

PART IV

CULTURAL RESOURCE MANAGEMENT PLAN

CHAPTER 9

CULTURAL RESOURCE MANAGEMENT PROGRESS REPORT

Introduction

This chapter, along with Chapter 10, will constitute a Cultural Resource Management Plan. The overall objectives of this management plan, as defined in our Scope of Work, are as follows:

- 1) To review past and present cultural resource management policies, procedures, and activities.
- 2) To identify deficiencies in the inventory, evaluation, and management of cultural resources.
- 3) To delineate and prioritize management objectives in terms of the legal requirements for cultural resource management and the use of the project area as National Wildlife Refuges.
- 4) To formulate and describe a comprehensive management strategy, consisting of both short and long term objectives, whereby deficiencies can be rectified, and the goals of cultural resource management can be successfully incorporated into the productive use of the project area as three active National Wildlife Refuges.

This chapter will also include a brief discussion of the relevant legal requirements for cultural resource management, and will evaluate the degree and success of their application (both past and present) to the three National Wildlife Refuges which make up the current project area.

Applicable Cultural Resource Management Laws and Regulations

Along with other federal agencies, the United States Fish and Wildlife Service is required by law to identify, evaluate, and protect the significant prehistoric and historic cultural resources located on the public lands within its jurisdiction. The U.S. Fish and Wildlife Service also must take into consideration the concerns of those Native Americans with ancestral or cultural ties to the lands under its jurisdiction.

The legal requirements for cultural resource management are listed in Chapter 1 of this report and will not be repeated here. In general, with regard to historic and prehistoric cultural resources, it is required that federal agencies conduct inventories of the resources on the lands within their jurisdictions, identify those properties which are eligible for nomination to the National Register of Historic Places, and provide measures for the protection of significant cultural resources (King, Hickman, and Berg 1977).

In a court decision involving the United States Forest Service, the Hopi Indian Tribe, and a private developer, the U.S. District Court for the District of Columbia (U.S. District Court, District of Columbia 1981) held that federal agencies have three duties toward the native peoples under the American Indian Religious Freedom Joint Resolution of 1978. These are as follows:

- 1) To evaluate their policies and procedures with the aim of protecting Indian religious freedom.
- 2) To refrain from prohibiting access, possession, and use of religious objects and the performance of religious ceremonies.
- 3) To consult with Indian groups in regard to proposed actions.

The court specifically stated that the American Indian Religious Freedom Joint Resolution "does not require that access to all publicly owned properties be provided to the Indians without consideration for other uses, or activities, nor does it require that native traditional religious considerations always prevail to the exclusion of all else" (U.S. District Court, District of Columbia 1981).

A more complete listing of Federal laws, regulations, executive orders, and related documents pertaining to cultural resource management has been compiled by Knudson (1982).

Cultural Resource Management Progress Report

The remaining sections of this chapter contain a Cultural Resource Management Progress Report. Within this chapter, the first two objectives of the Cultural Resources Management Plan (cited above) will be addressed. These objectives are:

- 1) To review past and present cultural resource management policies, procedures, and activities within the project area (along with their effectiveness), and
- 2) To identify existing deficiencies in the inventory, evaluation, and management of cultural resources.

The Current Status of the Cultural Resources

Within the Project Area

Historical Cultural Resources

As discussed in more detail in Chapter 5, the above-ground cultural resources constructed prior to the modern period have largely been dismantled, destroyed, or relocated and significantly remodeled. In most cases, this took place after acquisition by the Fish and Wildlife Service but prior to the implementation on the local level of cultural resource management regulations.

Given current data, we cannot predict the potential existence or the extent of any subsurface historical cultural resources which may have survived the destruction or drastic alteration which the above-ground resources suffered. In some areas, such as the current headquarters area at the Merced Refuge, the southwestern portion of San Luis Refuge (E 1/2 of Section 6, T9S, R11E), and the Gun Club Road area of Kesterson Refuge (Section 5, T8S, R10E; Section 1, T8S, R9E; Section 36, T7S, R9E), it is entirely possible that there are still below-ground cultural resources relating to the structures which once existed. These could include such resources as trash pits, privies, and a wide range of other subsurface features. In addition, each of the refuges may contain archaeological vestiges of historic canal systems and their components, or vestiges of stockraising or recreational sites and structures scattered throughout the refuges. The range of types of historical archaeological sites is discussed in Chapter 6.

