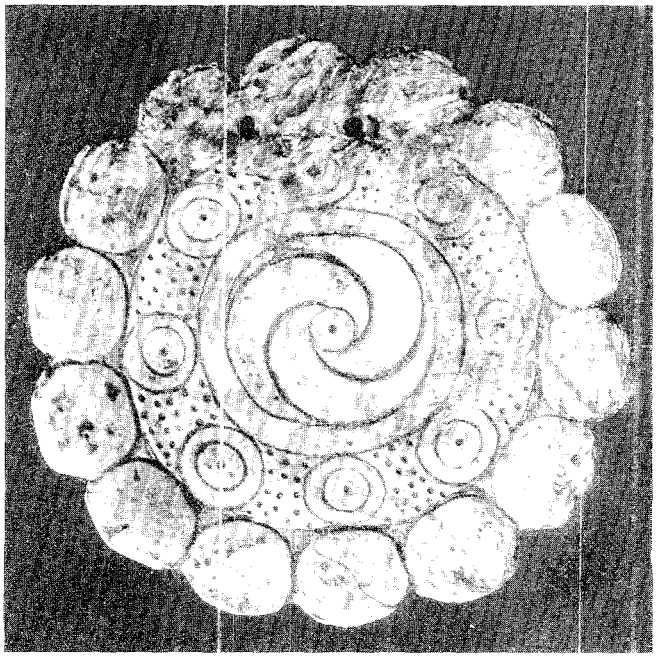

Archeological and Historical Data Recovery Program

Heritage Conservation
and Recreation Service
U.S. Department of the Interior
Washington, D.C.

Cover photograph:

Shell gorget (1300-1500 A.D.) from burial of youth in late teens, Averbuch Site, Tennessee. *Photo credit: Walter Smalling, Jr.*

1977 1978

Archeological and Historical Data Recovery Program

Heritage Conservation
and Recreation Service
U.S. Department of the Interior
Washington, D.C.

Submitted pursuant to Section 5(c) of Public Law 93-291 to the Interior and Insular Affairs Committee of the Senate and House of Representatives of the United States.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to insure the wise use of all these resources. The Department also has major responsibility for American Indian Reservation communities and for people who live in Island Territories under U.S. administration.

The Heritage Conservation and Recreation Service, a non-land managing agency within the Department, is responsible for assuring the identification, protection, and beneficial use of our important cultural, natural, and recreational resources. The Service offers grant assistance, technical information, and guidance to those in the public and private sectors involved in conservation or recreation projects.

U.S. Department of the Interior

Cecil D. Andrus, Secretary

Robert L. Herbst, Assistant Secretary

Heritage Conservation and Recreation Service

Chris T. Delaporte, Director

HCRS Publication No. 15

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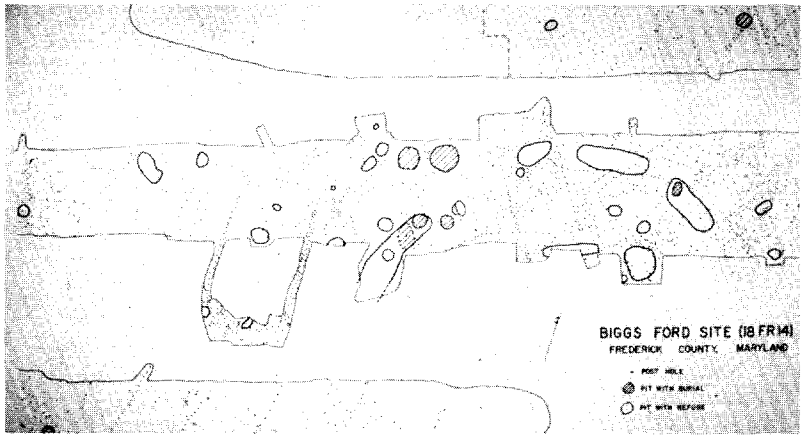
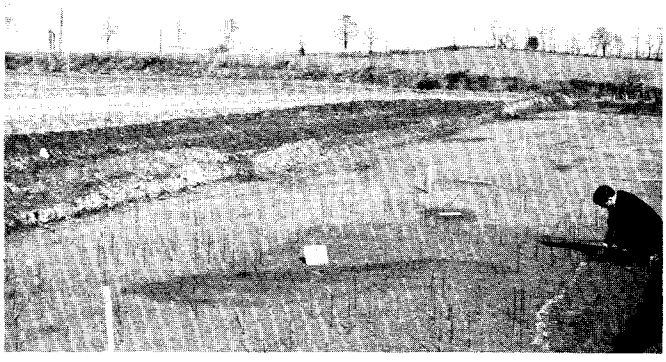


Figure 1. Biggs Ford Site, Maryland (Frederick County). Site plan shows subsurface features of a late prehistoric Indian village near the Monocacy River. *Courtesy Maryland Geological Survey, Baltimore, Maryland.*



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Introduction

Archeology, involving those remains usually hidden beneath the earth's surface, is a complex data-gathering science. And because archeological remains are considered a cultural rather than a physical resource, their importance is often misunderstood and underestimated.

Archeological remains are actually as much a physical resource as historic buildings and, as such, are as vulnerable to destruction from insensitive human activity (*Figs. 1, 2*).

Although man has inhabited North America for perhaps 27,000 years, recorded history began only with the arrival of European explorers in the 15th century A.D. Moreover, written histories may be very selective, focusing upon only the most important persons and happenings of the day. Archeological studies offer a candid, supplemental or alternative glimpse of the daily lives of people who left few, if any, written records. The remains of campsites and settlements form a revealing archeological record of the way people lived, how they adapted to their environment, and the kinds of things they valued. By studying earlier cultures, we may come to learn more about ourselves as human beings, set within the broadest possible context (*Figs. 3, 4, 5*).

For example, through archeology we learn of the coincidence of locations chosen by prehistoric man for activities vital to life. The same factors that caused early man to select a campsite—proximity to water, accessibility, transportation, trade, topographic features—seems to have appealed to his successors. Thus, we discover that many modern roads are built over prehistoric trails; even some modern cemeteries are located above ancient graveyards.

Archeology also provides a useful time scale for the study of our own environment. There is evidence that the clearing of trees and vegetation from watersheds has led to the cutting of deep arroyos, such as Chaco Canyon, New Mexico. When the shallow streams no longer flooded and naturally fertilized the land and the water table was lowered, this once habitable area deteriorated into a wasteland that is still desolate some 500 years later.

In summary, archeological sites are a vital part of our cultural heritage which, when destroyed, irreversibly diminish our knowledge of the past. That is why the emphasis today is on the preservation and selective investigation of sites rather than on total excavation. One archeologist has likened the digging of a site to reading George Washington's letters in the National Archives, taking notes, then burning the letters. Protected from human destruction, archeological data may be studied and interpreted with fresh insights and the most up-to-date information and technology available.

Federal Leadership for the Preservation of Cultural Resources

Since World War II, massive public construction projects—highways, dams, urban renewal—have destroyed thousands of archeological sites throughout the country. With the rapid expansion of essential construction activities today, we as a Nation are losing irreplaceable information on such an enormous scale that it is impossible for the private sector alone to retard or prevent the loss. Therefore, it is fitting that the Federal Government, acting on behalf of the American people, play a major role in protecting and preserving those historic and archeological resources still intact.

The Heritage Conservation and Recreation Service (HCRS) of the U.S. Department of the Interior administers a national historic preservation program with the cooperation of other Federal agencies, State governments, and the private sector. The Service's resource programs establish guidelines and professional standards for effective preservation activities, identify and document cultural resources, offer matching grants for preservation projects, and promote greater interest and involvement in historic preservation by citizens and government.

To administer the historic preservation responsibilities of the Secretary of the Interior, the Department created the Office of Archeology and Historic Preservation (OAHP) within the National Park Service in 1967. OAHP consolidated the existing survey programs; related programs in archeology, architecture, and history; and the new programs required by the National Historic Preservation Act of 1966 and Executive Order 11593. The Governor of each State was asked to appoint an official to work with OAHP. The responsibilities of the State Historic Preservation Officers include identifying historic resources of national, State, and local significance in their jurisdictions and nominating them to the National Register of Historic Places, preparing Statewide historic preservation plans, and administering the grant-in-aid program in their States.

In January 1978, the Department of the Interior took steps to bring several environmental programs under the direction of a single agency with the creation of the Heritage Conservation and Recreation Service. The agency's three main areas of concern are historic preservation, natural conservation, and outdoor recreation. HCRS operates in cooperation with the States and relies heavily on public participation, providing technical and information services for those involved in environmental activities. For more detailed information, write to the U.S. Department of the Interior, Heritage Conservation and Recreation Service, Pension Building, 440 G Street, N.W., Washington, D.C. 20243.

Interagency Archeological Services—Washington

One of the programs of HCRS, Interagency Archeological Services (IAS) directs and coordinates a nationwide effort to protect significant archeological and historic remains threatened by Federal construction projects, programs, or activities. IAS:

- Assists Federal agencies in the fulfillment of their Executive Order 11593 responsibilities by helping them to locate, identify, and evaluate historic properties under their jurisdiction or control, or to conduct data recovery, if necessary, under Public Law 93-291.
- Develops for the Secretary of the Interior national goals and objectives, policies, standards, guidelines, and procedures for all Federal agencies to follow in the administration of the archeological and historic data recovery program under the Archeological and Historic Preservation Act of 1974 (Public Law 93-291).
- Manages the permit system instituted under the Antiquities Act of 1906 (Public Law 59-209) to regulate data recovery projects on most federally-owned or controlled lands.
- Consults with the Advisory Council on Historic Preservation on archeological issues.
- Reports annually to Congress on the scope and effectiveness of the program.

IAS Field Offices

The Interagency Archeological Services program is administered at the field level by the three regional offices, IAS-Atlanta, IAS-Denver, and IAS-San Francisco. Each field office:

- Maintains a day-to-day liaison with other Federal agencies at the regional level in order to identify and plan for needed data recovery projects.
- Identifies firms or institutions capable of performing data recovery.
- Establishes the scope of archeological services required for projects, negotiates contracts, and reviews data recovery proposals.
- Monitors field and laboratory work.
- Reviews and approves final reports submitted following the completion of data recovery.

Because many Federal agencies whose actions may affect significant sites do not have sufficent archeological staff expertise, IAS is able to provide invaluable technical assistance nationwide. With its staff of professional archeologists in Washington and in the field, IAS is in a unique position to coordinate federally-sponsored archeological activities and to help other Federal agencies meet their responsibilities under Executive Order 11593 and Public Law 93-291.

Program Scope

Legislation

Historic preservation in the United States has been shaped by a body of more than two dozen laws that deal with archeological, architectural, cultural, and historic resources (Appendix A). Their intent is to make the Federal Government accountable for any potential impact its actions may have on the cultural environment. Laws that are particularly pertinent to archeology are summarized in Appendix B and include: the Antiquities Act of 1906 (Public Law 59-209). The Historic Sites Act of 1935 (Public Law 74-292), the National Historic Preservation Act of 1966 (NHPA) (Public Law 89-665 as amended), the National Environmental Policy Act of 1969 (NEPA) (Public Law 91-190), and the Archeological and Historic Preservation Act of 1974 (Public Law 93-291). As mentioned earlier, Executive Order 11593 assigns certain responsibilities to Federal agencies with regard to historic preservation.

Often poorly understood by agency planners, archeological resources frequently receive inadequate consideration during project planning. It cannot be emphasized too strongly in this report that the timely application of the legal requirements cited above are intended to integrate historic preservation goals with the successful completion of agency construction projects without undue costs. The harmful effects of proposed construction projects, if recognized and dealt with during the planning phase, could be avoided or, at least minimized. IAS believes the failure of agencies to follow the historic preservation compliance process is the main cause of the needless destruction of archeological resources as well as costly construction delays. Unfortunately, archeologists have long been accused of obstructing public works projects when just the opposite seems more accurate: a construction project in full compliance with the intent of Federal law is seldom delayed by the recovery of significant archeological information.

Complying with the Requirements of the Law

In order to deal responsibly with the cultural environment and to avoid delays caused by the failure to take the "preventive measures" required by law, Federal agencies should begin the compliance process in the early stages of planning for a construction project. This process consists of three major steps.

1. *Identification of Cultural Resources within the Project Area.* Executive Order 11593 requires all Federal agencies to locate, identify, and evaluate all historic and archeological resources under their jurisdiction or control that will be affected by their actions. The agency must consult with the State Historic Preservation Officer and ask the Secretary of the Interior to resolve questions of whether properties are eligible for inclusion in the National Register of Historic Places. Where properties eligible for the National Register are involved, the agency should reevaluate the proposed undertaking to consider its impact.

Archeological sites are often the most numerous cultural entities identified during inventory and evaluation. Current knowledge about the distribution of sites geographically makes detailed site predictions difficult; therefore, systematic field surveys should be undertaken for many projects, even when State plans for the protection of cultural resources called for by the National Historic Preservation Act of 1966 have been completed.

2. *Consultation with the Advisory Council on Historic Preservation.* The National Historic Preservation Act of 1966 created the Advisory Council on Historic Preservation to counsel the President and the Congress and established the National Register of Historic Places. The Federal agency must consult with the State Historic Preservation Officer to determine whether (1) its undertaking will affect a significant cultural resource in or

eligible to be entered in the National Register, and (2) if the resource will be affected, whether the effect will be adverse. The Council must be given an opportunity to comment on the proposed project.

If the Council deems there will be an adverse effect, the agency must submit a preliminary case report to the Council, outlining the project and its impact on the property. The Council staff, the State Historic Preservation Officer and the agency will then explore methods by which the adverse effects can be avoided or minimized. The final plan to avoid the property or mitigate the adverse effect must be acceptable to all three parties and must be incorporated into a legally binding Memorandum of Agreement. If no agreement can be reached, the full Council must formally comment on the matter. The Federal agency is responsible for deciding the ultimate disposition of the property. It may elect to carry out, modify or ignore the Council's recommendations. Current policy of the Council is to view its comments as not legally binding. However, if the Federal agency chose to ignore the Council's comments and subsequently had to defend its action in the courts, a position of noncompliance would severely weaken the case.

3. *Data Recovery* is defined as the scientific retrieval and preservation of archeological and historic materials and information that would otherwise be lost and the study of these resources in their original context. Because cultural resources that have been destroyed by construction or by archeological excavation cannot be replaced, their protection and conservation for long-term scientific study is always preferable (as stressed in the *Introduction* to this report) to immediate excavation. In addition, techniques for recovery are continually improving. Accordingly, data recovery through archeological salvage is undertaken only as a last resort to save important information, while allowing a construction project to proceed.

If the consultation process reveals no way to avoid damaging or destroying the cultural resources and finds that recovery of specimens and scientific information is in the public interest, the agency may use its authority under the Archeological and Historic Preservation Act to undertake archeological excavations. The agency may contract for this work directly, using up to one percent of the authorized project appropriation, or may request the Secretary of the Interior to assume responsibility for the archeological investigations on a cost reimbursable basis or through the use of discretionary funds appropriated to him for this purpose. When significant archeological sites are threatened by issuance of a Federal permit or license or in other federally-assisted projects where the one percent proviso cannot be applied, the Secretary of the Interior may elect to fund data recovery as the only prudent recourse to destruction of the resource without prior study. Data recovery, therefore, is the last step taken under preservation law and should only be conducted after a Federal agency has fully discharged its responsibilities for identifying, evaluating, and considering cultural resources in the planning process.

Program Effectiveness

Cultural Resource Management by Federal Agencies

National coordination of archeological programs is a monumental task for a variety of reasons. Although requirements that agencies consider cultural resources in their planning process have been law for years, some Federal agencies continue to regard historic preservation legislation as individual authorities rather than an integrated set of responsibilities, procedures, and managerial options. The result is fragmented planning and an incomplete response to the need to protect cultural resources affected by their projects. Conversely, several agencies such as the Corps of Engineers and the Soil Conservation Service, have taken some positive steps to begin refining guidelines to reflect the importance of considering cultural resources in planning for projects.

As a first step in the preparation of the annual report to the Congress, IAS requested all Federal agencies to provide information concerning data recovery projects conducted under the authority of Public Law 93-291 as well as survey and evaluation activities initiated during FY 1977. As reported to IAS, more than 70 data recovery projects were undertaken by Federal agencies during FY 1977 (see Appendix C); the actual number of projects may be considerably higher, but information was not available from the Soil Conservation Service, the Department of Housing and Urban Development, and the Environmental Protection Agency, all of which funded or guaranteed loans for numerous construction projects.

Several problems in coordinating a national approach to cultural resource preservation are highlighted in the agency responses. Because data recovery can only be undertaken on significant sites under the authority of Public Law 93-291, this aspect of the archeological program should depend entirely upon the results of prior systematic survey and evaluation. Many agencies still seem to misunderstand the purpose of Public Law 93-291, viewing it as a substitute for preservation legislation when, in fact, it should be applied *only* after agencies have fully complied with the planning requirements of NHPA, NEPA, and Executive Order 11593.

Regulations and guidelines were developed by IAS during 1977 in order to clarify the relationship between planning activities required under NHPA, NEPA, and Executive Order 11593 and the data recovery authorized under Public Law 93-291. These regulations and guidelines have been discussed extensively with OMB regarding their policy and budget implications and it is anticipated that they will be published in the "Federal Register" during 1979.

Although the number of projects and total dollars committed to data recovery during FY 1977 increased during FY 1978, the *total* impact of Federal construction activities on archeological resources is unknown. Because of the difficulty of collecting information from individual agencies about their activities under Public Law 93-291, other methods of acquiring these data are being considered. In order to reduce paperwork, HCRS has eliminated the practice of making blanket requests of Federal agencies for information on their archeological activities. Beginning in FY 1979 and in following years, HCRS will derive information from existing agency notification and reporting requirements described in Sections 3a and 4a of Public Law 93-291.

However, until we have information addressing (1) the full impact of losses caused by Federal and federally-related activities on archeological and historic sites; and (2) the full extent of data recovery performed under Public Law 93-291, a meaningful statement on the level of need for the recovery of archeological and historic data by Federal agencies cannot be made.

Archeological and Historic Data Recovery in Fiscal Years 1977 and 1978

During fiscal years 1977 and 1978, IAS assumed a vital leadership role in the first of what may be many large-scale projects to mitigate the damage to significant archeological resources caused by Federal construction activities. Through the program, IAS has endeavored to provide a strong link between Federal agencies and professionals in the private sector for the protection and preservation of our cultural heritage. IAS is pleased to include several brief case studies in the annual report that specifically detail these efforts.

Data Recovery in FY 1977

During FY 1977, IAS initiated 18 data recovery projects completely funded by the Department of the Interior or jointly funded with other agencies (Appendix D, Table 1). Four of these projects are described.

