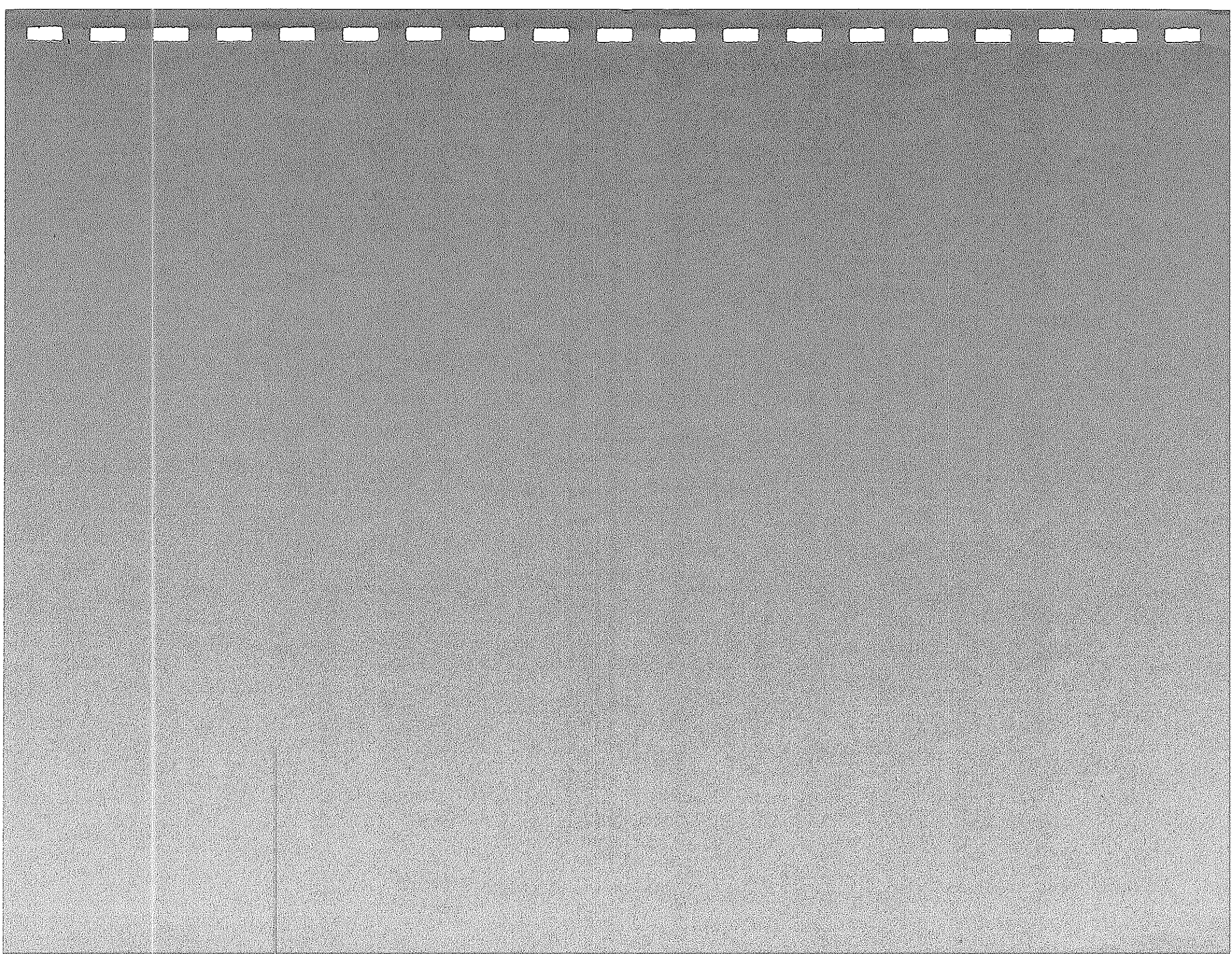
4.11 CULTURAL RESOURCES



4.11 CULTURAL RESOURCES

INTRODUCTION

This section examines potential impacts resulting from implementation of the OCMP or project alternatives. The main issues addressed in this section include:

- Disturbance of cultural resources; and
- Treatment of cultural resources.

In general, cultural resources fall within the three broad categories of paleontological, archaeological, and historical resources. Paleontological resources in the area could include both vertebrate and invertebrate fossils. Among the vertebrate fossils, Pleistocene megafossils (i.e. mammoth) are most common to the immediate area. Molluscan fauna are the most common invertebrate fossils in the area.

Anticipated archaeological resources include both prehistoric and historic-era archaeological sites. Prehistoric archaeological sites are expected to include habitation and task-specific deposits. Historical archaeological sites expected are deposits of historical debris, building and structural foundations, and backfilled wells and privies.