Prehistoric Cultural Resources

Within San Luis, Merced, and Kesterson National Wildlife Refuges, the prehistoric cultural resources are extensive, and for the most part, relatively well preserved. Together the resources at San Luis and Kesterson must be considered as an extremely valuable "preserve" of prehistoric site types and activity areas which are, we believe, well qualified for inclusion in the National Register of Historic Places. However, as listed in Tables 1 through 5, the significance of some of the cultural resources cannot currently be documented, and archaeological testing has been recommended.

The significance of the cultural resources has been previously recognized. A nomination form for the sites on the San Luis Refuge was prepared in 1978 by Harvey Heffernan, the Assistant Refuge Manager (Heffernan 1978), but apparently was never acted upon. Another nomination form was prepared in 1980 for major portions of the Kesterson Refuge by G. James West of the Bureau of Reclamation, but this nomination, when submitted to the Office of Historic Preservation for comments, was never returned (West, personal communication 1984).

The current project located several additional prehistoric cultural resources, and expanded the boundaries of many of the previously recorded sites within the San Luis and Kesterson Refuges. Also, we formally recorded the previously known archaeological site on the Merced Refuge. The background research and the other studies which we have conducted have provided more documentation than was available when the initial estimations of significance were made.

Based upon the research we have conducted, we concur with the previous estimations of archaeological significance which led to the nomination of these two districts to the National Register of Historic Places. As districts, the archaeological resources of the San Luis and Kesterson Refuges appear to meet the requirements for inclusion on the National Register of Historic Places.

Further, we believe that our field and background research has documented the fact that the archaeological resources within these two properties are even more significant than has been realized in the past. They represent possibly unique "archaeological preserves" within an area of the Central Valley in which site destruction has been extensive.

The prehistoric sites have not escaped entirely the damage which is so characteristic of the Central Valley, but the damage which we observed appears minor by comparison. The current sources of damage are discussed below, and the integrity of each site is described in Appendix G.

Deficiencies in the Data Base

One of the requirements of the current project has been to review the deficiencies in the cultural resources data base within the project area. These deficiencies are briefly summarized below.

Historical Cultural Resources

As pointed out elsewhere in this report, there are no longer any above ground historical resources which retain architectural integrity. However, there is within the refuges the potential for a wide range of subsurface archaeological resources (as discussed in Chapter 6).

Although the current data base is limited, there are methods through which we could begin to predict the amounts, locations, and significance of these potential resources using various sources of historical information, particularly that compiled by Ralph Milliken in the early 20th century (see Chapters 5 and 6). For the most part, however, such an inventory can only be compiled through archaeological techniques.

Prehistoric Cultural Resources

With regard to the prehistoric cultural resources, there are major deficiencies in the data base. The field reconnaissance carried out as a part of the current project was hampered by extremely dense vegetation, and could not rectify as many of these deficiencies as had been hoped.

Even with good visibility, however, most of the deficiencies of the prehistoric data base could not have been rectified during the current project. For the most part, the deficiencies are a direct result of the limited amounts of archaeological reconnaissance and research, and the total lack of archaeological excavation within the project area.

Some of the major deficiencies in the prehistoric data base are listed and discussed briefly below.

- 1) Major portions of project area have not yet been systematically surveyed for archaeological resources, although the work of Eggers (1980a) at Kesterson does represent a major step forward. As a result, we have a lot to learn about the number of archaeological resources which are present within the three refuges. But, as discussed elsewhere, given the dense vegetation which often characterizes the refuges, and given the limited surface manifestations at many of the prehistoric sites, archaeological surface reconnaissance is frequently difficult.
- 2) Because there has been no excavation within the project area, we have only limited amounts of information which can be used for cultural resource management planning. For example, we do not know the specific temporal periods represented by each of the sites. Beyond what is visible on the surface, we have little information on the site types which might be represented, or on the range of activities which may have been conducted by the prehistoric inhabitants. Likewise, there is little information on the range of variation of site types within the refuges, or on the amounts and types of intersite and intrasite variation which are

present. These basic data sets are of importance to the determinations of site significance.