• *Rood Creek Mounds, Georgia.* Public Law 93-291 funds were used for active preservation in the case of important ceremonial mounds in southwest Georgia. Following completion of the Walter F. George Reservoir, erosion endangered several of the Rood Creek Mounds that date from about 1100 A.D. The Department of the Interior and the Corps of Engineers jointly funded the placement of heavy sheet-steel pilings, which were hammered into the lake bed just off the shoreline near the prehistoric village and its associated mounds. Fill was placed behind the pilings to strengthen the barrier, building a new, higher shoreline that sloped gently upward to each mound site. Finally, sod was laid over the sterile fill to offer effective, unobtrusive protection (Figs. 6, 7). This exemplary method of stabilization used to alleviate the adverse impact of construction should stimulate careful observation of other projects for any secondary effects construction may have on cultural resources.

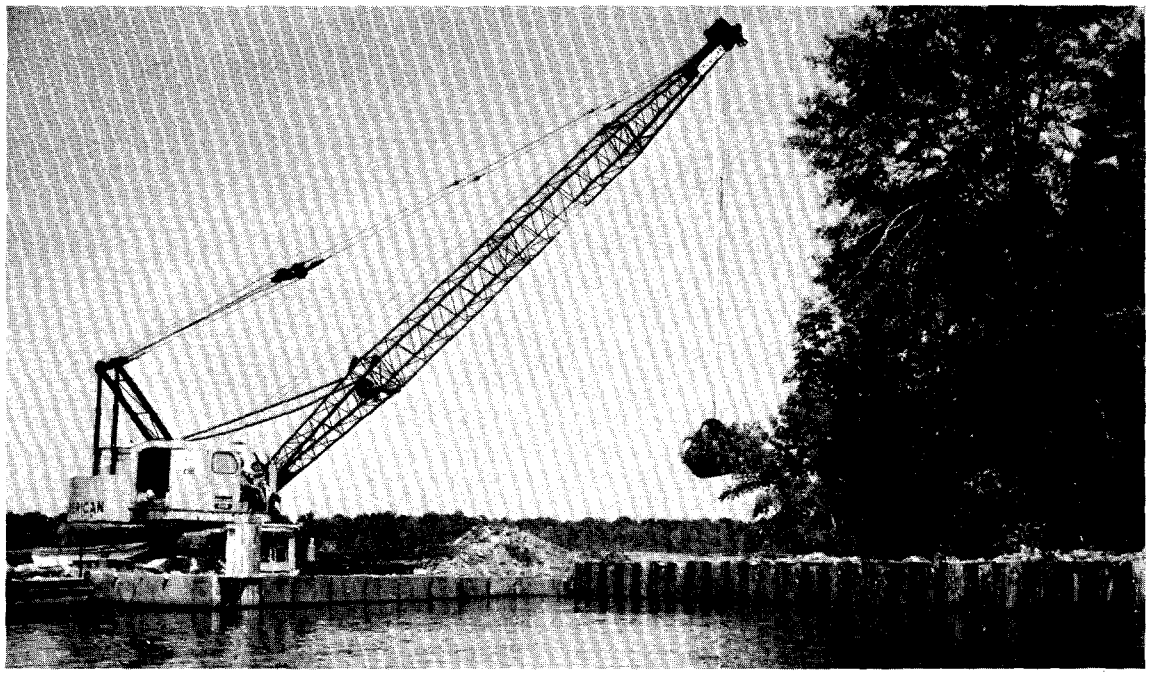

Figure 6. Rood Creek Mounds, Georgia (Stewart County). Protective stabilization work in progress. *Photo credit: Walter Smalling, Jr.*

Figure 7. Sheet steel pilings will protect the unexcavated ceremonial mounds at Rood Creek for possible future investigation. *Photo credit: Walter Smalling, Jr.*

Figure 8. Hog Creek Watershed, Texas (Bosque and Coryall Counties). Nearing completion of archeological investigation of Windy Rockshelter. *Courtesy University of Tulsa, Tulsa, Oklahoma.*

Figure 9. Completed investigation of the "Bee Bee Buddysite," a prehistoric burned rock midden in the Hog Creek Watershed project. *Courtesy University of Tulsa, Tulsa, Oklahoma.*

• *Hog Creek Watershed, Texas.* In central Texas, IAS initiated a project to recover archeological data that would have been lost as the result of a Soil Conservation Service project in the Hog Creek Watershed. Nine archeological sites containing remains of prehistoric Indian occupations were to be disturbed or destroyed by floodwater control construction. Five sites were under rock shelters, overhanging cliffs caused by erosion; two others were accumulations of burned rock (middens); and the remaining two were situated on terraces above the river floodplain (*Figs. 8, 9*).

Major objectives of the project were to develop a cultural history of the sites, showing their occupation by various groups as reflected in the archeological remains; to reconstruct environmental conditions during the different prehistoric Indian occupations; to determine at what season each locale was in use and the activities carried on; and to learn how the sites related to each other and to other known archeological sites in the region.

The analysis of plant and animal remains, for example, was expected to yield information on the climate and times of year each site was occupied and on the kinds of resources available and used by the Indians. The abundance of water, game, vegetation, and raw materials for fashioning tools were all partly responsible for the nearly continuous occupation of the region for thousands of years.

Investigators in Hog Creek have been impressed by the sheer volume of archeological materials recovered, far surpassing their expections.

Information on climatic conditions is being derived from the study of tens of thousands of land snails found (one of the most complete layerings in the southwestern United States). Large numbers of artifacts are being analyzed by computer in an effort to characterize the various cultures that occupied the sites. Well-preserved organic materials suitable for radiocarbon dating have also been obtained. Pollen analysis is helping to determine the changes in vegetation through time in the Hog Creek area.

Although analysis of the archeological materials is not yet complete, researchers have discovered that a gradual, yet dramatic environmental change began to take place in the area around 600-700 A.D. that continues to the present. Over the past 1300 years, the trend at Hog Creek has been away from arid conditions toward a moister climate, from grassland to light forest.

Radiocarbon dating of charcoal samples has revealed that the earliest sites at Hog Creek, the rock shelters, were probably inhabited around 500 A.D. and that Indians continued to occupy the area until about 1600 A.D. Researchers believe that prehistoric settlers used the rock shelters and the other sites for both permanent villages and intermittent camping. Activities of everyday survival—mainly deer and rabbit hunting and the collection of such foods as nuts, berries, and fruit from the prickly pear cactus—occupied most of their time. Many tools were manufactured from readily available stone materials.

Burned rock middens are among the region's most mysterious prehistoric archeological features. While theories abound about their use for hide processing, heat treating tools, and roasting ovens, the two burned rock middens discovered at Hog Creek were probably used for processing acorns. Unlike most prehistoric middens, these two contained few shells or snails, no charcoal, and few animal bones.

Although investigators expect to conclude their study of the Hog Creek Site in the early 1980's, the mass of material recovered will be available to scientific researchers in the near future. Some of the items will be placed on public exhibit at a county museum.

• *Newburyport Waterfront, Massachusetts.* Another IAS project was conducted in Newburyport, Massachusetts. The Market Square Historic District, with its brick Federalist buildings, makes up the main business district of Newburyport. It was determined eligible for the National Register of Historic Places in 1971. While the architectural integrity of the old business area was recognized, there had never been a formal attempt to assess the significance of the archeological remains of the waterfront area behind Market Square, which had been the economic focus of this once thriving New England seaport. After nearly ten years of legal controversies concerning the urban development of the Market Square Historic District, an archeological study of the central waterfront was finally conducted.

The task of evaluating the archeological potential of the central waterfront was complicated by the initial stages of redevelopment of the area. Except for the Federalist architecture fronting on Market Square, all the buildings along the waterfront had been razed in 1971, and the project area was covered with massive piles of rubble and granite blocks.

Archeological test excavations and extensive documentary research, including the examination of property records, estate probates, city directories, insurance maps, and photographs were conducted during the summer of 1977. They revealed the presence of significant cultural remains from the 18th and 19th centuries in the central waterfront (*Figs. 10, 11*). Underneath the razed surface, undisturbed foundations and trash deposits spanned two centuries of Newburyport's history. Researchers were thus afforded the rare opportunity to examine the evolution of a natural area into a thriving seaport and the adaptions of the waterfront to the economic and social pressures of various periods in history. Archeologists believed that excavations in the project area could provide important information on shifting populations and changes in patterns of residence within the central waterfront—the adaptation of individuals to their changing landscape.

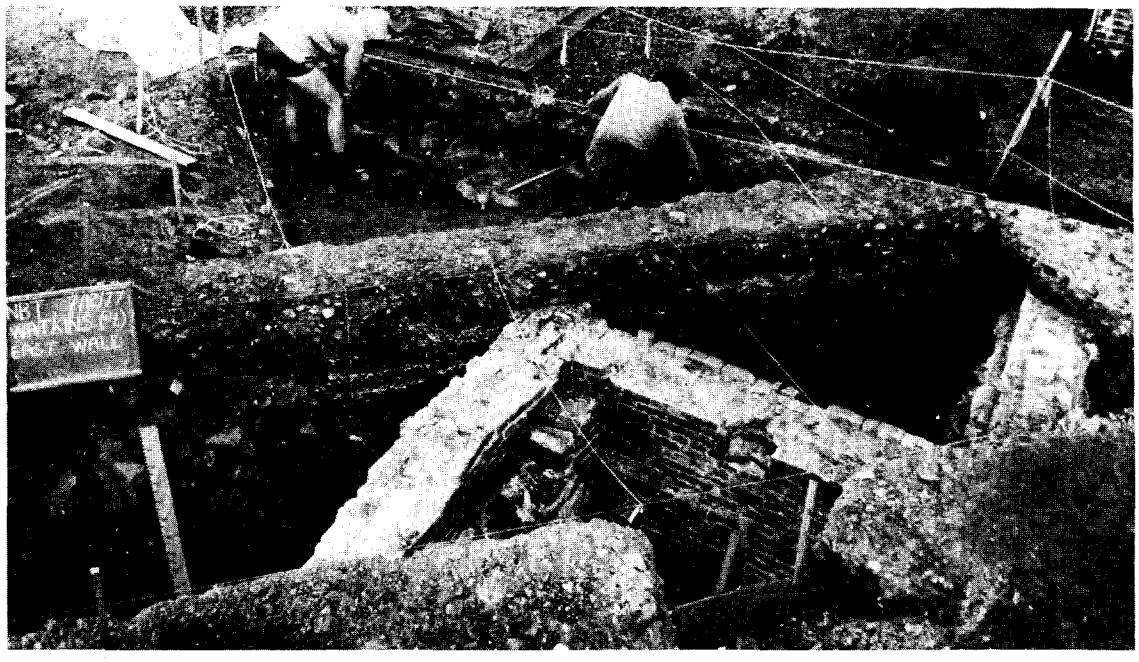

Figure 10. Newburyport, Massachusetts (Essex County). Ongoing excavation of 18th century brickwork, Hale Watkins House on Merchant's Row, Central Waterfront. *Courtesy Franklin Pierce College, Rindge, New Hampshire.*

Figure 11. Extensive documentary research preceded the archeological investigation of Newburyport. Shown, a one-dollar bill, dated Oct. 14, 1840. *Courtesy Franklin Pierce College, Rindge, New Hampshire.*

Archeological investigations covered the Market Square stores, the commercial waterfront, the industrial waterfront and private residences. The central waterfront was a focal point of Newburyport's history, with its first occupation by prehistoric hunters and gatherers around 3500 B.C. It continued through initial contact with Europeans in the early 17th century, the Colonial and Federalist periods and an interim period of serious economic depression, to two industrial periods that ended in 1900.

The archeologists were disappointed to learn that although prehistoric aboriginal remains were present in the central waterfront, they were found in areas that had been disturbed by Federalist construction and were of little scientific value. However, more useful information was recovered concerning the Colonial, Federalist and 19th century Industrialist periods and several important historic structures and their associated refuse were preserved intact.

Of several former wharfside business complexes, the brick Merchant's Row, built in stages from 1770 to 1820, was best represented. Also identified were probable areas of Colonial goldsmithing, wigmaking, and comb and button manufacture, as well as 19th century foundry work. Domestic refuse from an 18th century home and a 19th century boardinghouse provided a unique opportunity for the study of waterfront residential life in the Colonial and industrial periods.

The archeological and historical information from the project reveals a changing pattern of land use at Newburyport. Parcels allotted for 17th century port facilities were subdivided and developed in the 18th century as the importance of maritime commerce surpassed that of shipbuilding. Profits from privateering, neutral trade, and destruction caused by a fire in 1811 all led to episodes of new construction. The Colonial market area was replaced by a Federalist business district which still stands. As maritime industries declined, wharfside properties were consolidated. By 1876 they were dominated by a railroad and a small coal mining operation. Today the property is vacant.

The investigating archeologists recommended that use of the central waterfront area be limited to surface activities because additional subsurface excavations would destroy important portions of the archeological site. A parking lot now covering the area should protect the archeological remains from further abuse.

• *Southwest Jefferson County, Kentucky.* In response to direct Federal construction with funds transferred from other agencies (Appendix D, Table 2), IAS initiated four data recovery projects in FY 1977. In one case, in Southwest Jefferson County, Kentucky, the Corps of Engineers transferred funds for archeological investigations in several areas that would be damaged by a local flood protection project on the Ohio River. Construction of levees would destroy three sites that had been determined eligible for listing in the National Register and would partially cover a fourth with sediment dredged from the river. Accordingly, a program was undertaken to excavate and recover the significant archeological information from several archeological sites before it was lost (*Figs. 12, 13*).

Figure 12. Southwest Jefferson County, Kentucky. Archeologists examining surface features at one of the four sites in the project after mechanical stripping has taken place. *Courtesy University of Kentucky, Lexington, Kentucky.*

Figure 13. Trenching with shovels marks an early stage of the archeological investigation in the Southwest Jefferson County, Kentucky project. *Courtesy University of Kentucky Lexington, Kentucky.*

Researchers expected to find prehistoric cultural remains dating from about 7500 B.C. to 300 A.D. Because no one site contained evidence from the entire 8000-year time sequence, each site was to be partially excavated to obtain information for the total period of prehistoric occupation.

One goal of the Southwest Jefferson County project was to establish a firm and detailed cultural chronology of the area. The investigating archeologists planned to examine the kinds of occupations at the various sites to determine how each site was used and how the inhabitants lived. They also hoped to identify prehistoric environmental conditions and their relationship to the changing patterns of culture reflected in the several sites.

Two sites turned out to be exceptional. At the Longworth-Gick Site investigators recovered a number of projectile points, scrapers, drills, and flint chips, some from as much as 20 feet below the ground surface. Although the Longworth-Gick Site produced a relative sparsity of materials it was, nevertheless, a goldmine of information. Gently laid flood deposits had quickly covered the remnants of each brief Indian occupation, protecting them and separating them into distinct layers. Thus, researchers were able to examine the archeological materials in comparatively clear relationships to each other.

Archeologists believe the Longworth-Gick Site has the potential to be nationally significant because of the depth of its cultural remains and because it may date back to the Paleo-Indian period, the earliest evidence of man in the New World. At the lowest level of the site, where radiocarbon datable material, such as charcoal, was found, researchers exposed evidence dating from 7800 to 6700 B.C. The site was so impressive that the Corps of Engineers agreed to modify its construction plan and to preserve a portion of the site for future research.

A second important and unexpected discovery was made during excavation of the Rosenberger Site, where more than 200 burials were recovered. Most were poorly preserved because plowing had disturbed the upper portions of the shallow burial pits. Although the Rosenberger Site yielded an abundance of archeological remains, it produced little material useful for radiocarbon dating. The burials and associated prehistoric debris appear to date from 3000-2000 B.C. and some materials from the site may date as late as 500 A.D.

In the beginning the Corps planned to use the Rosenberger Site as a borrow pit for a levee. But when the extent and scientific importance of the archeological remains became known, the engineers agreed to borrow fill from another location. Today the burial site is secure under layers of sand, earth, and grass, and will be available to future researchers.

Perhaps the major accomplishment of investigations conducted in the Southwest Jefferson County project has been the reconstruction of a sequence of prehistoric occupations dating from 7800 B.C. to around 500 A.D. In the course of this reconstruction, a number of puzzles had to be solved. At the Villier Site, for example, archeologists found evidence of settlement from around 3000-1500 B.C. But the area apparently was not inhabited again until the end of the 19th century, over 100 years after the settlement of nearby Louisville.

By interpreting the geological record, researchers were able to chart a gradual process of maturation of the area from a glacier-filled valley to a habitable area to a mosquito-infested swamp. After the glaciers retreated about 15,000 years ago, leaving the valleys choked with rubble, the Ohio River began to cut away the coarse glacial material, carrying it downstream and replacing it with fine clays, silts, and sands. Over the next 13,000 years the valley terraces built up to a point where the river rarely flooded and no longer

left silt deposits. Forests developed, side streams became clogged, and swampy areas formed. Researchers concluded that this gradual transformation eventually discouraged Indian use of the area and delayed European settlement. It also may help account for the dearth of archeological evidence from the past 2000 years in this part of Southwest Jefferson County.

All of the materials recovered from the project will be permanently stored and maintained at the University of Louisville.

Data Recovery in FY 1978

The number of data recovery projects completely funded by the Department of the Interior or jointly funded with other agencies increased to 29 in FY 1978 (Appendix E, Table 1). Three of these projects are described:

• *Walpi Pueblo, Arizona.* Shortly after the Pueblo Revolt of 1680 (an organized Indian uprising against the Spanish), the Hopi Tribe founded a village on the tip of a mesa in northeastern Arizona, naming it Walpi Pueblo. The population of the village remained relatively stable until extensive contact with the Anglo-Saxon culture began in the 1780's. The resulting gradual decrease of the inhabitants from Walpi Pueblo in the 19th century accelerated after World War II (Fig. 14). Today, 35 people are reported to be living there year-round. Without maintenance of the elaborate stone structure, its deterioration was predictable. By the end of the 1970's, only 150 of the approximately 500 rooms remained intact.

In 1975, the Economic Development Administration awarded a grant to the Hopi Tribe for the rehabilitation of Walpi Pueblo. Under

Figure 14. Walpi Pueblo, Arizona (Navajo County). The massive stone complex, built in the 18th century, is shown here in 1955. *Courtesy Museum of Northern Arizona, Flagstaff, Arizona.*

the authority of Public Law 93-291, a portion of grant funds supported archeological excavation and evaluation of recovered material in those areas of the village to be affected by development work. At the conclusion of field work in April, 1977, 103 rooms of the pueblo had been mapped and photographed, and another 43 rooms photographed in part (approximately 3000 photographs were taken); 93 of the rooms were partially or totally excavated.