- 3) Because of the data gaps identified in the two preceding sections, detailed and specific management plans are difficult to formulate. For example, we do not know which archaeological sites are unique, which are well represented, which deserve special preservation efforts, or which are best suited for mitigation or public interpretation, etc. However, with the data now available, we have been able to provide an initial evaluation of the National Register eligibility for each of the known cultural resources (see Tables 1 through 5).
- 4) There is little comparative information from immediately surrounding areas with which to work. While there has been a significant amount of archaeological excavation, and several good reports, from the San Luis Reservoir area, some extensive work done at the nearby Wolfsen Site (CAMER-215), and a very few other notable projects or reports, there is only limited information available which can be applied directly to the three Wildlife Refuges which make up the project area. There are, for example, no good areal syntheses which focus directly on western Merced County, although the research conducted by the California Department of Parks and Recreation has established an excellent data base from which to work (see Chapter 4).
- 5) In addition to the deficiencies cited above, there are a number of other deficiencies in the data base which also have been identified. For example, as one part of our project we collected several small pieces of obsidian, which were subjected to obsidian source and hydration analysis (see Chapter 7). The results of these analyses are intriguing, and suggest a relatively early occupation for the project area, but there is no similar body of information from other sites near the project area for comparison.
- 6) Another deficiency which we noted is that the relatively small Fish and Wildlife Service archaeological collections do not contain chipped stone artifacts (projectile points, knives, scrapers, etc.), shell or stone beads, or bone artifacts. For example, even the shell and chipped stone artifacts collected by Joe Pope during his 1975 work could not be located. Without comparative collections with which to work, interpretation of the materials which we collected is much more difficult. This points out the critical need for a policy, and implementing regulations, to insure the safety and long term availability of archaeological collections.

Significance of Cultural Resources within the Study Area

For a number of reasons, the cultural resources within the project area, particularly the archaeological resources, appear to be highly significant. For example, the prehistoric archaeological resources appear to constitute a large and relatively intact research data base within an area of the Central Valley generally characterized in the past by wanton site destruction. The above ground historical resources have been almost entirely destroyed, but subsurface historical resources are potentially still intact, and could also be highly significant.

The prehistoric cultural resources within the San Luis and Kesterson Refuges constitute important districts, both for preservation and for research purposes. Within these two districts are likely to be preserved a wide range of activity areas representing a considerable span of time. There should be site types ranging from major villages through somewhat isolated special purpose use areas. The unique opportunity to set aside such a large sample of the prehistoric resource base for preservation and research purposes contributes greatly to the overall significance of the districts. These resources are particularly important given the level of destruction documented by Joe Pope for surrounding lands.

Finally, prehistoric cultural resources in general, and the resources within the project area in particular, are now the only existing link to the prehistory of the area. There are many research questions which can only be addressed through archaeological research and data—questions pertaining to over 98 percent of the total period of human occupation of the project area.

There are, as discussed in other sections of this report, a number of significant gaps in the historical record. It is entirely possible that some of these inconsistencies, omissions, and contradictions in the historical record can be addressed through the use of archaeological information.

The broad patterns of historical development discussed in Chapter 5 left their mark in many representative imprints within the study area landscape. The archival record points to material evidence in the form of archaeological sites undoubtedly present in the study area.

During the Hispanic period, structures were built that had a place in the stock-raising activities of the hide and tallow industry, and people entered the project area to procure food, travel, and camp. The archaeological record alone may hold information that relates to the social and economic changes that took place when the resident native Indians were taken to San Juan Bautista and other missions; when Hispanic settlers sought to use the area's resources and were driven off by hostile Indians; and when the cattle industry took hold and the natives provided the labor force for the working ranches.

During the Early American period, a substantial increase in freight traffic, cattle and sheepraising, and settled small communities of ranch stations took place on and near what are now the San Luis and Kesterson Refuges. Some of these activities involved Basque settlers, of whom almost nothing has been extracted from archival sources. It is possible that questions concerning the participation of this ethnic group in the changing economic and social development of the West Side may be answered only by archaeological research. During this period Hispanic land use which may have involved acculturated Indians is known to have taken place. This occurred particularly at ranch stations (such as San Luis Camp, and the Salt Slough Adobe and Warehouse) and in the richly productive slough and marsh areas.

During the Later American period, many structures were built within the study area which were removed during the modern period. The interrelationships of these structures could have been indicative of land and space use changes under changing environmental conditions, a shift to confined stock management, technological changes in water control, and the introduction of row crops. The archaeological remains of those structures now offer the only record of that important period.

Previous Cultural Resource Management Policies, Procedures, and Impacts

During the early years of federal control of the refuges (prior to approximately 1966-1969), there were few federal controls which mandated the effective preservation of cultural resources within the project areas (note, however, that two of the refuges were created as late as 1966 and 1969). Following enactment of the more recent legislation and regulations, federal policies regarding preservation were enunciated, and to some degree began to work their way down to the local levels.

Since approximately 1971-1972, the regulations requiring cultural resource protection have increasingly become tighter, and more structured, and have gradually been incorporated into planning and management efforts at the local level. For example, it is the policy of most federal agencies, including the Fish and Wildlife Service, to conduct inventories prior to development to identify sites on, or eligible for inclusion on, the National Register of Historic Places which might be affected by the proposed actions.