Although material recovered from Walpi Pueblo dates from 1680 to the present, the information dating from 1700 to 1880 is considered of particular significance because only a very few Spanish and American histories exist that contain anthropological observations (Fig. 15). Researchers have had the added benefit of being able to interview the current inhabitants of the village, who have provided supplemental statements on the probable uses of various recovered artifacts and on the pueblo's remaining original architectural features.

Both the quantity and type of material recovered from the living village of Walpi are unparalleled in southwestern archeological research. Almost 90 percent of the more than 250,000 items collected is of perishable material such as wood, bone, and vegetable matter—an unusually high percentage for an open site. Fortunately, the pueblo's rooms that remained intact provided protection for the cultural materials within them from rain and snow, while layers of low-acid soil and an arid climate afforded further natural protection.

A partial listing of the diversified artifacts recovered through archeological excavation at Walpi Pueblo includes lithics, ceramics, buttons, marbles, coins, unfired clay and pottery, textiles, leather, basketry, and wooden objects. Specialists will describe each artifact in detail: its composition, dimensions, wear, use, color, and other specific identifying characteristics. A comparative analysis will be made with similar articles in other southwestern collections and the resulting data will be stored on computer tapes. (The data will also be available on cards in the catalogue files of the Museum of Northern Arizona.) After a 30-month period of intensive analysis and report preparation, the excavated material will be returned to Walpi Pueblo. The anticipated completion date for the project is October 31, 1979.

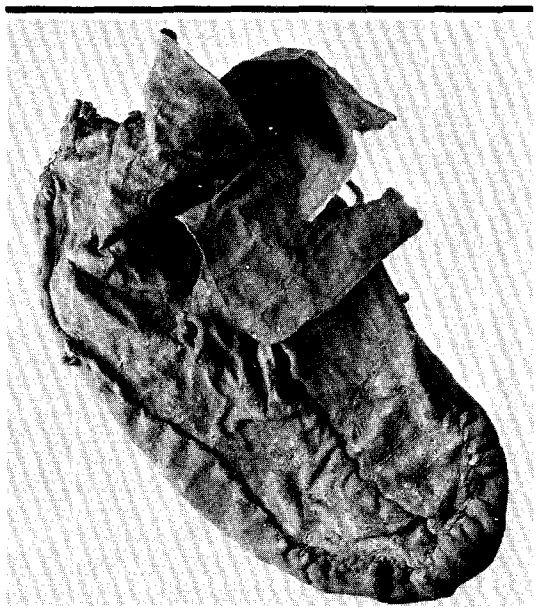

Figure 15. Leather moccasin found in a room at Walpi Pueblo is not a Hopi-style moccasin and might reflect contact with other Indian tribe. *Courtesy Museum of Northern Arizona, Flagstaff, Arizona.*

• *Averbuch Site, Tennessee.* Discovered in a housing subdivision near Nashville, the Averbuch Site is the only known undisturbed village and cemetery dating from the late prehistoric period (1300-1500 A.D.) in central Tennessee (Fig. 16). The location of the site itself, relatively far from a major river, has led to speculation that Averbuch represents the 15th century equivalent of urban sprawl. Population pressures may have forced the village's inhabitants away from the more desirable settlements along the Cumberland River.

Because the housing subdivision was already being developed when the Averbuch Site was discovered, it was imperative that archeologi-

cal investigations be initiated as quickly as possible before the prehistoric remains were disturbed or lost.

Scientific investigations began during the fall of 1977. Initiated by IAS under the authority of Public Law 93-291, they disclosed that the site was considerably more extensive and complex than had been anticipated. Although researchers had known of a village with about 80 circular or rectangular houses and a cemetery, two additional cemeteries, numerous structures, and a portion of the village's palisade were discovered.

The site investigators exposed a total of 15 structures, two cemeteries containing approximately 350 stone box graves (graves constructed of limestone slabs) within the palisade enclosure, and another estimated 400 graves in the third cemetery outside the palisade. Often, several burials were interred in a single box; many individuals were accompanied by grave goods, such as pots, shell ornaments, and stone and bone tools. Interestingly, a number of stone box graves containing the remains of children were found in the village's houses. Burials of children beneath large pottery fragments were also recovered from under the packed earth house floors.

Although burials are often found in association with settlements, it is unusual to find an entire village and its adjacent cemeteries intact. The quantity of skeletons recovered at Averbuch was extraordinary and, because the limestone grave boxes helped to preserve the bones, the condition of the skeletal remains was remarkable. With such a well-preserved, seemingly related skeletal population to examine, researchers believe they can learn much more about prehistoric diet, disease, and genetic variability in prehistoric Central Tennessee *(Fig. 17)*.

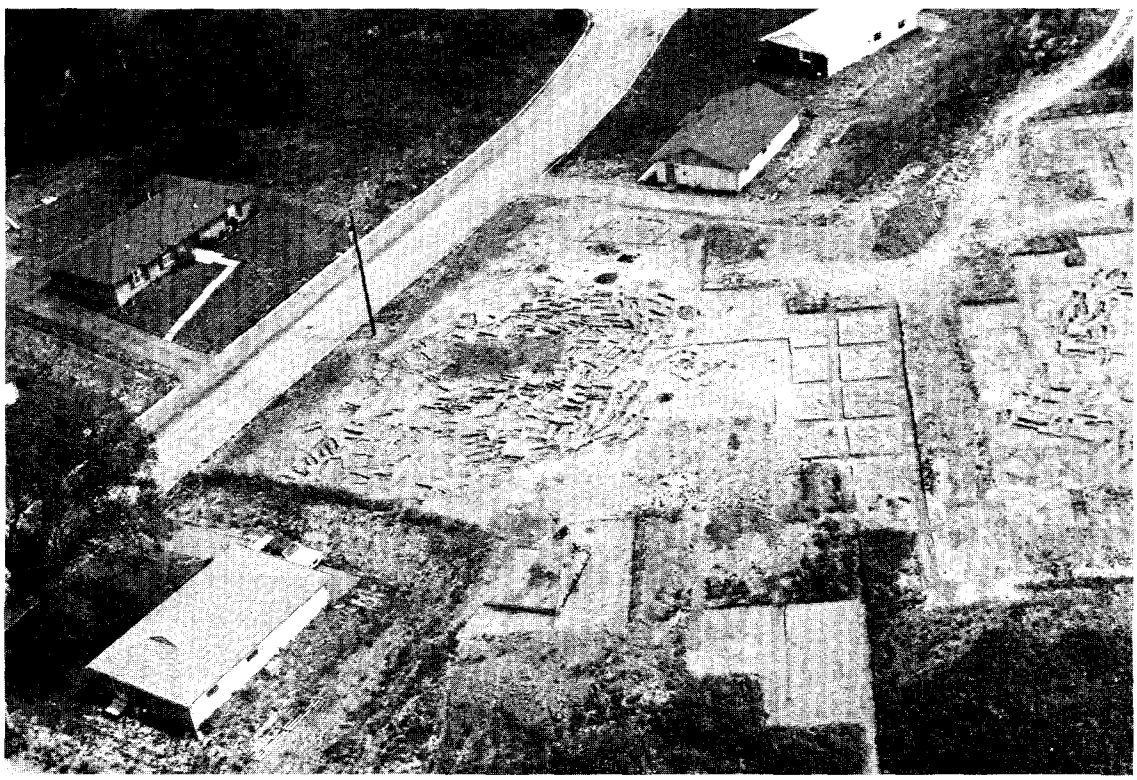

Figure 16. Averbuch Site, Tennessee (Davidson County). An entire late prehistoric village and its cemeteries were found intact. *Courtesy University of Tennessee, Knoxville, Tennessee.*

Figure 17. Skeletal remains found at the Averbuch Site were in excellent condition, thus permitting researchers to learn more about prehistoric living conditions. *Photo credit: Walter Smalling, Jr.*

When archeological activities at the Averbuch Site ended on July 7, 1978, the subdivision developer agreed to donate all excavated materials—including 800 skeletons, 15 structures, 96 features, and hundreds of thousands of artifacts—to the State of Tennessee. The University of Tennessee, Knoxville, will be specifically responsible for the maintenance and preservation of the Averbuch legacy.

• *Held Creek Watershed, Iowa.* The regular cultivation of land in the Plains States during the past century has resulted in increased surface water run-off; in consequence, streams crossing farmland are now cutting into deposits that have been accumulating for millenia.

Such a stream has cut a straight-sided ravine almost 18 feet deep in the Held Creek Watershed through a large, undisturbed archeological site from the Woodland Period (500 B.C. to 900 A.D.).

During the course of a routine archeological survey conducted in the preliminary stages of the construction of an erosion control dam by the Soil Conservation Service (SCS), an archeologist discovered evidence of a prehistoric fireplace buried under seven feet of soil, protruding from the ravine. Further inspection disclosed that the site probably extended well back from the stream. Even though the watershed project was already underway when the fireplace was discovered, the SCS and the Plymouth County Park Board were most cooperative by delaying construction in order to provide additional time for site investigations.

The Held Creek archeological investigations were initiated in July of 1978 by IAS under the authority of Public Law 93-291. Upon cleaning of the ravine wall, there appeared to be at least four layers of cultural deposits (including animal bones, clam shells, bone and stone tools, pottery, and charcoal and carbonized seed from the remnants of fires) indicating four different periods of human occupation. But by completion of fieldwork, more than two dozen single occupations of the site lay exposed (*Figs. 18, 19*). After each

Figure 18. Held Creek Watershed, Iowa (Plymouth County). The uppermost two steps were opened with a backhoe. Below, the excavation is being completed at about a 16 ft. depth. *Courtesy Luther College, Decorah, Iowa.*

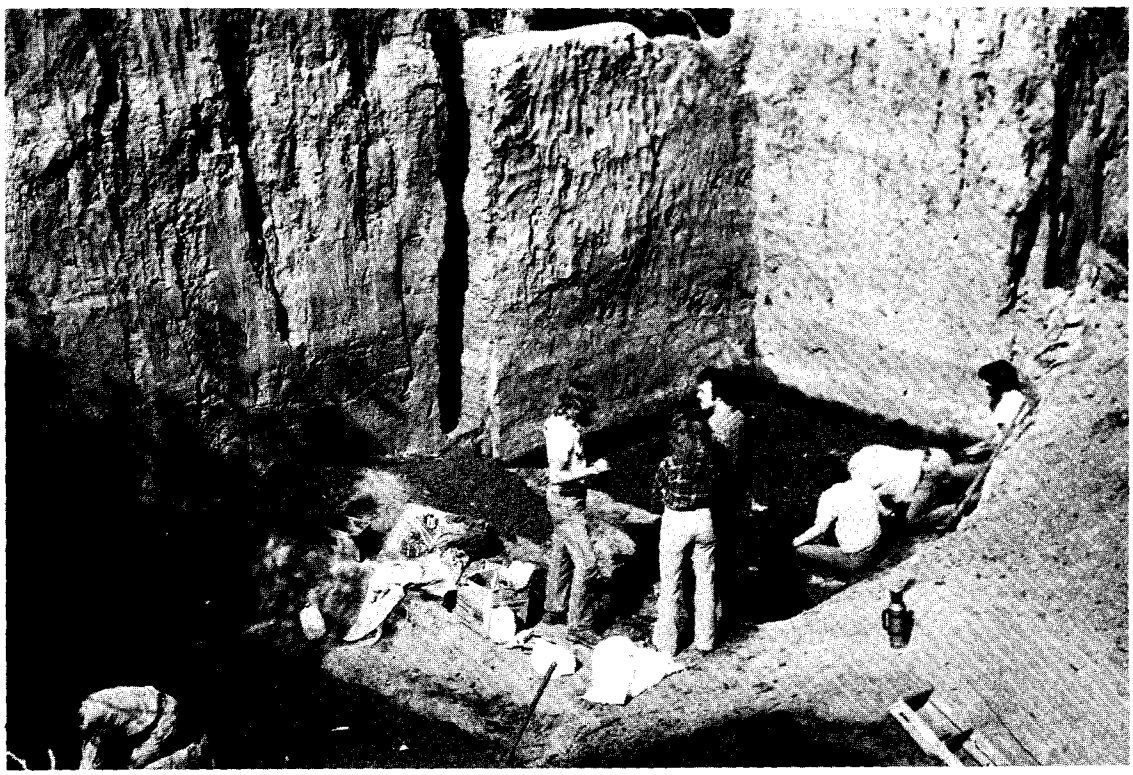

Figure 19. This section of the Held Creek project was excavated to expose the cultural levels at the bottom. *Courtesy, Luther College, Decorah, Iowa.*

occupation, layers of soil had covered the deposits, protecting them from such intrusions as tree roots and animal burrows.

The result of the Held Creek study is a meticulous record of prehistoric information dating between ca 200-700 A.D. and an outstanding example of discrete cultural levels in a Woodland Period site. The distinctiveness of each level is enabling researchers to document changes in pottery and tool styles as well as in the nutritional intake of the occupants.

The unusually clear separation of layers at Held Creek has also furnished detailed insights into environmental conditions during the 500 year period of prehistoric use. A high profile wall showed distinct alternating groupings of dark and light bands, indicating wet and dry cycles. By examining pollen, soil samples, snail shells, and plant fossils, researchers are collecting additional information on the earlier land features and the climate.

A particularly exciting aspect of the investigations was the discovery of a house-like structure within the section of the ravine wall already exposed by erosion. By the close of fieldwork, wood fragments from two cigar-shaped lodges were recovered. About 50 feet long by 15 feet wide, the lodges appear to date from about 500 A.D. Because well-preserved Woodland structures are known to exist primarily in the Great Lakes region, their discovery in Western Iowa is considered extremely important. Through subsequent investigation of the artifacts and surviving architectural features and materials (such as elm bark for the roof and walls), researchers have surmised that two families, consisting of 10-12 people, lived in one of the houses, primarily during the winter.

The variety of cultural material is now being analyzed by archeologists and specialists in other disciplines and a final report on the project is expected by the end of 1979. A representative sampling of the pottery, tools, and other items will be returned to the county to be used in a display for park visitors. The archeologists also plan to develop a slide and cassette program on the Held Creek discoveries for public showing.

During Fiscal Year 1978, other Federal agencies transferred funds to the Department of the Interior for 15 data recovery projects (Appendix E, Table 2). In one of them, IAS and the Corps of Engineers embarked on an undertaking that is unprecedented in its scale and diversity.

• *Tennessee-Tombigbee Waterway, Alabama and Mississippi.* The Tennessee-Tombigbee Waterway in Alabama and Mississippi is the largest single public works project now being built in America. The Atlanta field office of Interagency Archeological Services and the Mobile and Nashville Districts of the Corps of Engineers are cooperating in a pioneering venture to systematically mitigate the adverse effects this vast construction project will have on all cultural resources in the area.

As early as the 18th century, engineers envisioned a water transport route that would connect the Tennessee River via the Tombigbee River to the Gulf of Mexico, but Congress did not authorize the building of such a waterway until 1946. Detailed planning began in the 1960's, and construction of the first lock and dam commenced in 1972.

Although the Department of the Interior had funded some archeological surveys and salvage along the proposed waterway as early as 1970, prior to 1975 research had been generally directed toward the testing and excavation of aboriginal archeological sites. But shortly after the enactment of Public Law 93-291 in 1974, the Corps of Engineers used the law's one percent funding authority to transfer money to the Department of the Interior for surveys and evaluation.

By 1975, the Corps of Engineers had taken the lead in historic preservation within the Tennessee-Tombigbee Waterway. Although the Mobile District was initially charged with

the overall development of historic preservation for the waterway, by 1976 the Nashville District, with its own staff archeologist, had assumed responsibility for the waterway's northern portion.

In the course of informal conversations in 1977, the Corps of Engineers and the IAS-Atlanta office staffs agreed that the Tennessee-Tombigbee Waterway project was too large and complex to be administered in the usual manner. Called for was a comprehensive, integrated approach that would limit duplication of effort and eliminate wasted time, money, and the possible loss of archeological resources.

Although at this time construction was virtually complete in one segment of the project, and construction contracts had been awarded in another, 135 miles of the waterway remained to benefit from a large scale plan to mitigate adverse effects. IAS-Atlanta and the Nashville and Mobile Districts signed Memoranda of Agreement naming IAS an equal partner in the development and implementation of a mitigation plan, with the Corps underwriting all costs under authority of Public Law 93-291.

The Mobile District and IAS-Atlanta staffs prepared documentation indicating that the known significant historic properties and other cultural resources along the waterway were, in the opinion of the Corps and the State Historic Preservation Officers of Alabama and Mississippi, eligible for listing in the National Register of Historic Places as a multiple resource district. In September of 1977, the Tombigbee River Multi-Resource District was formally declared eligible for inclusion in the National Register. The district encompasses a corridor five miles wide and about 135 miles long from Gainesville, Alabama to Paden, Mississippi.

The IAS-Atlanta office was responsible for developing procedures to launch the Tennessee-Tombigbee Waterway mitigation plan. In October 1977, a four-day planning conference brought together 45 representatives from the Corps of Engineers, the archeological, historical and architectural communities, the National Register of Historic Places, the Advisory Council on Historic Preservation and the State Historic Preservation Officers of Alabama and Mississippi. Through these meetings, the participants identified research questions and strategies for data recovery and drafted a comprehensive plan calling for the investigation of all aspects of the cultural milieu—from prehistory to the present—in the Multi-Resource District. Elements of the mitigation plan identified at the conference were later formalized in a Memorandum of Agreement among the Council, the States of Alabama and Mississippi, the Corps of Engineers, and IAS-Atlanta. The Corps and IAS-Atlanta are now in the process of implementing the agreement. Under its terms, extensive excavations, recording, and research in the Tombigbee Multi-Resource District will be conducted over a five-year period.

Surveys in the area have identified a broad range of archeologically and historically significant properties preparatory to mitigation efforts. Because earlier archeological surveys had been directed toward aboriginal sites, many cultural resources such as standing houses, outbuildings, stores, bridges, river landings, ferry sites, sunken boats, and historic roads and trails were overlooked. New research will focus upon the area in terms of both archeological remains and historic and architectural evidence. For example, the abandoned towns of Colbert, Barton, and Vinton, Mississippi will be comprehensively studied in order to gain additional information about mid-19th century settlement in the Tennessee-Tombigbee Valleys.

Steamboats dominated area commerce and transportation in the 19th century until they were supplanted by railroads. Thus, scattered throughout the Aliceville, Columbus, and Aberdeen segments of the Tennessee-Tombigbee Waterway within the District are many sunken steamboats and other river

vessels (*Fig. 20*). Research into these "submerged resources" should offer insights into vessel design, local imports and exports, and manufactured items related to the period of the wreckage. Preliminary archival research and a magnetometer survey of the Tombigbee River channel have disclosed over 100 submerged "magnetic anomalies" which may indicate the presence of sunken vessels. Twenty of them were within the planned construction area and another 11 were close by. Historic wrecks directly affected by construction will be investigated and sample lots of their cargoes and vessel parts will be recovered. Any historically significant "anomalies" located below the dredging depths will be marked with buoys to insure their preservation.

Several technical reports will likely result from the many archeological and historical investigations taking place along the Tennessee-Tombigbee Waterway. Of particular interest to the general public will be a series of brochures and pamphlets to be prepared by IAS-Atlanta. In addition, two comprehensive final reports documenting the project are planned—one, a technical publication directed toward professionals and the second, a report to the public that describes the project and its findings.

Although the Tennessee-Tombigbee Waterway project is scheduled for completion in 1986, navigational structures should be in operation by 1984. Mitigation of the adverse effects of the project on the area's cultural resources is more than merely a program of salvage excavation: it is a carefully planned and scheduled research program that will benefit government agencies, the professional community, and most important, the general public.

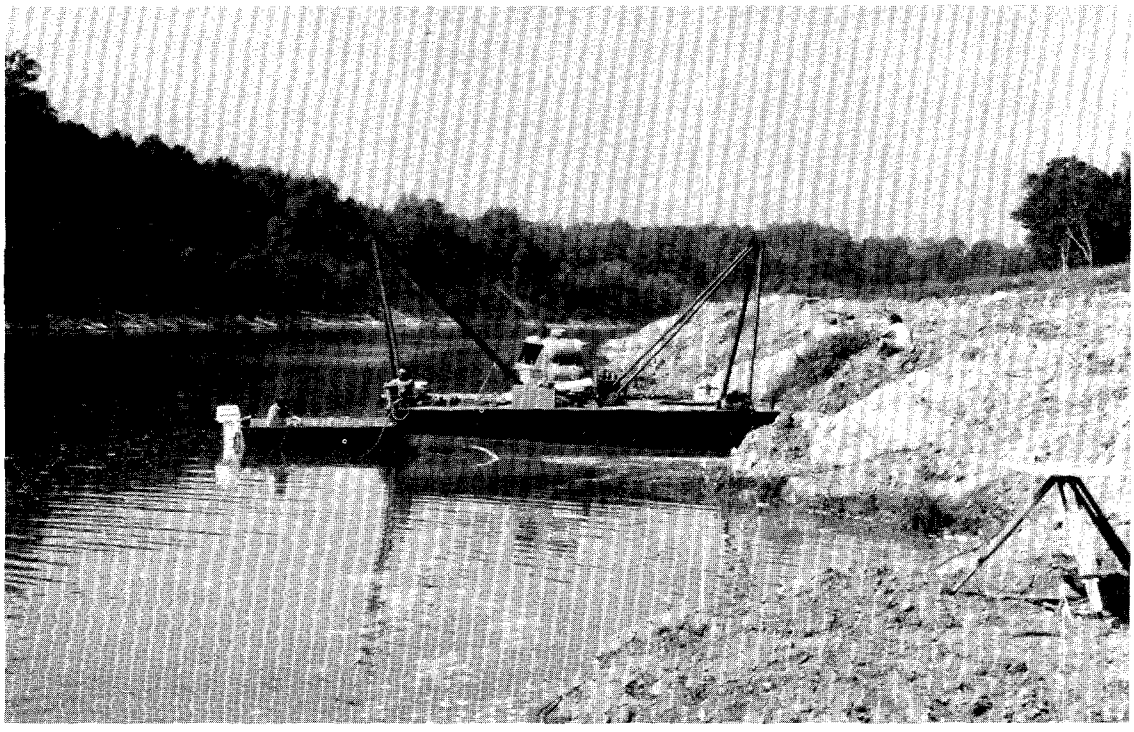

Figure 20. Tennessee-Tombigbee Waterway, Alabama (Greene, Pickens, and Sumter Counties) and Mississippi (Noxubee, Clay, Lowndes, Monroe, Prentiss, Tishomingo, and Itawamba Counties). Support vessel for the investigation of submerged resources within the Multi-Resource District. The entire archeological project is cooperatively managed by IAS-Atlanta and the Corps of Engineers. *Courtesy University of Alabama, Birmingham, Alabama.*

Final Reports on Archeological Investigations

Archeological investigations are labor intensive, often involving numerous field and laboratory activities. Excavations frequently yield more extensive remains than anticipated and excavated materials (such as soil samples; animal, bird, and fish bones; flint flakes; pieces of pottery; pollen samples; and projectile points) require detailed analyses for inclusion in final project reports. As a result, most archeological investigations and the preparation of final reports that mark the conclusion of such projects, take more than one year to complete (see final reports accepted on fiscal years 1977 and 1978 by the IAS field offices, Appendix F, Tables 1 and 2). Copies of most of the reports finished during this period are available to the public from the National Technical Information Service (NTIS); abstracts of these reports and specific details for ordering them may be found in Appendix G, Tables 1 and 2. It will be noted that some final reports describing the exact locations of archeological sites are available only through limited distribution by the IAS field offices in order to assure site protection.

Program Innovations

During FY 1977-78, IAS launched several program innovations designed to share information on archeological findings and techniques. To strike a balance between the construction of essential public works projects and the protection of our Nation's cultural heritage, preservationists, professional archeologists, and the staffs of Federal and State agencies need access to the most timely, accurate, useful information available. Thus, IAS has expanded its services to this varied constituency.

State-based Resource Planning Model

Most major political, administrative, budgetary, and technical issues confronting the cultural heritage program may be divided into alternative viewpoints about (1) when to search for cultural properties; (2) how to assess the importance of any properties that are found; and (3) what to do with the important properties once they are recognized. Dealing with these questions is more a function of how resource data are used than of how many data are available. The interrelationship of the three questions outlined above indicates that decision-making about cultural properties can be most effectively accomplished in a systems framework that integrates resource factors with social, political, economic, and other related factors.

Accordingly, IAS has developed a systems model of a State-based resource planning process that promises to cost substantially less than complete inventories. Moreover, it has the potential to achieve the goal of simplifying Federal planning and reduce the amount of unnecessary cultural resource work done in the Federal planning processes, thereby allowing the reduction or retargeting of spending in other agency budgets. With the implementation of a systems-based planning process like or similar to that we have developed, there is essentially no limit to the extent that the historic preservation pro-

gram can be carried out by the States, thereby significantly decreasing Federal program administration.

Cultural Resource Management Studies

IAS publishes a series of exceptional reports on various aspects of cultural resource management for distribution to professionals and to the general public. These studies are aimed at improving archeological and historic site management and planning techniques. Several early volumes are available only from NTIS, 5285 Port Royal Road, Springfield, Virginia 22161—the order numbers, prices, and abstracts follow:

An Overview of the Prehistoric Resources of the Metropolitan St. Louis Area (1976). **Elizabeth Benchley.**
Unique and important archeological resources of the greater St. Louis area are being continuously threatened by the growing metropolis and its network of transportation routes, surrounding communities, agricultural zones, and recreational areas. In this overview study, Benchley examines the quality, distribution, and condition of the known prehistoric resources of this area, and investigates the present and projected impact of modern land use on this data base. The author then proposes measures which should be further explored for promoting the preservation of these sites, and for establishing an effective archeological resource management program for the metropolitan St. Louis area.
NTIS Order #: PB265016/AS: $6.00 paper; $3.00 microfiche

Prehistoric Rources of East-Central New England: A Preliminary Predictive Study (1976). **Dena Dincauze and Judith Meyer.**
Dincauze and Meyer attempt to shed light on the nature of the severe prehistoric resource losses occurring throughout New England. Their report is intended to make land-use planners and policy makers, historic preservationists, legislators in Federal, State, and municipal governments and concerned citizen groups, cognizant of the distribution, density, and scientific value of the prehistoric sites in this region, and to stimulate policy for the development of approaches to the historic preservation planning process.
NTIS Order #: PB265019/AS: $5.25 paper; $3.00 microfiche

The Importance of Small, Surface and Disturbed Sites as Sources of Significant Archeological Data (1977). **Valerie Talmadge and Olga Chesler.**
Federal agencies are occasionally advised by archeologists, or assume on their own, that small, surface and/or disturbed sites are of little value to the study of prehistory. As a result, these types of cultural resources frequently have been ignored in the development of local and regional archeological research designs. This paper shows that such sites often yield significant information relating to a variety of prehistoric activities. Techniques exist for recovery of important data in these sites pertaining to settlement patterns, activity loci, demographic parameters, site utilization, etc.
NTIS Order #: PB270939:$4.50 paper; $3.00 microfiche

Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf, Prehistoric Sites, Volume I (1978). **Sherwood Gagliano.**
This report is a predictive study of the location of submerged prehistoric habitation sites on the continental shelf of the northern Gulf of Mexico. An indirect approach was used to predict their locations. Literature on the prehistoric archeology of adjacent land areas was extensively reviewed to identify major cultural remains by time, type, and particular landforms favored for sites. These geological studies suggest that similar cultural remains can be expected to occur on the submerged relic landforms of the continental shelf. Eleven basic types of sites and their salient characteristics were identified. The study demonstrates that remote-sensing technology can be used to correlate landforms with possible site locations.
NTIS Order #: PB276773/AS: $13.00 paper; $3.00 microfiche

Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf, Historic Sites, Volume II (1978) **Sherwood Gagliano.**
This report is a predictive study of shipwrecks that occurred in the Northern Gulf of Mexico between 1500 A.D. and 1945 A.D. Through library research, a list of 1,904 reported losses and wrecks was compiled. The nature of shipping, the character of the vessels, sailing practices in use, and routes are considered by period. Most of the wrecks lie near the coast and most are associated with hazards to navigation and well established sailing routes. A list of danger zones, containing hazardous materials such as bombs, and areas used for waste dumping was also compiled. Current techniques for underwater surveys are discussed and evaluated.
NTIS Order #: PB276774/AS: $9.00 paper; $3.00 microfiche

Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf, Charts and Maps, Volume III (1978) **Sherwood Gagliano.**
NTIS Order #: PB276775/AS: $3.00 microfiche only

Archeological Survey: Methods and Uses (1978). **Thomas F. King.**
This publication, written in plain language primarily for the nonarcheologist, presents the methods and objectives of archeological survey. It begins with a description of the formation of the archeological record

and describes how this record has been discovered through archeological survey in the recent past. A major objective of archeological survey is to identify and evaluate all sites that have a potential for yielding useful cultural and scientific information. This manual describes basic methods used in every survey: background research, research design, and field work. It calls attention to exceptions that arise requiring special techniques such as urban surveys or the survey of buildings and structures. The volume provides the reader with a better understanding of the nature of archeological resources. It enhances the ability of the user to understand the conclusions of an archeological survey report, and illustrates the importance of survey data as part of the basis for developing a State plan for the wise use of cultural property.
NTIS Order #: PB284061/AS: $7.25 paper; $3.00 microfiche

Scholars as Managers (1978). Edited by Alice W. Portnoy.
This report records the results of a workshop conducted by Texas Tech University, Lubbock, Texas, with financial support from the Heritage Conservation and Recreation Services, IAS. Participants explored the application of certain management techniques to the conduct of archeological research. In a program usually confronted with insufficient funds to conduct needed surveys and data recovery, methods are considered to make such work more cost effective while still maintaining the integrity of the research process.
GPO Stock #: 024-016-00098-6; Price: $4.75

Scholars as Contractors (1979). Edited by William J. Mayer-Oakes and Alice W. Portnoy.
This second volume on archeological project management records the results of a workshop on "The Contract Archeology Process" sponsored by the Heritage Conservation and Recreation Service, IAS, in May of 1978 at the Cultural Resources Institute, Texas Tech University. Archeologists from Federal agencies, universities, and private business participated. They examined contracting processes, project operations, and archeological scholarship as accomplished under contract. They also discussed problems encountered when doing archeological research in the contract framework and the implications of operating within this framework. Viewpoints of the public, of agencies, clients, and archeologists were considered. Conservation archeology and cultural resources management, the bases for most contract work, were reviewed. Workshop proceedings, conclusions, and recommendations were summarized for the report.
GPO Stock #: 024-016-00107-9; Price: Not Set.

The following publications are available at no cost from Interagency Archeological Services, Heritage Conservation and Recreation Service, 440 G Street, N.W., Washington, 20243:

Archeology of Black American Culture: An Annotated Bibliography (1978) By Bert Salwen and Geoffrey Gyrisco.

Interagency Archeological Services Final Reports on Archeological Investigations
A cumulative listing, by State, of final reports on archeological investigations that are available from NTIS, with stock numbers and prices.

Bibliography

The enactment of NEPA and Public Law 93-291, as well as the issuance of Executive Order 11593, caused a rapid increase in the annual number of archeological surveys and data recovery projects. The reports on many of these investigations were not produced in sufficient quantities to fill a growing need for archeological information. As a result, IAS initiated a bibliography project in 1977 as a pilot program to test one possible method of making archeological information widely available.

The IAS-Atlanta and Denver field offices and five States—Louisiana, Massachusetts, Missouri, Nevada, and Texas—were selected to compile annotated bibliographies of archeological reports prepared in conjunction with federally-involved projects between January 1970 and July 1977. These offices and States were chosen because they represented a wide range of cultural, geographical, and administrative differences. The completed bibliographies should be particularly helpful to Federal agencies and State Historic Preservation Officers in the pilot States, enabling them to better assess the status of archeological knowledge about specific project areas and to make more informed decisions about identifying needs for additional cultural resource management studies. The project also facilitates research by making information about previous work more readily available. The bibliography project will thus serve as a feasibility study for introducing similar programs throughout the country and for adapting the information to automated data processing systems.

Archeology for the Federal Manager

A five-day introductory course has been specifically designed for Federal managers whose responsibilities include the protection of archeological resources, and who may have difficulty understanding the potential of archeological sites. The instructor explains the technical aspects of archeology in lay terms and emphasizes its role in the historic preservation process. IAS has offered "Archeology for the Federal Manager" on a regular basis since the fall of 1977 and to date has presented the course six times with more than 150 participants in different regions of the country.

Intern Program

In order to improve IAS responsiveness to the archeological community and the public as well as to improve the professional diversity and strength of the division, an intern program has been established to place highly experienced senior professional archeologists and carefully selected graduate students who plan careers in public archeology in temporary appointments. Because the program has proven to be highly successful in the Washington office, approximately 12 interns are now being used by the field offices with the result that the IAS program is becoming increasingly well-suited to the needs of contemporary archeology.

As part of its data recovery program under Public Law 93-291, IAS arranges for professional investigations by outside experts. It also attempts to integrate the efforts of other archeologists into its projects, both formally and informally.

IAS negotiated with the Society of Professional Archeologists during FY 1977 to inaugurate a formal, short-term peer review of various aspects of the contracting process, including scopes of work, proposals, project monitoring, and final reports. The results of the peer review project are expected to strengthen the IAS cooperative partnership with the archeological community, to provide a model for the design and institution of a continuing peer review system, and to insure better and more cost effective archeology.

Airlie House Report

In the summer of 1974, IAS contracted with the Society for American Archeology to hold six seminars in Airlie, Virginia, to develop recommendations on such topics as professional standards, approaches to resource management, report preparation standards and the archeological concerns of Native Americans. The results of these conferences were published in 1977 in *The Management of Archeological Resources: The Airlie House Report,* edited by Charles R. McGimsey III and Hester A. Davis. The publication is available from the Society for American Archeology, 1703 New Hampshire Avenue, N.W., Washington, D.C. 20009.

Curation Study

The artifacts and other materials recovered from surveys and excavations must be stored, maintained and properly protected. The protection of these recovered materials and records is as vital as that of undisturbed cultural resources and, accordingly, a curation study of the material owned or controlled by the Federal Government has been instituted. The American Anthropological Association is conducting the study.

The purpose of this project is to define and describe the professional and technical requirements for curating the archeological material in Federal and non-Federal repositories to insure its preservation for future research. The study will define the nature and extent of curation problems affecting existing collections and recommend guidelines for adequate curation of future materials. The results will be published in 1979, thus providing the basis for developing specific curation contract requirements.

Budget and Cost Effectiveness

In Fiscal Year 1977, a total of 26 projects were administered by IAS for Public Law 93-291 data recovery. Of the 26 projects, 18 were accomplished using Department of Interior funds for a total of $891,897 *(Appendix D, Table 1);* 8 projects were accomplished with funds transferred to the Department of the Interior from other Federal agencies for a total of $549,544 (Appendix D, Table 2). Of the total 26 projects, 8 projects amounting to $89,609 were jointly funded by IAS and other agencies *(Appendix D, Table 1, 2).*

In Fiscal Year 1978, a total of 49 projects were administered by IAS for Public Law 93-291 data recovery. Of the 49 projects, 29 were accomplished using Department of Interior funds for a total of $1,301,055 *(Appendix E, Table 1);* 20 projects were accomplished with funds transferred to the Department from other Federal agencies for a total of $738,263. Of the total 49 projects, 8 projects amounting to $299,233 were jointly funded by IAS and other agencies *(Appendix E, Tables 1, 2).*

The more than doubling of the number of data recovery projects with funds transferred to the Department of Interior from other Federal agencies from Fiscal Year 1977 to Fiscal Year 1978 (8 projects to 20 projects) may be interpreted as reflecting the greater use of IAS by other Federal agencies in order to furnish professional archeological expertise. As more agencies become fully aware of their responsibilities for data recovery under Public Law 93-291, the number of projects conducted by IAS is anticipated to increase at an even more dramatic rate. In addition, IAS expects that those agencies with smaller construction projects and those guaranteeing loans or issuing permits will also increasingly request the Department of the Interior to direct and coordinate their Public Law 93-291 data recovery projects.

In the data recovery projects IAS directed and coordinated, cost effectiveness is high—substantial savings have been realized. Coordination activities include serving as liaison between agencies and contractors, reviewing scopes of work, contract proposals, and project reports; and making the project reports available to the public through NTIS *(See Appendix G).* Because the IAS field offices serve as evaluation committees, critically reviewing proposals for archeological services, they keep excavation to a minimum, consistent with those objectives and guidelines developed by IAS-Washington.

Therefore, we are pleased to report that in Fiscal Years 1977 and 1978, IAS has redesigned and negotiated contracts for archeological services that resulted in the recovery of valuable information while saving the Federal Government millions of dollars by providing expert cost projections for data recovery that sponsoring agencies estimated would be substantially higher. For example, due to IAS direction in a local flood control project in Southwest Jefferson County, Kentucky, the Corps of Engineers saved $850,000; the Veterans Administration saved $81,000 in the Bay Pines Nursing Home, Florida; and in Illinois, the Illinois Department of Transportation saved approximately $3,550,000 in the Federal-Aid I-270 construction project. Finally, IAS has redesigned data recovery proposals to avoid significant sites entirely—the most effective means of protecting cultural resources.