The following sections briefly describe the primary sources of direct and indirect adverse impacts which characterized the project area during the past. (It should be noted, however, that most of these impacts have been reduced or eliminated in recent years.)

Sources of Direct Adverse Impacts

During the early years of the federal management of the three refuges within the project area, occasionally as late as the early 1970s, there were no official preservation policies which reached "the ground level" in terms of effective preservation and management. As an example, none of the above-ground historical resources which existed when the properties were acquired by the federal government has survived in its original state. Direct impacts included burning, demolition, remodeling, replacement of obsolete structures, and relocation.

The prehistoric sites also suffered during the earlier periods of federal management of the Wildlife Refuges. At and around the Merced Refuge Headquarters area various artifacts and numerous burials were found during deep plowing, grading, scraping, waterway maintenance, and other earth altering activities. At San Luis Refuge, "ground stone" artifacts have been excavated from Moffat Field during earth moving. Joe Pope (1976; archaeological site records; personal communication 1984) has documented site damage between 1972 and 1976. This was generally associated with road maintenance, levee construction, and related activities. At Kesterson, burials were encountered during earth borrowing and filling activities (see also Eggers 1980a).

Most of the major impacts resulted from the use of bulldozers, backhoes, and deep plowing. Canals were placed through sites (such as CA-MER-108 and CA-MER-106), although this almost certainly occurred prior to Fish and Wildlife Service tenure. More recently, however, sites were impacted and burials encountered during road, pond, or drain construction and/or maintenance.

Other sources of damage over the years may have included "pothunting" (indiscriminant digging in search of artifacts), surface collection of artifacts, oil and gas drilling, cattle grazing (which has been eliminated in recent years), rangeland burning, and the resulting secondary impacts which may be associated with each of these activities.

Sources of Indirect Adverse Impacts

The principal indirect impact which we noted, both past and present, is erosion. A number of sites have been actively cut or undercut by waterways. A burial has been exposed within the wavecut terrace at CA-MER-231. Erosion in the area of CA-MER-105 was noted by Pope (1976), and continues to the present.

While there are few secondary impacts, they can occasionally be quite severe in places, and must be considered as a source of continuing damage within the project area.

Current Cultural Resource Management Policies, Procedures, and Impacts

Significant progress has been made in a number of areas. For example, it is currently the policy of most federal agencies, including the Fish and Wildlife Service, to conduct cultural resources inventories prior to development in order to identify sites on, or eligible for, the National Register of Historic Places which might be affected by the proposed actions. Surveys of this type have been conducted by the Fish and Wildlife Service within the project area (cf. Pope 1983; Haversat 1984), and by the Bureau of Reclamation within Kesterson Refuge (Eggers 1980a, 1980b; U.S. Bureau of Reclamation 1983).

In addition, applications to the National Register of Historic Places have been prepared for both San Luis and Kesterson Refuges (Heffernan 1978 and West 1980).

The current study has been designed and funded by the Fish and Wildlife Service in an effort to correct deficiencies in the inventory and evaluation of cultural resources and to guide future actions within the study area. To these ends, the current report contains both a cultural resources overview and a recommended cultural resources management plan. The preparation of this document represents a significant step forward.

Finally, the refuge staff and the Master Plan staff have shown a considerable interest in, and support for, the current project. As these are the people who are charged with actually protecting the cultural resources, their interest and cooperation is a significant indication that progress is indeed being made.

CHAPTER 10

RECOMMENDED CULTURAL RESOURCES MANAGEMENT PLAN

As discussed in the introduction, the United States Fish and Wildlife Service, along with other federal agencies, is required by law to identify, evaluate, and protect the significant prehistoric and historical cultural resources located on the public lands within its jurisdiction. It must also take into consideration the concerns of those Native Americans with ancestral or cultural ties to the lands under its jurisdiction. Additional information concerning legal considerations can also be obtained through reference to the Fish and Wildlife Service overview of Kern and Pixley Refuges (Arguelles with Moratto 1983).

The following section presents recommendations for a cultural resources management plan for San Luis, Kesterson, and Merced National Wildlife Refuges. This plan delineates and prioritizes management objectives (including long and short range objectives, as well as immediate objectives) in view of the legal responsibilities of the Fish and Wildlife Service, and the particular problems and opportunities presented by the existing cultural resources and available information for the project area.