Cultural Resource Management by Federal Agencies

Unfortunately, where IAS has not been directly involved in the coordination of Public Law 93-291 data recovery projects, the results range from being negative to unassessable. More than 30 agencies conduct programs that threaten archeological remains; however, many of these agencies are not fully aware of their responsibilities nor have they developed internal archeological expertise or requested such expertise from IAS. Some agencies, especially through their State and local government counterparts, have spent inordi-

nate amounts of public monies for poorly planned and inadequate data recovery.

Without Soil Conservation Service, Environmental Protection Agency, and Department of Housing and Urban Development project and budget information on data recovery in Fiscal Year 1977 *(Appendix C)*, the $3,930,421 reported as a total for Federal agency spending is meaningless. All three agencies funded or guaranteed loans for numerous construction projects. In addition, the Federal Highway Administration, which conducts data recovery under the Department of Transportation Act of 1966 rather than Public Law 93-291 *(see Appendix C)*, estimates that over $15,000,000 was spent in Fiscal Year 1977 on data recovery alone.

IAS is therefore committed to improving this aspect of the program by (1) deriving statistical information on Federal agency actions from existing agency notifications and reporting requirements described in Sections 3a and 4a of Public Law 93-291; and (2) making technical reports easily accessible to the archeological profession, to public officials, and to project planners. IAS will continue in its efforts to urge the public and professional communities to become directly involved in the decision-making and review processes to protect and preserve the nation's threatened cultural resources through closer coordination with SHPOs, local sponsors, and local institutions.

Appendix A

Legislation and Regulations Affecting Historic Preservation

Those that Specifically Mention the Secretary of the Interior

Antiquities Act of 1906, Public Law 209, 16 USC 431-33 (1970)

Historic Sites Act of 1935, PL 74-292, 16 USC 461-67 (1970)

Federal Property and Administrative Services Act of 1949, PL 92-362, (1972 Amendment) 40 USC 484 (K) (3)

National Historic Preservation Act of 1966, PL 89-665, 16 USC, 470h, 470i, 4701-470n (Supp. 1973)

Executive Order 11593, Protection and Enhancement . . . 16 USC 470 (supp. 1, 1971

Procedures of the Advisory Council on Historic Preservation (36 CFR 800), 1973, revised 1974

Archeology and Historic Preservation Act of 1974, PL 93-291, 16 USC 4692

Emergency Home Purchase Assistance Act of 1974, PL 93-449, 12 USC 1723e

Railroad Revitalization and Regulatory Reform Act of 1976, 90 Stat. 125, PL 94-210, 45 USC 801

Land and Water Conservation Fund Act of 1976, PL 94-422, 16 USC 4601-4

Mining Activity in National Park Systems, 90 Stat. 1342, PL 94-429 (1976)

Tax Reform Act of 1976, 90 Stat. 1521, Title XXI, Section 2124, PL 94-455, 26 USC 191, 2808

Amendment to Section 3 of the General Authorities Act of 1970, 84 Stat. 825; 16 USC 1a-1 et Seq., 90 Stat. 1939, PL 94-458 (1976

Studies Act of 1976, 90 Stat. 2447, PL 94-518

Federal Land Policy and Management Act of 1976, 90 Stat. 2743, PL 94-579

Other Legislation and Regulations

National Trust for Historic Preservation of 1949. PL F1-408

Housing Act of 1954, Section 701 (a) Comprehensive Planning Assistance Program 701, PL 93-383 (1974) as amended by the *Housing Authorization Act,* August 3, 1976, PL 94-375, 90 Stat. 106 40 USC 461

Department of Transportation Act of 1966, PL 89-670

National Environmental Policy Act of 1969, PL 91-190, 42 USC 4321 ET. SEQ. 1970

Comprehensive Employment and Training Act of 1973, PL 93-203, PL 93-567

Flood Disaster Protection Act of 1973, PL 93-23

Housing and Community Development Act of 1974, PL 93-383 (State Housing Finance and Development Agencies and Urban Homesteading)

Amtrack Improvement Act of 1974, PL 93-496, as amended by the Rail Transportation Improvement Act, 90 Stat., PL 94-555, 45 USC 501

Public Works and Economic Development Act of 1974, PL 93-567

Public Buildings Cooperative Use Act of 1976, 90 Stat. 2505, PL 94-541

Public Works Employment Act of 1976, 90 Stat. 999, PL 94-369, 52 USC 6701

Coastal Zone Management Act of 1976, PL 94-370

Arts, Humanities, and Cultural Affairs Act of 1976, 90 Stat. 1971, PL 94-462

Appendix B

Historic Preservation Laws and Regulations Affecting Archeological Resources

Antiquities Act of 1906: Public Law 59-209; 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 without permission of the Secretary of the Department having jurisdiction. The act 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.

Historic Sites Act of 1935: Public Law 74-292; 16 U.S.C. 461-67 (1970)

The preservation for public use of historic sites, buildings, and objects was declared as national policy by this act. It led to the establishment of the Historic Sites Survey, the Historic American Buildings Survey, and the Historic American Engineering Record by giving the Secretary of the Interior authority 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.

National Historic Preservation Act of 1966; Public Law 89-665; 16 U.S.C. 470-470m (1970) as amended 16 U.S.C. 460h, 470i, 4701-470n (supp. 1973)

This act provides for an expanded National Register of Historic Places, including districts, sites, buildings, structures and objects significant in American history, architecture, archeology, and culture. It authorizes a program of matching grants-in-aid to the States for survey and planning and for acquisition and development projects. The act also establishes the Advisory 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. Section 106 of the Act requires Federal agency heads to allow the Advisory Council opportunity to comment when undertakings to be licensed or executed by their agencies will affect properties listed in the National Register.

National Environmental Policy Act: Public Law 91-190; U.S.C. 4321 Et Seq. (1970)

Federal agencies are required by this act to prepare an environmental impact statement for every major Federal action that affects the quality of the human environment. The environment is defined to include cultural as well as natural resources.

Executive Order 11593 Protection and Enhancement of the Cultural Environment, 16 U.S.C. 470 (Supp. 1, 1971)

Federal agencies are directed by this Executive Order 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 significant 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 inclusion in the National Register of Historic Places. If the Federal action will substantially alter or destroy a historic property, the agency must allow the Advisory Council to comment on such undertakings; nationally significant properties must be recorded by the Historic American Buildings Survey or the Historic American Engineering Record.

Archeological and Historic Preservation Act of 1974: Public Law 93-291; 16 U.S.C. 460

This act calls for the preservation of historic and archeological materials and data that otherwise would be lost as a result of Federal construction or federally licensed or aided activities. Data recovery or *in situ* preservation are available to the Secretary. Public Law 93-291 amends the Reservoir Salvage Act of 1960 (Public Law 86-523) and institutes several prominent changes.

(1) It makes *all* Federal construction programs and *all* projects licensed or otherwise assisted by Federal agencies responsive to the damage they will cause to scientific, prehistoric, and archeological resources once a project is authorized.

(2) It places coordinating responsibility in the Secretary of the Interior in order to assure a relatively uniform Federal program.

(3) It authorizes all Federal agencies to seek future appropriations, obligate available monies, or reprogram existing appropriations for the recovery, protection, and preservation of significant scientific, prehistoric, or archeological materials and data.

(4) It permits agencies either to undertake the requisite recovery, protection, and preservation of archeological material and data themselves in coordination with the Secretary of the Interior or, alternatively, to transfer a maximum of one percent of the total amount authorized to be appropriated for each project to the Secretary of the Interior for this purpose.

Appendix C

Summary of Federal Agency Cultural Resource Actions in Fiscal Year 1977

Agency	Data Recovery Projects/Federal Cost
Department of Agriculture	
Agricultural Stabilization and Conservation Service	Not available
Farmers Home Administration	None
Forest Service	1 project/no Federal cost
Rural Electrification Administration	None
Soil Conservation Service	Not available
Department of Commerce	
Economic Development Administration	2 projects/no Federal cost
Maritime Administration	None
Department of Defense	
Corps of Engineers	57 projects/$2,951,000
Army	None
Navy	None
Air Force	None
Delaware River Basin Commission	None
Department of Energy	1 project/$9,000
Environmental Protection Agency	Not available
Federal Communications Commission	None
General Services Administration	None
Department of Health, Education, and Welfare	None
Department of Housing and Urban Development	Not available
Department of the Interior	
Bureau of Indian Affairs	None
Bureau of Land Management	None
Bureau of Mines	None
Bureau of Outdoor Recreation	None
Bureau of Reclamation	4 projects/$124,421
Fish and Wildlife Service	None
Geological Survey	None

National Aeronautics and Space Administration	None
National Endowment for the Humanities	None
National Science Foundation	None
Regional Action Planning Commissions	
Appalachian Regional Commission	None
Coastal Plains Regional Commission	None
Four Corners Regional Commission	Not available
New England Regional Commission	None
Old West Regional Commission	None
Ozarks Regional Commission	None
Pacific Northwest Regional Commission	None
Southwest Border Regional Commission	None
Upper Great Lakes Regional Commission	Not available
Saint Lawrence Seaway Development Corporation	None
Small Business Administration	None
Susquehanna River Basin Commission	None
Tennessee Valley Authority	5+ projects/$827,000
Department of Transportation	
Federal Aviation Administration	None
Federal Highway Administration	*
Federal Railroad Administration	None
Urban Mass Transportation Administration	Not available
U.S. Coast Guard	None
Veterans Administration	1 Project/$19,000
Total	71+ projects/$3,930,421

*The Federal Highway Administration conducts data recovery under the authority of Section 305 of the Department of Transportation Act of 1966 rather than under the authority of Public Law 93-291. During FY 1977, The FHWA estimates (1) $2,706,700 was spent on positive preservation activities and (2) $12,728,300 was spent to mitigate adverse effects of highway construction.

Appendix D

Program Expenditures For Fiscal Year 1977

Table 1

Fiscal Year 1977 Public Law 93-291 Data Recovery Investigations Funded With Department of Interior Appropriations

Project	Agency Served	Cost	Contractor
Alabama			
Bay Oaks Apartment Complex*	Housing and Urban Development	$19,981	Northern Gulf Coast Archeological Research Consortium Mobile, Alabama
Georgia			
Walter F. George Dam	Corps of Engineers	42,000	Columbus Museum of Arts and Crafts, Inc. Columbus, Georgia
Massachusetts			
Newsburyport Waterfront*	Housing and Urban Development	79,117	Franklin Pierce College Rindge, New Hampshire
Montana			
Big Creek Lake**	Soil Conservation Service/ Big Creek Reservoir Association	9,176	Montana Tech Foundation Butte, Montana
New Mexico			
Bandelier, Cochiti Lake	Corps of Engineers	60,000	National Park Service, Southwest Region Santa Fe, New Mexico
New York			
Nanticoke Creek Watershed	Soil Conservation Service	10,000	Cultural Resource Management, Tallahassee, Florida
North Carolina			
Edenton Courthouse	Economic Development Administration	23,727	Soil Systems, Inc. Marietta, Georgia
Ohio			
Killen Electric Generating Station**	Corps of Engineers/ Dayton Power & Light Co.	13,582	The Cleveland Museum of Natural History Cleveland, Ohio
Oklahoma			
Clear Boggy Creek	Soil Conservation Service	19,973	Archeological Research Associates Tulsa, Oklahoma

Pennsylvania			
Blue Marsh Lake* **	Corp of Engineers	25,000	Research Foundation of State University of New York Binghamton, New York
Tennessee			
Tellico Reservoir* Toqua	Tennessee Valley Authority		University of Tennessee Knoxville, Tennessee
Toqua		93,949	
Iddins, Toqua, Mialoquo		58,915	
40MR23, 40MR25		35,100	
Texas			
Granger Lake, San Gabriel Project	Corps of Engineers	39,811	Texas A & M University College Station, Texas
Hog Creek Watershed	Soil Conservation Service	175,400	University of Tulsa, Tulsa, Oklahoma
Hog Creek Watershed **	Soil Conservation Service	3,203	University of Tulsa, Tulsa, Oklahoma
Washington			
Ozette XI		175,000	Washington State University, Pullman, Washington
Trust Territory			
Fefan Island Road Construction	Office of Territorial Affairs*	7,963	University of Iowa Iowa City, Iowa
Total		$891,897	

* Project Report Available. See Appendix F
**Jointly Funded

Table 2

Fiscal Year 1977 Public Law 93-291 Data Recovery Investigations Through Funds Transferred to the Department of the Interior

Project	Agency Served	Cost	Contractor
Florida			
Bay Pines	Veterans Administration	$19,000	Florida State University Tallahassee, Florida
Indiana			
Patoka Lake	Corps of Engineers	142,743	Indiana University Foundation, Bloomington, Indiana
Kentucky			
Southwest Jefferson County*	Corps of Engineers	253,053	University of Kentucky Lexington, Kentucky
Montana			
Big Creek Lake**	Soil Conservation Service Big Creek Reservoir Assn.	700	Montana Tech Foundation Butte, Montana
Ohio			
Caesar Creek Lake	Corps of Engineers	96,100	The Cleveland Museum of Natural History Cleveland, Ohio
Killen Electric Generating Station**	Corps of Engineers Dayton Power & Light Co.	27,150	The Cleveland Museum of Natural History Cleveland, Ohio
Pennsylvania			
Blue Marsh Lake* **	Corps of Engineers	10,000	Research Foundation of State University of New York, Binghamton, New York
Texas			
Hog Creek Watershed**	Soil Conservation Service	798	University of Tulsa Tulsa, Oklahoma
Total		$549,544	

* Project Report Available. See Appendix F
**Jointly Funded

Table 2

Fiscal Year 1978 Public Law 93-291 Data Recovery Investigations Through Funds Transferred to the Department of the Interior

Project	Agency Served	Cost	Contractor
Alabama/Mississippi			
East Aberdeen	Corps of Engineers	$ 85,361	Mississippi State University Mississippi State, Mississippi
East Aberdeen Literature Search	Corps of Engineers	2,855	Jack D. Elliot, Jr. Mississippi State University Mississippi State, Mississippi
F.L. Brinkley Midden	Corps of Engineers	98,465	University of Alabama Birmingham, Alabama
Lubbub Creek Analysis	Corps of Engineers	11,752	University of Alabama Birmingham, Alabama
Tombigbee Multiple Resource District, Analysis of the Survey Data	Corps of Engineers	7,251	University of Southern Mississippi Hattiesburg, Mississippi
Tombigbee Multiple Resource District, Literature Search	Corps of Engineers	89,526	University of Alabama Birmingham, Alabama
Tombigbee Multiple Resource District, Submerged Resources	Corps of Engineers	55,339	University of Alabama Birgmingham, Alabama
Arkansas			
Sliding Slab Shelter**	Soil Conservation Service	8,500	Environmental Assessments, Inc. Pauls Valley, Oklahoma
California			
Point Arguello Underwater Archeological Survey	U.S. Air Force	750	Win Swent Santa Barbara, California
Point Arguello Underwater Archeological Survey	U.S. Air Force	369	National Park Service Southwest Region, Santa Fe, New Mexico
Point Arguello Underwater Archeological Survey	U.S. Air Force	521	National Park Service Channel Islands National Monument, Ventura, California
Point Arguello Boathouse Facility	U.S. Air Force	1,975	David Gebhard, University Art Galleries, University of California, Santa Barbara, California
Point Conception Coast Guard Facility	U.S. Air Force	1,428	University of California Santa Barbara, California

Vandenberg Air Force Base, Phases I & II	U.S. Air Force	2,318	University of California Santa Barbara, California
Vanderberg Air Force Base, Phase III	U.S. Air Force	335,490	University of California Santa Barbara, California
Yuma Facility	Immigration & Naturalization Service	370	Archeological Research Services Tempe, Arizona
Iowa			
Held Creek**	Soil Conservation Service	487	Luther College Decorah, Iowa
Massachusetts			
Shaw Site**	Soil Conservation Service	7,716	Harvard University Cambridge, Massachusetts
Mississippi			
Tuscumbia Watershed**	Soil Conservation Service	5,200	University of Southern Mississippi Hattiesburg, Mississippi
Texas			
Sanderson Canyon**	Soil Conservation Service	22,591	Environment Consultants, Inc. Dallas, Texas
Total		$738,263	

* Project Report Available. See Appendix F.
**Jointly Funded

Appendix E

Program Expenditures for Fiscal Year 1978

Table 1

Fiscal Year 1978 Public Law 93-291 Data Recovery Investigations Funded with Department of Interior Appropriations

Project	Agency Served	Cost	Contractor
Alabama			
Dead Lake	Corps of Engineers	$ 9,900	Heritage Company, Ltd. Panama City, Florida
Dead Lake Analysis	Corps of Engineers	6,575	Heritage Company, Ltd. Panama City, Florida
Mobile Courthouse	Economic Development Administration	8,667	Auburn University Montgomery, Alabama
Arizona			
Walpi Analysis and Report, Phase II	Economic Development Administration	32,211	Museum of Northern Arizona Flagstaff, Arizona
Walpi Analysis and Report, Phase II	Economic Development Administration	120,929	Museum of Northern Arizona Flagstaff, Arizona
Arkansas			
Sliding Slab Shelter**	Soil Conservation Service	38,710	Environmental Assessments, Inc. Pauls Valley, Oklahoma
California			
Hidden Reservoir	Corps of Engineers	9,879	California State University Long Beach Foundation Long Beach, California
Iowa			
Held Creek**	Soil Conservation Service	72,500	Luther College Decorah, Iowa
Louisiana			
Bayou Jasmine	Federal Highway Administration	17,485	Louisiana State University, Baton Rouge, Louisiana
Massachusetts			
Shaw Site**	Soil Conservation Service	32,219	Harvard University Cambridge, Massachusetts
Mississippi			
Tuscumbia Watershed**	Soil Conservation Service	33,658	University of Southern Mississippi Hattiesburg, Mississippi

Nevada			
Humboldt Project, Rye Patch Phase III	Bureau of Reclamation	98,440	Nevada State Museum Carson City, Nevada
New York			
Nanticoke	Soil Conservation Service	9,999	Cultural Resource Management Service Tallahassee, Florida
North Carolina			
Uniflite	Corps of Engineers	15,311	University of North Carolina Wilmington, North Carolina
Oklahoma			
Delaware Creek	Soil Conservation Service	99,499	North Texas State University Denton, Texas
South Carolina			
Spiers Landing	Economic Development Administration	12,412	Carolina Archeological Services Columbia, Georgia
Jackson Mill Creek	Soil Conservation Service	5,694	Carolina Archeological Services Columbia, Georgia
Tennessee			
Averbuch, Phase I	Housing and Urban Development	48,113	University of Tennessee Knoxville, Tennessee
Averbuch Phase II	Housing and Urban Development	79,983	University of Tennessee Knoxville, Tennessee
Tellico Analysis	Tennessee Valley Authority	76,798	University of Tennessee Knoxville, Tennessee
Texas			
Canyon Lakes	Bureau of Outdoor Recreation	5,000	Texas Tech University Lubbock, Texas
Golf Joint Venture	Housing and Urban Development	29,525	Commonwealth Associates Jackson, Michigan
Pebble Hills	Housing and Urban Development	9,614	Commonwealth Associates Jackson, Michigan
Salado Creek	Soil Conservation Service	82,454	University of Texas Austin, Texas
Sanderson Canyon**	Soil Conservation Service	77,653	Environment Consultants, Inc. Dallas, Texas
Vermont			
Winooski	Farmers Home Administration	33,327	University of Vermont Burlington, Vermont

Washington			
Ozette Village Phase XI		99,000	Washington State University Pullman, Washington
Ozette Village Phase XII		112,000	Washington State University Pullman, Washington
Wisconsin			
Madeline Island	Farmers Home Administration	23,500	Beloit College Beloit, Wisconsin
Total		$1,301,055	

* Project Report Available
** Project Jointly Funded

Appendix F

Final Reports Accepted in Fiscal Years 1977-1978

Table 1

Final Reports Accepted FY 1977 (IAS-Atlanta)

Project	FY of Contract	Report Title
Alabama		
Bay Oaks Apartment Complex	1977	*Test Excavations at the Bay Oaks Site on Dog River in Mobile County, Alabama* by Northern Gulf Coast Archaeological Research Consortium. Available on loan through IAS-A
Georgia		
Carter's Dam	1969	*Archaeological Investigation of the Little Egypt Site (9 Mu 102) Murray County, Georgia: 1969 Season* by David J. Halley. Available through NTIS or on loan through IAS-A
Ft. Benning Military Reservation	1977	*Lawson Field: A Cultural Resource Survey and Evaluation of a Selected Portion of Fort Benning Military Reservation* by John W. Cottier. Available from NTIS or on loan through IAS-A
West Point Reservoir	1971	*Archaeological Investigations at the Park Mound Site (9 Tp 41), Troup County, Georgia, 1972 Season* by David J. Halley and Leila Oertel. Available through NTIS or on loan through IAS-A
Illinois		
Coal and Crane Creek Watershed	1974	*Report on Phase 2 Excavations of the Goldsborough Site (Sc 141 A&B) Schuyler County, Illinois* by Jerry Fairchild. Available on loan through IAS-A
East St. Louis and Vicinity Flood Control Project	1975	*Excavations at the Lilly Lake Site: 1974 Season* by Terry Norris. Available from NTIS or on loan through IAS-A
Kentucky		
Indian Knoll	1970	*Indian Knoll: Two Brief Visits* by Lathel F. Duffield. Available on loan through IAS-A
Kehoe Reservoir	1973	*A Preliminary Archeological Survey and Assessment of the Proposed Kehoe Reservoir in Carter and Greenup Counties, Kentucky* by John T. Glover and Edward Hefferman. Available on loan through IAS-A

Paintsville Reservoir	1975	*Archeological Survey and Test Excavations in the Proposed Paintsville Lake Reservoir Project* by Thomas N. Sanders. Available on loan through IAS-A
S.W. Jefferson County Loan Flood Protection Project, Section 5	1977	*Cultural Resources Testing and Evaluation in Section V Southwest Jefferson County, Kentucky, Local Flood Protection Project* by Joseph E. Granger and Philip J. DiBlasi. Available on loan through IAS-A
Taylorsville Reservoir	1975	*Archeological Survey and Testing in the Proposed Taylorsville Reservoir in Anderson, Spencer, and Nelson Counties, Kentucky* by Betty J. McGraw. Available from NTIS or on loan through IAS-A
Yatesville Reservoir	1975	*Archeological Survey and Testing in the Proposed Yatesville Reservoir, Lawrence County, Kentucky* by Jason M. Fenwick. Available on loan through IAS-A
Maryland		
Fort George Meade	1977	*A Cultural Resources Reconnaissance of Fort George G. Meade, Maryland* by William M. Gardner, Gary Haynes, Dennis Curry and Michael Stewart. Available on loan through IAS-A
Massachusetts		
Newburyport	1976	*Archeological Testing in Various Cellar Limits of Parcels 6A and 6B Market Square Historic District, Newburyport, Massachusetts* by Edward S. Rutsch and Kim Mark Peters. Available on loan through IAS-A
Mississippi		
Columbus Lock and Dam	1975	*Archaeology of the Okashua and Self sites, Mississippi* by Jack T. Wynn and James R. Atkinson. Available from NTIS or on loan through IAS-A
Luxapalila Creek Survey, Mississippi	1975	*An Archaeological Survey Along Luxapalila Creek, Lowndes County, Mississippi and Lamar County, Alabama* by Sheila D. Lewis. Available from NTIS or on loan through IAS-A
Tennessee-Tombigbee Divide Cut Section	1975	*A Cultural Resources Survey of the Divide-Cut Section Tennessee-Tombigbee Waterway, Tishomingo County, Mississippi 1975* by Robert M. Thorne. Available on loan through IAS-A
New Jersey		
Tocks Island	1973	*The Archaeology of the Pahaquarra Site (A Preliminary Report and Supplement)* by Herbert C. Kraft. Available on loan through IAS-A

North Carolina		
Randleman Lake	1977	*Final Report of an Archeological Reconnaissance of the Randleman Reservoir Area* by J. Ned Woodall. Available from NTIS or on loan through IAS-A
Ohio		
Nashport Mound	1975	*Report of the 1975 Excavations at the Nashport Mound (33 Mu 15), Dillon Lake, Ohio* by N'omi Greber. Available from NTIS or on loan through IAS-A
Salt Creek Reservoir	1973	*Archaeological Investigations Salt Creek Reservoir, Ohio: Season II Drake Site (33 Vi 2) and Brown Village Site (33 Ro 107)* by John E. Blank. Available from NTIS or on loan through IAS-A
Pennsylvania		
Blue Marsh	1976	*Archeological Survey and Evaluation of Blue Marsh Lake, Pennsylvania* by W. F. Kinsey III. Available on loan through IAS-A
U. S. Route 209	1977	*A Cultural Resources Survey and Evaluation of the Right-of-Way for the Relocation of U.S. Route 209 in Pike and Monroe Counties, Pennsylvania* by Commonwealth Associates, Inc. Available on loan through IAS-A
Tennessee		
Normandy Reservoir	1974	*Fourth Report of the Normandy Archeological Project* by Charles H. Faulkner and Major C. R. McCollough. Available from NTIS or on loan through IAS-A or the Tennessee Valley Authority.
Tellico Reservoir	1975	*Archaic Period Research in the Lower Little Tennessee River Valley* by Jefferson Chapman. Available from NTIS or on loan through IAS-A or the Tennessee Valley Authority
Tellico Reservoir	1976	*A Summary and Preliminary Interpretation of Archaeological Investigations at the Toqua Site (40 Mr 6)* by Gerald F. Schoedl and Richard R. Polhemus. Available from the Tennessee Valley Authority or on loan through IAS-A
West Virginia		
Tygart Lake	1975	*Archeological Investigations in the Tygart Lake Reservoir, Taylor and Barbour Counties, West Virginia* by Stanley W. Baker. Available on loan through IAS-A

Appendix F

Table 1 con't.

Final Reports Accepted FY 1977 (IAS-Denver)

Project	FY of Contract	Report Title
Iowa		
Waubonsie Creek Watershed	1974	*Paleontological Investigations Within the Waubonsie Creek Watershed, Iowa* by R. Sanders Rhodes, III, and Holmes A. Semken, Jr. Available through NTIS, or on loan from Iowa's SHPO or IAS-D
Kansas		
Tuttle Creek Reservoir	1975	*The Coffey Site: Environment and Cultural Adaptation at a Prairie Plains Archaic Site* by Larry J. Schmits. Available through NTIS, or on loan from Kansas' SHPO, IAS-D, or the State Archeologist
Montana		
Fresno Reservoir	1974	*The Role of the Seasonal Bison Procurement in the Prehistoric Economic Systems of the Indians of North-Central Montana* by James David Keyser. Available through NTIS or on loan from IAS-D
New Mexico		
Abiquiu Reservoir	1975	*Archaeological Survey of Maximum Pool and Navajo Excavations at Abiquiu Reservoir, Rio Arriba County, New Mexico* by Curtis F. Schaafsma. Available through NTIS or on loan from IAS-D, or New Mexico's SHPO or State Archeologist
North Dakota		
Lonetree Reservoir	1974	*Archaeological Investigations in the Proposed Lonetree Reservoir, Garrison Diversion Project, North Dakota: 1974 Investigations, Parts I & II,* by Thomas K. Larsen and Fred E. Schneider. Available through NTIS or on loan from IAS-D or North Dakota's SHPO
Oklahoma		
Ft. Cobb Laterals	1975	*Excavations at Cd244, Caddo County, Oklahoma* by Annetta L. Cheek. Available through NTIS (Archeological Research Associates Research Report No. 8), or on loan from IAS-D, Oklahoma's SHPO or State Archeologist

Kaw Reservoir	1975	*Archaeological Investigations at the Bryson-Paddock Site, An Early Contract Period Site on the Southern Plains* by John D. Hartley and A. F. Miller. Available through NTIS (Oklahoma River Basin Surveys, Archaeological Report No. 32), or on loan from IAS-D, Oklahoma's SHPO or State Archeologist
Optima Lake	1976	*Investigations at Tx-33, Old Hardesty, Texas County, Oklahoma* by William B. Lees. Available through NTIS (Archaeological Research Associates Research Report No. 11), or on loan from IAS-D, Oklahoma's SHPO or State Archeologist
South Dakota		
Big Bend Region	1974	*Extended Middle Missouri Components in the Big Bend Region, South Dakota* by Ann M. Johnson. Available through NTIS or on loan from IAS-D or South Dakota's SHPO
Pierre Canal	1976	*Archaeological Investigations Along the Proposed Pierre Canal, Hughes County, South Dakota* by Alice M. Tratebas. Available through NTIS or on loan from IAS-D or South Dakota's SHPO
Texas		
Wallisville Reservoir	1972	*Cultural Variation on the Texas Coast: Analysis of an Aboriginal Shell Midden, Wallisville Reservoir, Texas* by Kathleen Gilmore. Available through NTIS (Texas Archeological Survey Research Report No. 44), or on loan from IAS-D, Texas' SHPO or State Archeologist
Regional		
Dendroclimatic Variability	1975	*Dendroclimatic Variability in the American Southwest, A.D. 680 to 1970* by Jeffrey S. Dean and William J. Robinson. Available through NTIS or on loan from IAS-D

Appendix F

Table 1 con't

Final Reports Accepted FY 1977 (IAS-San Francisco)

Project	FY of Contract	Report Title
Arizona		
Buttes Reservoir	1975	*An Archeological Survey of the Buttes Reservoir* by Sharon S. Debowski, et al., Arizona State University. Available on loan from IAS-SF
Foote—No Name Wash	1976	*Mitigation of Adverse Effects to Archaeological Resources on the Foote Wash Conservation and Development Project*, Graham County, Arizona by James E. Fitting, Commonwealth Associates, Inc. Available on loan from IAS-SF
California		
New Melones Project, Phase VI	1975	*New Melones Archaeological Project—Stanislaus River, Calaveras and Tuolumne Counties, California: Phase VI* by Michael J. Moratto, San Francisco State University, Conservation Archaeology Paper No. 3. Available on loan from California's SHPO or IAS-SF
Colorado		
Animas-La Plata Project	1974	*Archeological Resources of the Animas-La Plata Project: Report on the 1975 Season* by L. Kent Leidy, University of Colorado, Boulder. Available on loan from IAS-SF
Utah		
Central Utah Project	1975	*A Survey of Archeological and Historical Resources Within the Strawberry Reservoir Area of the Central Utah Project* by Richard N. Holmer, University of Utah *A Test Excavation Within the Unitah Unit of the Central Utah Project: 42UN435* by Richard N. Holmer, University of Utah *A Survey of Archeological and Historical Resources Within the Bonneville Unit of the Central Utah Project: Diamond Fork Powerline Corridors* by Frank W. Hull, University of Utah *A Survey of Archeological and Historical Resources Within the Unitah Unit of the Central Utah Project: 1976* by Frank W. Hull, University of Utah

Central Utah Project (continued)	1975	*A Survey of Archeological and Historical Resources Within the Bonneville Unit of the Central Utah Project: Deer Creek Dam Enlargement* by Frank W. Hull and Craig W. Fuller, University of Utah *A Survey of Archeological and Historical Resources Within the Upalco Unit of the Central Utah Project: Taskeech Reservoir* by Frank W. Hull, University of Utah *A Survey of Archeological and Historical Resources Within the Alpaco Unit of the Central Utah Project: Moon Lake Enlargement* by Frank W. Hull, University of Utah *Survey of Archeological and Historical Resources Within the Bonneville Unit of the Central Utah Project: Lower Stillwater Recreation* by Frank W. Hull, University of Utah *A Survey of Archeological and Historical Resources Within the Bonneville Unit of the Central Utah Project: Mona Complex* by Frank W. Hull, University of Utah *All* available on loan from IAS-SF
Washington		
Long Island Timber Cutting Area	1976	*Cultural Resource Survey on Long Island, Washington* by Christopher L. Brown, Washington State University. Available on loan from IAS-SF
Green River Watershed	1977	*Cultural Resource Inventory, Green River Watershed, King County, Washington* by Lionel A. Brown, Grays Harbor College. Available on loan from IAS-SF

Appendix F

Table 2

Final Reports Accepted FY 1978 (IAS-Atlanta)

Project	FY of Contract	Report Title
Alabama/Mississippi		
Tombigbee River Multi-Resource District Survey Evaluation	1978	*Analysis and Evaluation of Survey Data, Tennessee-Tombigbee Multi-Resource District Mississippi and Alabama* by David M. Heisler. Available on loan through IAS-A
Florida		
Merritt Island NWR	1978	*Cultural Resources Reconnaissance of Merritt Island National Wildlife Refuge* by John W. Griffin and James J. Miller. Available on loan through IAS-A
St. Marks NWR	1978	*Cultural Resources Reconnaissance in the St. Marks National Wildlife Refuge, Florida* by Judith A. Bense. Available on loan through IAS-A
Massachusetts		
Newburyport	1977	*Port and Market: Archaeology of the Central Waterfront Newburyport, Massachusetts* by Alaric Faulkner, David P. Sell, Kim Mark Peters and Edwin S. Dethlefsen. Available from NTIS or on loan through IAS-A
Mississippi		
Bay Springs	1976	*A Cultural Resource Survey of the Bay Springs Segment of the Tennessee-Tombigbee Waterway* by Charles M. Hubbert. Available on loan through IAS-A
North Carolina		
Falls Lake	1977	*Final Report, R-L865, Cultural Resources Survey and Evaluation at Falls Lake, North Carolina* by James Fitting. Available from NTIS or on loan through IAS-A
Ohio		
Plum Run Mound	1974	*Report on the Archaeological Excavations at Plum Run Mound (33 Hi 23) Highland County, Ohio* by Martha Potter Otto. Available on loan through IAS-A
Tennessee		
Tellico Reservoir	1977	*A Summary and Preliminary Interpretation of Archaeological Investigations at the Toqua Site (40 Mr 46)* by Gerald F. Schroedl and Richard R. Polhemus. Available on loan through IAS-A
Tellico Reservoir	1977	*The Bacon Farm Site and a Buried Site Reconnaissance* by Jefferson Chapman. Available from the Tennessee Valley Authority or on loan through IAS-A

Appendix F

Table 2 cont'd.

Final Reports Accepted FY 1978 (IAS-Denver)

Project	FY of Contract	Report Title
Kansas		
Glen Elder Reservoir	1967	*Settlement Ecology of Solomon River Upper Republican Sites in Central North Kansas* by Kerry A. Lippincott. Available through NTIS or on loan from Kansas' SHPO or IAS-A
Hillsdale Lake	1974	*Supplementary Investigations at Site 14MM26, Hillsdale Lake, Eastern Kansas, 1974-1975* by Arthur H. Rohn and Barry G. Williams. Available through NTIS or on loan from Kansas' SHPO or IAS-D
Oklahoma		
Kaw Reservoir	1975	*Kaw Reservoir-the Northern Section: Part II* by Wayne C. Young. Available through NTIS (Archeological Research Associates Research Report No. 8), or on loan from Oklahoma's SHPO, IAS-D, or State Archeologist
Little Caney River	1976	*The Prehistory of the Little Caney River, 1976 Field Season* by Donald O. Henry. Available through NTIS or on loan from Oklahoma's SHPO, IAS-D, or State Archeologist
Skiatook Reservoir	1975	*The Prehistory and Paleoenvironment of Hominy Creek Valley* by Donald O. Henry. Available on loan from Oklahoma's SHPO, IAS-D, or State Archeologist
Oklahoma (continued)		
Waurika Lake	1976	*Archeological Mitigation at the Waurika Lake Reservoir, Southwestern Oklahoma* by Dominique E. Stevens and T. R. Hays. Available through NTIS or on loan from Oklahoma's SHPO, IAS-D, or State Archeologist
Texas		
Aquilla Lake	1972	*1975 Archaeological Investigations at Aquilla Lake, Texas* by Mark J. Lynott and Duane E. Peter. Available through NTIS (SMU Archaeological Research Report No. 100), or on loan from Texas' SHPO, IAS-D, or State Archeologist

Appendix F

Table 2 cont'd.