Management Objectives and Strategies

This section is divided into four subsections. These present a summary of recommendations, followed by recommendations for long range (continuing), immediate, and short range management objectives and strategies. Long range objectives and strategies are those which should be implemented continuously, and/or which could take four or more years to complete. They most often are derived from, and implement, general management policies. Immediate objectives and strategies are those which are needed to correct existing problems, such as erosion. Short range objectives and strategies are those which may be completed within a period of from one to three years, and which are derived from, and implement, the long range objectives and strategies. They specify procedures and methods for the location, inventory, evaluation, protection, development, and study of cultural resources.

Summary of Management Recommendations

The following list summarizes the management objectives and strategies presented above, and arranges them in terms of priority.

Long Range (Continuing) Management

Objectives and Strategies

Number Strategy

- 1A The Fish and Wildlife service should develop and implement a comprehensive Cultural Resources Management Plan. This plan should be updated as necessary.
- 1B Impacts to archaeological sites from development activities should be controlled through continuation of the policy of conducting surveys prior to development.

Immediate Management Objectives and Strategies

Number Strategy

- 2A Impacts to archaeological sites should be reduced through the control of erosion.
- 2B Impacts to archaeological sites from maintenance activities should be controlled.
- 2C Impacts to archaeological sites from burrowing rodents, particularly ground squirrels, should be controlled at CA-MER-106.

Short Range Management Objectives and Strategies

Number Strategy

- 3A Cultural resource surveys should be conducted on at least an annual basis until the project area lands within the jurisdiction of the Fish and Wildlife Service have been completely examined.
- 4A The San Luis Archaeological District, the Dickenson Ferry Site, and, in conjunction with the Bureau of Reclamation, the Kesterson Archaeological District should be nominated to the National Register of Historic Places.
- 5A There are ten prehistoric cultural resources whose eligibility status could not be determined (seven at San Luis, two at Kesterson, and one at Merced). These sites should be subjected to subsurface archaeological testing and related research to determine National Register eligibility.
- 6A Archaeological site records and maps must be kept under lock and key, and access must be strictly controlled.

- 7A The Fish and Wildlife Service should adequately safeguard existing and future archaeological collections through curation at an approved research facility.
- 8A In conjunction with ongoing survey projects necessary to identify cultural resources, the Fish and Wildlife Service should implement a long term ongoing program of study and research within San Luis and Merced National Wildlife Refuges, and, in conjunction with the Bureau of Reclamation, within Kesterson National Wildlife Refuge. This program, which should apply to historical and prehistoric resources, should be designed to provide additional, and much more accurate information for use in the management, preservation, and enhancement of cultural resources.

Recommended Long Range (Continuing)
Management Objectives and Strategies

In the following section, we identified a single wide-ranging management objective. This objective is followed by strategies through which it may be implemented.

Objective 1: In order to comply with federal laws, regulations, and Executive Order 11593, the U.S. Fish and Wildlife should implement within the San Luis and Merced National Wildlife Refuges, and, in conjunction with the Bureau of Reclamation within Kesterson National Wildlife Refuge, an ongoing, long term program for the preservation and enhancement of the cultural resources within its jurisdiction.

Strategy 1A: The Fish and Wildlife service should develop and implement a comprehensive program (a Cultural Resources Management Plan) which includes short and long term strategies, as well as immediate procedures, whereby this long term objective can be met. This plan should be formulated by the Fish and Wildlife Service in conjunction with Fish and Wildlife Service archaeologists, qualified professional archaeologists, and refuge management personnel. It should be updated as necessary.

Discussion: In terms of cultural resource protection, this program should be pro-active, rather than reactive or passive. Under passive or reactive protection, cultural resources are generally protected only through avoidance, or when there is a specific impact identified with a specific development project. Under this type of a policy, however, many cultural resources will deteriorate beyond recovery as they will continue to be impacted by maintenance activities, vandalism, erosion, and various other adverse impacts. Because Executive Order 11593 calls for both the preservation and enhancement of cultural resources, simply directing developments away from cultural resources is not sufficient.

Strategy 1B: Impacts to archaeological sites from development activities are currently controlled by conducting survey projects prior to development. This existing policy is an effective one which should be continued.

Discussion: For several years it has been standard procedure to conduct an archaeological field reconnaissance prior to development activities. This policy has been and will continue to be effective in reducing impacts related to development. It should be continued.

Recommended Immediate Management Objectives and Strategies

In the following section, we have recommended a single broad immediate management objective. This objective is derived from the long range objective above, but is designed to be implemented immediately and continued as long as needed. This objective is followed by a series of strategies through which it may be implemented.

Objective 2: The Fish and Wildlife Service should seek to reduce the overall impacts to cultural resources on the project area lands within its jurisdiction.