Final Reports Accepted in FY 1978 (IAS-San Francisco)

Project	FY of Contract	Report Title
Arizona		
Cave Buttes	1973	*An Archeological Survey of the Cave Buttes Dam Authorized Site and Reservoir Arizona* by Alfred E. Dittert, Jr., Susanne La Follette, and William G. Holiday, Arizona State University. Available through NTIS, or on loan from Arizona's SHPO or IAS-SF
California		
Auburn–Folsom	1969	*Archeological Investigations at the Blodgett Site (CA-Sac-267) Sloughouse Locality, California* by Jerry J. Johnson, University of California, Davis. Available on loan from IAS-SF
Sweetwater	1975	*Archaeological Investigations at the Handyman Site (CAL:E:8:15) and the Edgemere Site (CAL:E:8:17)* by Larry L. Leach, San Diego State University. Available from NTIS or on loan from California's SHPO or IAS-SF
Idaho		
Coulee Dam	1974	*Kettle Falls: 1972* by David H. Chance, Jennifer V. Chance, John L. Fagan, University of Idaho. Available through NTIS or on loan from Idaho's SHPO or IAS-SF
Oregon		
Tualatin Project	1975	*Survey of Impacts on Prehistoric Resources, Tualatin Project, Second Phase* by Dr. Wilbur Davis and Dr. Doyle Decker, Oregon State University. Available on loan from IAS-SF
Trust Territory of the Pacific Islands		
Fefan Island	1977	Fefan Island Survey and Mitigation Project by R. Shutler, J. Takayama, and Y. Sinoto, University of Iowa. Available on loan from IAS-SF
Washington		
Ozette Village, Phases VIII and IX	1975	*Ozette Archeological Project, Interim Final Report, Phases VIII and IX* by Paul Gleeson, Jeffrey Mauger, Marian Fisken (Richard Dautherty, Editor), Washington State University (WARC), Washington Archaeological Research Center Report No. 34. Available from NTIS or on loan from IAS-SF

Ozette Village, Phase X	1976	*Ozette Archaeological Project Interim Final Report, Phase X* by Paul Gleeson, Marian Fisken, Washington State University (WARC), Washington Archaeological Research Center Report No. 51. Available through NTIS or on loan from Washington's SHPO or IAS-SF *Basketry from Ozette Village Archeological Site: A Technological, Functional, and Comparative Study* by Dale R. Croes, Washington State University. Available through NTIS, or on loan from Washington's SHPO or IAS-SF
Lind Coulee, Phase II	1973	*The Lind Coulee Site (45GR97): 1973 Field Season* by Ann M. Irwin and Ula Moody, Washington State University, Washington Archaeological Research Center Report No. 36. Available on loan from IAS-SF
Lind Coulee, Phase III	1974	*The Lind Coulee Site (45GR97): 1974 Field Season* by Ann M. Irwin and Ula Moody, Washington State University, Washington Archaeological Research Center Report No. 53. Available on loan from IAS-SF
Rufus Woods Lake	1975	*Exploratory Archeological Research Along Rufus Woods Lake, Upper Columbia River Region, North-Central Washington, 1975* by R. Lee Lyman, Washington State University. Available through NTIS or on loan from Washington's SHPO or IAS-SF
Bonneville Project	1974	*Test Excavations and Mitigation for 45-SA-11, Skamania County, Washington* by Dr. Robert C. Dunnell and Robert B. Whitlam, University of Washington. Available through NTIS or on loan from Washington's SHPO or IAS-SF

Appendix G

National Technical Information Service (NTIS) Abstracts for Fiscal Years 1977-1978

Table 1
NTIS Abstracts FY 1977

California

An Intensive Archaeological Survey of Five Areas on Vandenberg Air Force Base, Santa Barbara County, California (IAS-San Francisco) **Michael A. Glassow.**
This report concerns the results of an intensive archaeological survey of five separate areas on Vandenberg Air Force Base, California, that range in size from approximately one to 400 acres. Based on information collected in a 1974 survey of other portions of the base, two sites were predicted to be present in the largest of the areas and one site in another. The survey failed to locate any sites, but isolated finds of three chert flakes and flake tool in the localities where sites were expected to be present indicated that the predictions had some value. No further archaeological investigations in these five areas is deemed necessary.
NTIS Order #: PB270312/AS: $4.50 paper; $3.00 microfiche

Georgia

The Beaverdam Creek Mound (9EB85), Elbert County, Georgia (IAS-Atlanta) **Chung Ho Lee.**
Excavations were undertaken in order to mitigate the adverse impact of the proposed Richard B. Russell Dam and Lake on archeological resources. The mound had been badly disturbed by pothunters, and vandalism was a continuing problem. Although a few Archaic artifacts (2500 to 8000 years old) were present, by and large the site was a single component, Savannah II site (A.D. 1200 to 1300). It is further to the north and far inland from where typical Savannah II sites are usually found. The destruction of the site from various non-archeological causes limited the amount of structural material discovered, but many artifacts were recovered, so that the date of the site is secure. Survey of the area also continued during this field season
NTIS Order #: PB270793/AS: $5.25 paper: $3.00 microfiche

Kansas

Archaeological Excavations Within The El Dorado Reservoir Area, Kansas (1974) (IAS-Denver) **Darrell W. Fulmer.**
In 1974, two archaeological sites (14BU4, 14BU19) were tested in the proposed El Dorado Reservoir in Butler County, Kansas. This report outlines the physical and biological context of the sites, describes the excavations and the excavated materials, and discusses the relationship of these materials to other archeological manifestations. It is suggested that both sites have Keith-like Woodland components. In addition, an Archaic component is present at 14BU4. Difficulties in temporal placement within the Plains Woodland (e.g. Keith and Cooper Variants) are discussed, but not resolved. Several recommendations are made regarding future work in the reservoir area.
NTIS Order #: PB274294/AS: $7.25 paper; $3.00 microfiche

The Glen Elder Focus: Cultural Affiliations of Archeological Material From the Glen Elder Site, 14 ML1 (IAS-Denver) **James O. Marshall.**
The Glen Elder Focus is similar in material culture to western Oneota-like manifestations and may represent peoples culturally related to Siouan speaking groups occupying the Central Plains in the 17th Century. The Blue Stone Focus is thought to represent hunting camps of the people identified with villages of the Glen Elder Focus.
NTIS Order #: PB266342/AS: $7.25 paper; $3.00 microfiche

Mississippi

Archeological Excavations at Okashua and Self Sites, Mississippi (IAS-Atlanta) **Jack T. Wynn.**
In conjunction with the Corps of Engineers' construction of the Columbus Lock and Dam in the Tennessee-Tombigbee Waterway, Mississippi State University excavated two sites within this project area: the Okashua Site (22MO651) and the Self Site (22MO586); they provided data on community patterns and subsistence activities within the sites. The Self Site shows evidence of almost continuous occupation, as a seasonal camp for the Early Archaic Period through most of the Woodland Period (8000 B.C.–A.D. 1100). The Okashua site was occupied during the Late Archaic and the first half of the Woodland Period; lithic artifacts from this site have been radio-carbon dated at 2055±80 B.C., and 2220±90 B.C.—Late Archaic artifacts.
NTIS Order #: PB270966/AS: $4.00 paper; $3.00 microfiche

Montana

The Role of Seasonal Bison Procurement in the Prehistoric Economic Systems of the Indians of North-Central Montana (IAS-Denver) **James David Keyser.**
The study indicates that Late Prehistoric Period Indians of north central Montana practiced a seasonal round centered on fall communal bison procurement in the Fresno Reservoir area. Artifact assemblages indicate utilization of a full range of meat processing and hide working activities. Both Besant and Old Women's phase appear to represent several ethnic units who exploited the northwestern plains in a similar manner. Comparison of data from the study area and data from nearby sites has resulted in reconstruction of the seasonal cycle of subsistence activities participated in by

Indians inhabiting the northern Montana portion of the northwestern plains.
NTIS Order #: PB 271867/AS: $12.50 paper; $3.00 microfiche.

North Carolina

Final Report of An Archeological Reconnaissance of the Randleman Reservoir Area (IAS-Atlanta) J. Ned Woodall, Alan N. Snavely, Terrell L. Armistead.
An archeological reconnaissance of the Randleman Reservoir area in Randolph and Guilford counties, North Carolina, recorded 85 prehistoric sites and seven historic structures. The reconnaissance used a multistage sampling design, including a stratified cluster sample along Deep River and its major tributaries. An estimation of the total archeological sites present was obtained by this method, and certain hypotheses regarding culture process in the Archaic and Woodland stages of the Carolina Piedmont were considered. The difficulties of small sample size from certain clusters is discussed, and problems for future research are suggested.
NTIS Order #: PB274016/AS: $8.00 paper; $3.00 microfiche

North Dakota

Archaeological Investigations in the Proposed Lonetree Reservoir, Garrison Diversion Project, North Dakota: 1974 Investigations. The Archaeology of 32SH7: A Bison Kill Site in Central North Dakota (IAS-Denver) Thomas K. Larson.
Archaeological investigations indicate that three bison kill areas exist at 32SH7. An analysis of the butchering pattern reveals many similarities with kill sites located elsewhere in the Northwestern Plains. Projectile points, scrapers, bifacial cutting tools, ceramics, bison bone butchering tools, and debitage were found throughout the excavations units. It is believed that the site functioned as a bison trap during the Post-Contact Coalescent period.
NTIS Order #: PB271217/AS: $6.00 paper; $3.00 microfiche

Ohio

Archaeological Investigations Salt Creek Reservoir, Ohio: Season II. Drake Site (33Vi2) and Brown Village Site (33Ro107) (IAS-Atlanta) John Edward Blank.
This publication contains the results of archeological field investigations undertaken in the Salt Creek Reservoir, Ohio. Excavations at the Drake Site revealed the existence of two spatially and depositionally separated components of Archaic occupation, Kirk (dating between 5000 & 7000 B.C.) and Dunlap (dating between 3500 & 2000 B.C). These dates were determined on the basis of projectile point chronology. Lack of archeological features and the recovery of a small amount of cultural remains suggests a short or intermittent occupation of the site during these phases. Flint knapping was the major activity as evidenced by the large amount of flint debitage. Excavations of the Brown Village site yielded projectile point types and ceramics indicative of occupation during the Adena Phase. A date of somewhere between 500 & 300 B.C. derived on the basis of typological cross dating with radiocarbon dated sites from the Ohio Valley. This site was of interest for it provided evidence of a possible shelter which lacks associated habitational debris. Flint knapping also appears to have been the major site activity.
NTIS Order #: PB270929/AS: $8.00 paper; $3.00 microfiche

Archeological Testing of Sites on North Branch, Newfields New Community, Ohio (IAS-Atlanta) Fred A. Finney, Karen S. Gum, Bennie C. Keel.
Wright State University conducted test excavations at five sites in the area of the Newfields New Community, to determine the significance of the sites according to National Register of Historic Places criteria. While none of the sites was found to be of local, regional or national significance, artifacts were found which dated to 19th and 20th Century farms and a 19th century indigo factory, as well as some prehistoric remains which could not be dated. It was concluded that the planned subdivision would not have an adverse impact on the cultural resources on North Branch of Wolf Creek.
NTIS Order #: PB270784/AS: $4.50 paper; $3.00 microfiche

Oklahoma

Archaeological Investigations at the Bryson-Paddock Site, an Early Contact Period Site on the Southern Plains (IAS-Denver) John D. Hartley, A. F. Miller.
This is a descriptive report on field work conducted at the Bryson-Paddock site during a period of nine weeks in the summer of 1975. This site is located in Key County, north-central Oklahoma on the western bank of the Arkansas River valley which has been dammed to form the Kaw Reservoir. The site represents a proto-historic village attributed to the Wichita Indians who were engaged in trading relations with the French during the early part of the 18th century. Evidence from former structures was found; most of the features represented are trash-filled storage pits. Artifacts recovered fall into two major groups, those of native manufacture and those from French traders. Radiocarbon dates suggest an occupation falling sometime between A.D. 1660 and A.D. 1760 which is compatible with previous age estimates. Hartley suggests the Bryson-Paddock occupation is derived from earlier archaeological manifestations such as the Little River and Lower Walnut foci of Kansas.
NTIS Order #: PB270649/AS: $10.75 paper; $3.00 microfiche

Archaeological Mitigation at the Waurika Lake Reservoir, Southwestern Oklahoma (IAS-Denver) Dominique E. Stevens, T. R. Hays.
The 1976 archeological mitigation at the Waurika Lake Reservoir, Southwestern Oklahoma, produced no sites which might be nominated to the National Register of Historic Places. Rather, all sites to be investigated were found to be either eroded away or in radically disturbed contexts and most yielded relatively few artifacts. Because of this disturbance, not all of the proposed problem areas could be dealt with. Such methodology and techniques as developed and applied here have enabled the investigators to address several of the initially proposed questions about the prehistoric habitation in the Waurika Reservoir. Consistent patterns of relationship between the sites were obtained using several portions of the data and several statistical procedures. The methodology and techniques delineated here may provide the basis for more comprehensive investigation in other conservation archeology contexts.
NTIS Order #: PB272375/AS: $13.25 paper; $3.00 microfiche

Investigations at TX-33, Old Hardesty, Texas County, Oklahoma (IAS-Denver) William B. Lees.
This report presents the results of research conducted at and about the site of Tx-33, Old Hardesty, Texas County, Oklahoma. Research at the site was necessitated by its impending inundation by Optima Lake under construction at this time. The contract for this research was processed by the National Park Service, with funds supplied by the Tulsa District Army Corps of Engineers.

Hardesty was an early white settlement in the Oklahoma Panhandle, and was occupied from approximately 1886 to 1906. It served as a small commercial center for the area, and was gradually abandoned after the railroad, which had been expected to go through the town, was constructed elsewhere. Little evidence of Hardesty remains on the surface, and research indicated that material culture was, in general, scanty at the site. Reasons for this are examined in this report. The nature of the material cultural assemblage recovered is examined also.
NTIS Order #: PB271862/AS: $8.00 paper; $3.00 microfiche

Tennessee

Archaic Period Research in the Lower Little Tennessee River Valley-1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island (IAS-Atlanta) **Jefferson Chapman.**
Archaeological investigations within the proposed Tellico Reservoir in the Little Tennessee River valley (Monroe and Loudon Counties, Tennessee) have located and tested four deeply stratified sites within the alluvial first terraces. Large scale excavations at the Icehouse Bottom site have permitted the definition of a cultural sequence based on sealed occupation levels that span the period from 7500 B. C. to 4500 B. C. Tool assemblages associated with Kirk Corner Notched, bifurcate, Stanlylike, and Morrow Mountain type projectile points are discussed. Other significant analytical data include refinement of Early and Middle Archaic period projectile point typology based on a large, stratified sample; identification of textile and basketry types from impressions in Kirk level clay hearths; two Early Archaic human cremations; the analysis of paleobotanical remains that suggest almost exclusive exploitation of hickory nut and acorns in the Early Archaic period supplemented by walnuts in the Middle Archaic period. Radiocarbon dates from the sites provide firm temporal control and intersite comparison. Problems of deep testing and the sampling of buried sites are discussed.
NTIS Order #: PB271849/AS: $9.25 paper; $3.00 microfiche

Excavations and Testing, Normandy Reservoir Salvage Project: 1972 Season (IAS-Atlanta) Charles H. Faulkner, Major C. R. McCollough.
In the continuing salvage operations in the Normandy Reservoir Project, three major sites were excavated (Barton Site, Banks I Site, and Banks II Site), as well as extensive testing in the area. This study provided settlement system data for occupation of the area from the Early Archaic period (8000 B.C.) through to at least a late Mississippian occupation (14th Century A.D.). The settlement-subsistence system was primarily based on the seasonal availability of natural food resources. This study also generated the continued research in lithic raw materials for the Duck River Valley.
NTIS Order #: PB270935/AS: $16.25 paper; $3.00 microfiche

The Rose Island Site and the Cultural and Ecological Position of the Bifurcate Point Tradition in Eastern North America (IAS-Atlanta) **Jefferson Chapman.**
In the continuing archeological salvage operations in conjunction with the Tennessee Valley Authority's construction of the Tellico Reservoir on the Little Tennessee River, extensive excavations of the Rose Island Site (40 MR 44), were conducted by the University of Tennessee Department of Anthropology. Since it is a sealed stratified site spanning 1000 years of the Early Archaic period (8000-6000 B.C.), it has provided an opportunity to excavate and recover one of the largest in-context collections from the Early Archaic period in eastern North America. Work focusing on the recovery of data regarding the subsistence and settlement systems of this portion of the Little Tennessee River, from the Early Archaic period, as well as later cultural occupations represented in the site, has been carried out.
NTIS Order #: PB270783/AS: $12.50 paper; $3.00 microfiche

Third Report of the Normandy Reservoir Salvage Project (IAS-Atlanta) Charles H. Fraulkner, Major C. R. McCollough.
In the continuing salvage operations in the Normandy Reservoir Project, 11 sites in the project area were tested during the 1973 field season: (Jernigan II Site 40CF3F; Sterling Shelton Site 40CFF3; Davidson Branch Site 40CfF4; Wiser-Stephens B Site 40Cf81; Anthrony II Site 40Cf104; Boyd I Site 40Cf63; Riddle Site 40Cf59; Henderson Site 40Bd4F; Normandy Bridge Site 40BdF5; Parks Site 40Cf5; Duke I Site 40Of9F). Since the Normandy Reservoir is located in a unique environmental area between the Highland Rim and the Nashville Basin physiographic sections, the recovered archeological information reflects the specific cultural adaptations made by the prehistoric inhabitants of the area, which would be seen in their settlement and subsistence systems. Specific information has been recovered, regarding the function of sites in the upper Duck River Valley and their relationship to the various microenvironments: flood plain, older alluvial terrace, valley slopes and bluffs, upland rim.
NTIS Order #: PB270936/AS: $10.75 paper; $3.00 microfiche

Texas

1975 Archaeological Investigations at Aquilla Lake, Texas (IAS-Denver) **Mark J. Lynott, Duane E. Peter.**
Archeological investigations at Aquilla Lake in 1975 supported the general interpretation of the 1972 survey. It appears that most sites exhibit short-period occupation traits. In addition, 23 new sites were found and tested. The study evaluates the settlement pattern of Aquilla Lake within the overall context of the Central Brazos River Basin. It is believed that all stages of prehistory are represented, especially the Late Archaic through Neo-American. Function, seasonality, and density were determined by lithic analysis. Although three different eco-zones were recognized, no significant patterning is visible.
NTIS Order #: PB276993/AS: $8.00 paper; $3.00 microfiche

West Virginia

Archeological Excavations in the Round Bottom Area, Hannibal Locks and Dam, Ohio River, Marshall County, West Virginia (IAS-Atlanta) **Emil R. Liddell.**
Test excavations were conducted on a late Woodland site (A.D. 500 to A. D. 1000) in order to determine the nature of cultural resources which would be adversely affected by the Hannibal Locks and Dam impoundment. Test trench A revealed that the area was badly disturbed by erosion and modern activities, and little or no prehistoric cultural material remained intact along the banks of the river. In Test B, an Allied Chemical Company well test excavation, the contractors located a fire pit, containing fire-cracked rocks; again, due to recent disturbance, the contractors recovered little information. The contractors determined that the prehistoric resources in the test area were of little significance because of the impact of industrial development.
NTIS Order #: PB270792/AS: $4.50 paper; $3.00 microfiche.

Regional Studies

Dendroclimatic Variability in the American Southwest, A.D. 680 to 1969 (IAS-Denver) **Jeffrey S. Dean, William J. Robinson.**
The variability of ring widths in tree-ring series from drought sensitive conifers in the semi-arid Southwest has long been known to contain a significant amount of information on climatic conditions that prevailed during the years in which the trees were growing. The Southwest Paleoclimate Project, sponsored by the National Park Service, enabled the Laboratory of Tree-Ring Research to construct a network of dendroclimatic tree-ring chronologies based on archeological materials from several areas within the Southwest. An additional project allowed the collection of samples from living trees which produced a network with time depth ranging from prehistoric times to the present. A series of maps that illustrate spatial and temporal variability in rainfall and temperature, throughout the northern Southwest from A. D. 680 to 1969, was produced.
NTIS Order #: PB266340/AS: $7.25 paper; $3.00 microfiche

National Technical Information Service (NTIS) Abstracts for Fiscal Years 1977-1978 con't.

Table 2

NTIS Abstracts FY 1978

Colorado

A Cultural Resource Survey of the Denver Federal Center (IAS-Denver) **F.A. Patterson, Betsy L. Tipps.**
A cultural resource survey conducted at the Denver Federal Center (DFC), Jefferson County, Colorado, was directed towards identifying and evaluating all archeological sites. The DFC grounds were found to be characterized by an almost total lack of surface archeological material. Only six flakes and two hammerstones, each widely scattered, were recorded. None of the artifacts was amenable to identifying cultural affiliations. The lack of surface cultural materials was attributed to two reasons: the high degree of disturbance and alteration of the DFC grounds which has occurred since 1941 and the presence of a more hospitable environment immediately to the west. Five sites with historic, i.e. Euro-American, associations were identified but each had been either severely impacted or completely destroyed by government activity.
NTIS Order #: PB282373/AS $4.50 paper; $3.00 microfiche

Georgia

Lawson Field: A Cultural Resource Survey and Evaluation of a Selected Portion of Fort Benning Military Reservation (IAS-Atlanta) **John W. Cottier.**
The present survey was designed to identify and evaluate cultural resources within a limited and noncontiguous research universe located along the Chattahoochee River of the Fort Benning Military Reservation, Georgia and Alabama. This research was to provide a planning tool which could assist not only Federal agencies, but also the professional archaeological community in more informed cultural resource management. To identify resources in the project areas, a physical inspection by means of transects and other search patterns was conducted by a three-person crew during September and October, 1977. In or directly adjacent to the project areas, comprised of some 450 acres, nine cultural resources of an archaeological nature were identified. Occupation at these locations was concentrated during the Woodland, Mississippian and Historic stages. Consideration of the significance of these resources resulted in two properties being considered eligible for inclusion in the National Register of Historic Places.
NTIS Order #: PB276841/AS: $4.50 paper; $3.00 microfiche

Archaeological Investigations at the Park Mound Site (9Tp41), Troup County, Georgia, 1972 Season (IAS-Atlanta) **David J. Hally and Leila Oertel.**
This study was initiated in a search for historically documented Creek villages located within the West Point Reservoir project area. Park mound, located at the confluence of the Yellowjacket Creek and the Chattahoochee River, is a platform mound built in at least five stages. To the north and northeast, associated palisaded village remains revealed a large quantity of characteristic Creek ceramics. Radiocarbon dates obtained from two charcoal samples indicated occupation occurred around AD 1125 and AD 1450. Some Archaic lithics were also found which suggest earlier, brief occupations at the site.
NTIS Order #: PB277782/AS: $6.00 paper; $3.00 microfiche

Idaho

Kettle Falls: 1972-Salvage Excavations in Lake Roosevelt (IAS-San Francisco) **David H. Chance, Jennifer V. Chance, John L. Fagan.**
The University of Idaho undertook salvage excavations in the Kettle Falls area of Lake Roosevelt-Grand Coulee Dam at two sites on Hayes Island. The Ksunku site (45 FE 45) contained a sequence of seven components dating from 7000 B.C. to about A.D. 1800. At the Chaudiere Site (45 FE 47) three pithouses of varying forms, believed to represent a series of occupations, were excavated. Evidence was found for a diversified economy during the early periods. An interim period was defined that indicates use of the island for storage and possibly as a refuge, while data on a final ethnographic period, beginning about 1400 A.D., indicates that the island was used by the Shwatip Salish as a salmon fishery.
NTIS Order #: PB285068/AS: $10.75 paper; $3.00 microfiche

Illinois

Excavations at the Lily Lake Site: 1974 Season (IAS-Atlanta) **Terry Norris.**
The Lily Lake site was found by an archeological survey party south of Cahokia, St. Clair County, Illinois, in an area where the Army Corps of Engineers is constructing a 90+ acre dry detention basin. Excavation at the site in 1974 indicated an occupation between 100 B.C. and A.D. 900. Several pits and a pit house structure were excavated. Organic materials recovered suggest intense cultivation and collection of natural vegetation. It is the first Middle Woodland Period site (100 B.C. to A.D. 400) excavated in the American Bottomlands.
NTIS Order #: PB281144/AS: $7.25 paper; $3.00 microfiche

Iowa

Final Report on the Investigations of Archeological Sites in Saylorville Reservoir, Iowa, as Covered in Four

Contracts Between the National Park Service and Iowa State University (IAS-Denver) **David M. Gradwohl.**
Seven sites were extensively tested or excavated. Smaller tests were conducted at five sites, and seven sites were investigated by reconnaissance and intensive surface collections. Osteological, lithic, ceramic, vegetal, faunal, and historic remains, if any, are described for each site investigated. A detailed analysis of the botanical remains from the Meehon-Schell Site (13BN110) is presented. The vegetal remains show that the inhabitants grew corn, squash, and sunflowers and harvested *Chenopodium* seeds and walnuts. There is no firm evidence that the plants represented by the other seeds on the site were used for food. These include: panic grass, smartweed, pigweed, sumac, nightshade, groundcherry and elderberry. The seed data also indicates seasonality at the site.
(NTIS Order #: PB285058/IAS: $11.00 paper; $3.00 microfiche

Kansas

Supplementary Investigations at Site 14MM26, Hillsdale Lake, Eastern Kansas 1974-1975 (IAS-Denver) **Arthur H. Rohn, Barry G. Williams.**
The attempt to expand and enhance the findings at Site 14MM26 in 1970 by University of Kansas archaeologists produced no significant results. Despite repeated efforts, utilizing alternate approaches, they could not locate the 1970 excavations, nor the lower occupational deposit in which futher work had been recommended. A final composite interpretation of Site 14MM26 envisages a temporary occupation by Pomona peoples, possibly engaged in subsistence activites, overlaying the remains of occupation by a Plains Woodland population who had some contact with Hopewellian inhabitants of the Kansas City vicinity.
NTIS Order #: PB277684/AS: $4.50 paper; $3.00 microfiche

Archaeological Investigations in the El Dorado Reservoir Area, Kansas (1975) (IAS-Denver) **Darrell W. Fulmer.**
The University of Kansas conducted archeological investigations in portions of the Corps of Engineers' proposed El Dorado Reservoir, Butler County, Kansas. Analysis of materials recovered from the surface and test excavations at four sites indicated a long, continuous history of occupation in the area from 5000 B.C. to at least A.D. 1500. Hunting and gathering peoples of the Plains Archaic Tradition inhabited the area between 5000 to 100 B.C. Hunters and gatherers continued to occupy the region through the Plains Woodland period (ca. 100 B.C. to A.D. 900). Plains Village farming peoples occupied the area into historic times (A.D. 900 to 1500). These investigations have contributed significant information to the understanding and refining of the region's archeological and historical chronologies and of human adaptation to south-central Kansas.
NTIS Order #: PB277631/AS: $7.25 paper; $3.00 microfiche

Archaeological Investigations at 14MM26, Hillsdale Reservoir, Eastern Kansas (IAS-Denver) **Joe Artz, Ronald Manion, J. Marshall, Chris Wright.**
Archeological research conducted at site 14MM26 by the University of Kansas disclosed remains of two prehistoric hunting camps that are distinctly separated in time. The first component, dated by radiocarbon at A.D. 760 ±105, is related to the Kansas City Hopewell culture, a local form of the Middle Woodland complex widely spread throughout the central United States. The second component, ca. A.D. 900 - 1300, can be associated with the Pomona culture centered in eastern Kansas. Statistical analyses of the pottery sherds and chipped stone refuse at the site revealed useful information on prehistoric technologies. In addition, environmental information was obtained by this research that provides a clearer understanding of prehistoric lifestyles of northeastern Kansas.
NTIS Order #: PB284039/AS: $6.50 paper; $3.00 microfiche

Massachusetts

Port and Market: Archaeology of the Central Waterfront Newburyport, Massachusetts (IAS-Atlanta) **Alaric Faulkner, Kim Mark Peters, David P. Sell, Edwin S. Dethlefsen.**
Although pre-settlement remains apparently have been disturbed or obliterated along the Newburyport Central Waterfront, important historic structures and associated refuse are preserved intact. Of several former wharfside business complexes, the brick Merchant's Row, built in stages from 1770 to 1820, was best represented. Also identified were probable areas of Colonial goldsmithing, wigmaking and comb and button manufacture. Domestic refuse from an 18th century home and a 19th century boardinghouse provided a unique contrast of waterfront residential life in the Colonial and Industrial periods. Archeological and historical information revealed a changing pattern of land use as maritime commerce attained importance which surpassed that of shipbuilding. Profits from privateering, neutral trade, and destruction caused by the fire of 1811, all led to episodes of new construction. The unspecialized Colonial market area was replaced with a Federalist business district, functionally segregated by zone and floor. This district still stands. By 1876 they were dominated by a railroad and coal pocket. Today, this property is vacant.
NTIS Order #: PB284557/AS: $10.75 paper; $3.00 microfiche

Montana

Tiber Reservoir, Montana: 1974 Archaeological Survey (IAS-Denver) Thomas E. Roll.
The 1974 Montana State University field school conducted an archeological survey of the Tiber Reservoir Basin, north-central Montana. Previous Smithsonian Institution surveys that concentrated on the floodplain located 53 archeological sites. The 1974 survey added 71 new sites, raising to 124 the number of sites in the Tiber Reservoir vicinity. Materials from nine prehistoric-historic phases or complexes document about 7500 years of human occupancy. The report recommends extensive evaluation of the Bootlegger Trail Site, protection by patrol and warning of 31 sites, and monitoring and reevaluation at five-year intervals of 14 sites within the critical reservoir draw-down zone. No recommendations were made for 78 sites that are inaccessible, have been destroyed by inundation, have minimal value beyound that already recorded, or are beyond Federal jurisdiction.
NTIS Order #: PB283473/AS: $6.00 paper $3.00 microfiche

Ohio

Report on the Archaeological Excavation at Plum Run Mound (33H123), Highland County, Ohio (IAS-Atlanta) Martha Potter Otto.
The Plum Run Mound (33H123) was located during an archeological investigation of the Paint Creek Lake Project area (Baby, Otto, Dreenen 1973). The site was listed on the National Register of Historic Places, and it was determined that periodic flooding due to impoundment of Paint Creek Lake would destroy the site by erosion. In order to preserve potential valuable information a program of salvage archeology was undertaken. Because initial work demonstrated that the site was not an Indian mound but an erosional feature, work was discontinued and the site was removed from the National Register of Historic Places.
NTIS Order #: PB280168/AS: $4.50 paper; $3.00 microfiche

Report of the 1975 Excavations at the Nashport Mound (33MU15), Dillon Lake, Ohio (IAS-Atlanta) N'Omi Greber.
Approximately half of the Nashport Mound was excavated. Ceramics and lithic material indicate a Late Adena cultural affiliation, and radiocarbon dates suggest construction took place about 200 B.C.. Despite complex stratigraphy, it appears that the entire mound assumed its final shape in a relatively short time period. The remains at least 13 individuals plus hearths and pits were recovered.
NTIS Order #: PB282020/: $9.00 paper; $3.00 microfiche

Oklahoma

The Prehistory of the Little Caney River, 1976 Field Season (IAS-Denver) Donald O. Henry.
Five prehistoric sites situated along the Little Caney River near Copan, Oklahoma were investigated during 1976. In conjunction with the archeological investigation, palynological and geologic studies were undertaken in the area. The archeological sites were occupied during the Plains Woodland and Plains Village Periods. The Plains Woodland sites appear to have been transitory occupations. The Plains Village sites incorporate a large village site and a small transitory rock shelter occupation. The geologic investigation recorded a history of erosion, sedimentation, and solid formation over the last 7,000 years. The palynological study yielded eleven pollen spectra from archeologic and geologic settings encompassing the last 2,000 years.
NTIS Order #: PB274067/AS: $8.00 paper; $3.00 microfiche

Kaw Reservoir - The Northern Section: Part II (IAS-Denver) Wayne C. Young
Investigations at 22 sites in the Kaw Reservoir area were designed to determine a cultural-historic framework for the prehistoric occupation of North-Central Oklahoma. Artifacts recovered suggest occupation by peoples of the Plains Woodland and Plains Village Periods and by protohistoric Wichita Indians. Firm dates for these occupations are not yet established. This report questions the current belief that use of the bow and arrow preceded the use of pottery by Woodland peoples of this part of the central plains.
NTIS Order #: PB283449/AS: $11.75 paper; $3.00 microfiche

Texas

Archeological Testing in the Red Deer Creek Watershed in Gray, Roberts, and Hemphill Counties, Texas (IAS-Denver) Jack T. Hughes, H. Charles Hood, Billy Pat Newman.
Archeological surveying for the Soil Conservation Service within the Red Deer Creek Watershed in Gray, Roberts, and Hemphill counties, Texas, revealed 81 historic and prehistoric sites including many small campsites, several village sites and a tipi site occupied from 400 B.C. to the 1600's. All that remained of the tipi site was a hard packed dirt floor, pottery fragments, and an incised piece of sandstone. Anglo-American settlement within the valley is evidenced by a lime-burning kiln and the old ghost town of Mendota. Although the historic sites will not be directly affected by construction, further investigation of the prehistoric sites will be required before they are damaged or destroyed.
NTIS Order #: PB286954/AS: $9.00 paper; $3.00 microfiche

Washington

Test Excavations and Mitigation Plan for 45-SA-11, Skamania County, Washington (IAS-San Francisco) **Robert C. Dunnell, Robert G. Whitlam.**
This monograph reports the results of test excavations undertaken at 45-SA-11, Skamania County, Washington, during the summer of 1976, and subsequent analysis of the recovered materials. The purpose of the investigations was to delimit the north-south extent of the site in two widely separated areas and to document the stratigraphy of the archeological deposits, in preparation for mitigative excavation. The site has been dated, on the basis of documented sedimentation rates, between 1590 and 1815 A.D.. Analysis revealed one prehistoric and two historic physical changes observed in the stratigraphy. This distinction is significant in that it will be useful in future investigations by refining the chronology for the contact period. The site was inhabited seasonally into historic times by one of the Chinookan Indian groups.
NTIS order#: PB281502/AS: $6.50 paper; $3.00 microfiche

Exploratory Archaeological Research Along Rufus Woods Lake, Upper Columbia River Region, North-Central, Washington, 1975 (IAS-San Francisco) **R. Lee Lyman.**
Archeological work in the Rufus Woods Lake area during the summer of 1975 involved both test excavations and site survey. Thirty-four unreported sites were recorded. The partial salvage of an eroding semi-subterranean pit house, dated A.D. 1000 revealed a sequence of occupations and data on house structure and internal social organization. The report presents a settlement pattern-land use model that will guide further research in the area.
NTIS Order #: PB281533/AS: $6.00 paper; $3.00 microfiche

Ozette Archaeological Project, Interim Final Report, Phases VIII and IX (IAS-San Francisco) **Paul Gleeson, Jeffrey Mauger, Marian Fisken (R. Daugherty, Ed.).**
This study covers the progress of excavations at the Ozette Village site between August, 1974 and April, 1976. Portions of the prehistoric village, including several houses and their contents, were preserved almost intact when covered by a series of mud slides. During this phase of the project, excavations at house 1 were completed and two other houses were partially excavated. Well-preserved artifacts of forms typical of the Northwest Coast culture area were recovered, and studies in their conservation continued. Structural remains and site stratigraphy are discussed in the report.
NTIS order #: PB280691/AS: $6.00 paper; $3.00 microfiche

Ozette Archaeological Project, Interim Final Report, Phase X (San Francisco) **Paul Gleeson (R. Daugherty, Ed.)**
This report covers the progress of excavations at the Ozette Village archeological site between April, 1976 and January, 1977. Portions of the village, including several houses and their contents, were preserved virtually intact when covered by a series of mud slides during site occupation. During Phase X of the Ozette Project, excavation of two houses continued using a water spray-excavation technique, and it revealed subfloor drainage channels in one case. Excavation also continued on a whale bone feature, which has been tentatively interpreted as a drainage structure. Stratigraphic trenches revealed a succession of layers believed to represent a series of mud slides that covered portions of the site at various periods. Results of analyses are not covered in this report; however, analyses of recovered Ozette materials, including basketry studies, faunal and settlement pattern analysis, and studies in the conservation of water-saturated artifacts, have been completed and published elsewhere and are cited.
NTIS Order #: PB280782/AS: $5.25 paper; $3.00 microfiche

Basketry from the Ozette Village Archaeological Site: A Technological, Functional, and Comparative Study (IAS-San Francisco) **Dale R. Croes.**
Prehistoric basketry items from the Ozette Village Archaeological site and other water-saturated sites on the Northwest Coast are examined analytically. Analysis is aided by the recovery of basketry items from their original portions in the site, with their original contents. Locations of family units, levels and activities of household members are inferred. Major village sites, fishing stations, and shellfish gathering areas are separated according to basket category occurrences.
NTIS Order #: PB284660/AS: $15.50 paper; $3.00 microfiche

West Virginia

Archeological Salvage Excavations in the R. D. Bailey Reservoir, Wyoming County, West Virginia (IAS-Atlanta) **Michael R. Beckes, Daniel B. Fowler.**
During a period of 3 weeks during the summer of 1973, the contractors conducted excavations in the R.D. Bailey Reservoir area in Guyandotte River basin in order to mitigate the project's effects on three prehistoric sites (46 Wm 7; 46 Wm 20; and 46 Wm 13). At site 46 Wm 7, the Rockhouse Branch Shelter, the contractors recovered Archaic (6000 B.C. – 1000 B.C.) and Late Woodland (A.D. 500 – A.D. 1200) cultural materials; the two other sites, however, yielded few cultural materials. The contractors recommended no further work in the project area.
NTIS Order #: PB284608/AS: $5.25 paper; $3.00 microfiche