Strategy 2A: One method of reducing impacts is through the control of erosion. This can be implemented by (1) the careful stabilization of eroding slough or canal banks adjacent to archaeological sites, and (2) halting gully erosion on archaeological sites.

Discussion: One factor critical to long term protection of cultural resources within the project area is the control of erosion. Along some slough and canal edges, archaeological sites are being severely eroded. For example, recommendations have already been made by Pope (1976) for some form of slough bank stabilization at sites CA-MER-103, CA-MER-104, and CA-MER-105. We concur in these recommendations, and suggest that some form of erosion control be initiated at these three sites as soon as possible. Also, serious erosion has been identified at other sites within the refuges. For example, CA-MER-106 is being impacted by erosion from a canal and by the maintenance which is required to keep the canal functioning. Also, one or more burials have eroded from the edge of site CA-MER-231. During any erosion control care should be taken to insure that the methods employed do not also impact the resources. For example, heavy equipment should not be moved across known archaeological sites.

Additional information on sources of erosion which have been identified is contained in the archaeological site records, and is summarized in the brief site descriptions contained in Appendix G of this report.

Strategy 2B: Impacts to archaeological sites resulting from maintenance activities should be controlled. This can be accomplished by (1) cross-checking the locations of known cultural resources before grading roads, dredging canals, or conducting earth altering activities, (2) halting all land leveling activities except under the supervision of an archaeological monitor, and/or (3) conducting a professional archaeological survey in any areas which will be impacted by maintenance activities but which have not previously been examined.

Discussion: Until detailed field reconnaissance studies are completed, as recommended elsewhere in this section, the Fish and Wildlife Service should avoid any impacts or alterations, especially to areas of high ground and to known archaeological sites. Policies should also be changed to include ongoing maintenance as a potential source of impacts. For example, some roads have been built across cultural resources — grading those roads could further impact the sites. Also, dredging of canals could cause impacts as in several cases canals or drainage ditches cut through known sites. Dredging can impact the walls of the canal, which may contain intact cultural deposits. The material removed from the canals is generally deposited on the site.

Because of the number of sites which appear to be buried under vegetation or silt, any land leveling activities, even when conducted as maintenance, should be monitored by a professional archaeologist. The potential for discovering subsurface cultural resources or burials during the leveling of mounds is extremely high.

Strategy 2C: In some cases serious impacts are resulting from the activities of burrowing rodents, particularly ground squirrels. In at least one case the damage appears extensive. Actions should be taken to limit rodent damage at site CA-MER-106.

Discussion: Damage from rodent burrowing occurs at virtually all archaeological sites, and must be considered a fact of life. However, the damage being done at CA-MER-106 appears to be more significant, and some steps should be taken to reduce impacts from this source.

Recommended Short Range Management Objectives and Strategies

Objective 3: The Fish and Wildlife Service should conduct intensive field reconnaissance projects until the project area lands within their jurisdiction have been completely examined.

Strategy 3A: Cultural resource surveys should be conducted on at least an annual basis until the project area lands within the jurisdiction of the Fish and Wildlife Service have been completely examined. Until the survey program is completed, and until all cultural resources are identified, the Fish and Wildlife Service should to (1) precede each development and maintenance project which will impact the ground with a cultural resources

reconnaissance, if one has not already been conducted within the area to be impacted, or (2) have an archaeological monitor present during any land leveling or major land altering activities.

Discussion: Most of the project area has not been examined for cultural resources. Joe Pope's 1976 study was directed toward recording those resources which were then being impacted. The current project included no new reconnaissance. On the Kesterson Refuge, the Bureau of Reclamation's 1980 ESCA-Tech project was a limited survey which was conducted under extreme time constraints.

Surveys should be conducted following controlled burns or during the late winter months when grass levels are lowest. Controlled surface collection (of such materials as obsidian and diagnostic artifacts) and minor subsurface testing, such as augering and work along slough edges, should be used, but only as a part of an overall management program and under the direction of a qualified professional archaeologist with expertise within the project area.

Given the number and significance of the cultural resources which we have documented on the refuges, stratified random surveys will be of little value. What are required are intensive reconnaissance projects, each covering a particular area completely, and documenting the exact nature of the examination, the areas covered, and the cultural resources identified.

Also, given the amount of siltation and the frequently poor visibility, the surface reconnaissance projects may have to be supplemented by some forms of subsurface investigation (augering, backhoe trenching, etc.) in order to obtain an adequate coverage.

Objective 4: The Fish and Wildlife Service should ensure that the eligible cultural resources within its jurisdiction (see Tables 1 through 5) are nominated as sites or districts to the National Register of Historic Places.

Strategy 4A: The 15 sites which constitute the San Luis Archaeological District should be nominated to the National Register of Historic Places. Additionally, the Dickenson Ferry Site should be nominated to the National Register as an individual site. In conjunction with the Bureau of Reclamation, the 13 sites which constitute the Kesterson Archaeological District should be nominated to the National Register.

Discussion: Nomination forms have been filled out in the past for both San Luis and Kesterson Refuges. The new information and detailed site maps generated by the current project should be used as the basis for the preparation of a new set of nomination forms. Once completed, the progress of these forms through the system should be carefully monitored until the cultural resources are enrolled on the National Register. These forms should be updated, as necessary, to include newly generated information, such as additional archaeological sites determined eligible for the National Register on the basis of the archaeological testing outlined below.

Objective 5: The Fish and Wildlife Service should sponsor archaeological excavations and related research to determine the National Register status of those prehistoric cultural resources within its jurisdiction which are listed in Tables 1 through 5 as "Unknown, needs testing."

Strategy 5A: There are ten prehistoric cultural resources whose eligibility status could not be determined (seven at San Luis, two at Kesterson, and one at Merced). These sites should be subjected to subsurface archaeological testing and related research to determine whether they also are eligible for nomination to the National Register of Historic Places.

Discussion: The subsurface archaeological testing will be most productive if it is conducted after the field surveys have been initiated, and the research recommended in Strategy 8A has been partially completed. This will make the efforts more cost effective and scientifically productive.

Objective 6: The Fish and Wildlife Service should adequately safeguard site location information to prevent vandalism by seasonal employees and others with access to this data.

Strategy 6A: Archaeological site records and maps must be kept under lock and key, and access must be strictly controlled. Also, general reports (such as the current one) should refer to archaeological sites only by site number, and should not provide specific site locations.

Discussion: We have learned from several informants that seasonal employees within federal agencies are, in some areas, among the primary sources of vandalism. For example, one of our employees, while conducting research within a National Forest, was told by a seasonal employee that he just worked within the forests to learn of site locations, and that he then returned to the sites to collect archaeological materials.

Information on the locations of cultural resources should be safeguarded both from casual visitors to Fish and Wildlife Service offices, and from seasonal employees. We recommend that archaeological site records and maps be kept under lock and key and that general reports (such as the current one) should refer to archaeological sites by site number, and should not provide specific site locations.

Objective 7: The Fish and Wildlife Service should adequately safeguard existing and future archaeological collections.

Strategy 7A: The Fish and Wildlife Service should adequately safeguard existing and future archaeological collections through curation at an approved research facility.

Discussion: We recommend that the Fish and Wildlife Service establishes a policy to insure that all archaeological materials which have been recovered from lands within their jurisdiction, and any materials recovered in the future, are curated at a recognized curatorial facility. In keeping with this recommendation, the archaeological materials collected during the current project have been archived at the Lowie Museum of Anthropology at the University of California, Berkeley. This will help to prevent accidental loss or theft from the collections, and will make the materials more available for comparative research. We feel that the curation of archaeological materials at such a facility is necessary as during the current project we have documented the fact that artifacts are indeed missing from the refuge collections.

As a part of this same policy, the collection of archaeological materials should be conducted only under the direction of a qualified professional archaeologist. Otherwise, site provenience and related information is frequently lost. Without provenience information, an artifact generally loses most of its scientific value.

Objective 8: The Fish and Wildlife Service should implement an ongoing program whereby detailed surface collections, subsurface excavations, and other studies or forms of documentation are used to increase and supplement the existing archaeological data base while causing minimal impacts to cultural resources.

Strategy 8A: In conjunction with ongoing survey projects necessary to identify cultural resources (Strategy 3A), we recommend that the Fish and Wildlife Service implements a long term ongoing program of study and research within San Luis and Merced National Wildlife Refuges, and, in conjunction with the Bureau of Reclamation, within Kesterson National Wildlife Refuge. This program should be designed to provide additional, and much more accurate information for use in the management, preservation, and enhancement of cultural resources. This program should apply to both historical and prehistoric archaeological resources.

Discussion: The information developed within the present document had to rely on studies which took place miles from the refuges because no controlled excavations have been conducted within the project area. This is a deficiency which can be corrected, but we recommend that excavations and other in-depth studies, to be of maximum value, should be initiated only after the establishment of a comprehensive research design.

As an example of the types of studies which we recommend, the limited obsidian studies conducted during the current project have resulted in some very interesting preliminary results (see Chapter 7). Additional studies of this type should be conducted as part of the ongoing archaeological reconnaissance and research conducted within the project area.

In order to make subsurface excavations and subsequent research more productive and cost effective, it will be helpful to first establish archaeological programs which can identify research questions, monitor ongoing impacts such as erosion, establish a detailed research design, and develop a comprehensive archaeological program. Like the Cultural Resources Management Plan, this document should be formulated by the Fish and Wildlife Service in conjunction with Fish and Wildlife Service archaeologists, qualified professional archaeologists, and refuge management personnel. Once established, this

technical document should be used to guide the subsequent archaeological research and testing.

CHAPTER 11

SUMMARY

This report presents a cultural resources overview, the results of primary field research, and makes recommendations for a Cultural Resources Management Plan for the United States Fish and Wildlife Service's San Luis, Kesterson, and Merced National Wildlife Refuges, located in western Merced County, California. This chapter presents a summary of the recommended Cultural Resources Management Plan and, to a lesser degree, the report as a whole.

The findings of this project, as they pertain to archaeological cultural resources, can be readily summarized: the prehistoric cultural resources within San Luis and Kesterson Refuges constitute extremely significant archaeological preserves. These preserves are possibly unique within an area of California characterized by massive destruction of cultural resources. While project area resources have been damaged through the years by a variety of causes, including development, maintenance activities, and natural forces, the damage appears to have been less by an order of magnitude than that which characterized surrounding areas.

With regard to historical structures within the project area: none retains its integrity — all have been burned, torn down, moved, or heavily modified. However, there is a high potential that significant historical archaeological resources exist in portions of the project area. These should be able to fill some of the data gaps which exist in the historical record.

Within the field of ethnohistory, this project has documented the fact that there are no surviving Native Americans whose ancestors once lived within the study area. Interviews with over 50 Native Californians failed to locate a single individual, or even hints of any individuals, who claim direct descent from the Native Americans of the study area

Finally the management plan recommends short and long range objectives and strategies, as well as objectives and strategies which should be implemented immediately, whereby the U.S. Fish and Wildlife Service can fulfill, through the effective management of the cultural resources within its jurisdiction, its federally mandated responsibilities. These procedures, following federal law and regulation, are designed to provide for the preservation and enhancement of the cultural resources within the project area.

The management recommendations, which are based upon the information presented in the cultural resources overview and on the primary field work, are designed to insure that the Fish and Wildlife Service is in compliance with federal cultural resource management laws and regulations. The management plan begins with a progress report (Chapter 9), which summarizes the status of the cultural resources within the project area, discusses deficiencies in the data base, explores the significance of the cultural resources known to exist within the project area, and identifies known sources of direct and indirect impacts, both past and present. It also discusses past and present management policies.

In Chapter 10 a series of implementing strategies is presented whereby the recommended objectives can be accomplished. The management objectives and strategies are

ranked in terms of Long range (continuing) procedures, immediate procedures, and short range procedures.

The strategies which are recommended as long range (continuing) procedures are designed to lead to the development of a comprehensive Cultural Resources Management Plan and to the continuation of the existing policy of conducting cultural resources surveys prior to development.

The objectives and strategies which are recommended as immediate procedures are designed primarily to reduce impacts to cultural resources. This can be accomplished by controlling existing impacts, such as erosion.

The strategies which are scheduled as short range procedures are designed to be phased in along with the development of a cultural resources program. These are procedures which will provide the detailed technical information needed to comply with federal laws and regulations. As one example, this detailed information will allow future erosion stabilization projects to be concentrated on those sites which are most in need, and which are of the greatest significance.

These procedures include completing intensive cultural resources reconnaissance projects for all three refuges, initiating subsurface archaeological excavations to clarify National Register Eligibility for the ten prehistoric sites whose status is uncertain (and for others which may be located in the future), and initiating an ongoing program of research and study designed to provide more accurate information for use in making cultural resources management decisions. Also recommended are completion of National Register nominations for the San Luis and Kesterson archaeological districts, and the Dickenson Ferry and Bridge site, the initiation a security procedure for site record data, and the establishment of adequate curatorial procedures.

The recommendations provided within Chapter 10 will lead to compliance with federal laws and regulations. It is our finding that the cultural resources within the project area are highly significant. We do not feel that they can be adequately managed by simply avoiding them. The impacts which have taken place, some of which are still continuing, may eventually reduce the integrity of some of these National Register eligible resources beyond recovery. In recent years, significant progress has been made in reducing impacts; additional recommendations are provided to assist in reducing impacts still further.

In addition to reducing impacts, we have recommended that a comprehensive program of active cultural resources management be initiated — we believe that the cultural resources within the project area are of sufficient importance to warrant such procedures.