Historical resources in the area are expected to include historical buildings (i.e., residences, farm and ranch complexes, stores, schools, train depots, and miscellaneous ancillary buildings), structures (i.e., silos, railroad grades, and roads), and landscape features (i.e., dams, canals, and fences).

SETTING

Description of Regional Environment

Paleontology

The planning area is located at the boundary between the Coast Ranges and the Central Valley geologic provinces and contains rocks associated with both regions. The rocks in the planning area range in age from Late Cretaceous to recent and vary in lithology from marine sandstones to non-marine sands and gravel. Rocks from the Forbes (Late Cretaceous), Tehama and Red Bluff (Pliocene), and Modesto-Riverbank (Quaternary) formations are present in the planning area. Each of these formations is reported as being fossiliferous. While nearly all of the stratigraphic units contain fossils in other areas, the record of paleontological finds in the planning area is generally sparse.

Recorded paleontological finds within the planning area are very limited and are mostly confined to the gravels mapped as Modesto-Riverbank Formations. Ramirez (1992) describes a concretionary zone (an area with mineral nodules within sedimentary rock) in the lower shale interval of the Late Cretaceous Forbes Formation which contains abundant megafossils (i.e., mammoth). This unit crops out in the planning area at the south end of the Capay Hills along Cache Creek.

Several mammoth fossils have been collected from the unit mapped as the Modesto-Riverbank Formations (Farnham 1996, personal communication; Simons 1996, personal communication). One mammoth locality northeast of Madison was in the bed of Cache Creek but the fossils almost certainly were eroded out of the older gravels (Simons 1996, personal communication). Mammoth tusks, four to five molars, and a skull were collected in 1982. In 1955, a large molar was collected about 3 miles downstream from the 1982 locality. More recently, according to Farnham (1996, personal communication) a mammoth skull was located in a gravel pit approximately 500 yards south of the 1982 occurrence. Farnham also reports the finding of another disarticulated mammoth from a red gravel in the southern Dunnigan Hills in 1937. The red color suggests that the fossil came from the Red Bluff Formation but this conclusion cannot be substantiated.

Previous Archaeology and Ethnographic Setting

Few archaeological excavations have been conducted in the vicinity of the planning area thus limiting the understanding of the prehistoric cultural environment. However, occupation of the Sacramento Valley is thought to have occurred as early as 5,000 years ago with sustained use occurring into the historical period (c. 1820). Archaeological survey teams have found evidence of prehistoric habitation at several locations along Cache Creek and in the hills west of the planning area. More sites are thought to be buried beneath alluvium as evidenced by the 1951 excavation of a burial found eroding from a creek bed near Capay. More than six feet of alluvium overlaid the burial. The locations of known archaeological sites show that, in general, prehistoric groups in the area chose elevated locations adjacent to creeks for their homes. These creekside settings would have afforded access to numerous plant and animal resources as well as fresh water.

The planning area is within the ethnographic territory of the Patwin, a Penutian-speaking people occupying the southern Sacramento Valley at the time of Euro-american contact. Ethnographers divide the Patwin into two geographically distinct groups with the Hill Patwin occupying the eastern foothills and intermontane valleys of the North Coast Ranges, and the River Patwin utilizing the Sacramento River and Valley. The dividing line between the two groups falls between Madison and Woodland. Early ethnographers documented several population centers along Cache Creek including three within the planning area. The village of *moso* was situated on the north bank of Cache Creek opposite the town of Capay, *kachituli* was described as being on the south bank about four miles southwest of the town of Yolo, and *hacha* was reported to be "three miles below Capay." Locations described for these sites clearly are not precise.

Descriptions of Patwin subsistence indicate that their diet was varied, taking advantage of the numerous plant and animal resources found in the area. Dietary staples of the Patwin included deer and elk, several species of freshwater fish, acorns, pine nuts, buckeyes, and many types of wild berries and seeds. Groups utilizing the area would have found ample resources in the diverse biota along Cache Creek. The material culture of the Patwin included flaked stone tools made of obsidian and chert (such as knives, arrow and spear tips, and scrapers), and ground stone implements for crushing and pounding. Bone and shell tools and decorative items were also common. Houses were semi-subterranean structures covered with earth. The Patwin are known to have used several types of plant fibers and animal skins in producing clothing and basketry.

Historical Land Use

Spanish exploration of the interior of California reached what is now Yolo County in 1821. At that time Luís Argüello headed an expedition in search of promising locations for new missions. In that decade, hunters and trappers regularly visited the area in search of game. Trappers, storing furs and supplies for the Hudson Bay Company, are thought to have given Cache Creek its name.

During the 1840s, the Mexican government approved petitions for five land grants in what is now Yolo County, three of them on Cache Creek. William Gordon's 8,894-acre *Guesesosi* grant was made in 1842 and included land on both sides of Cache Creek. Gordon had a ranch north of the Creek where he grew the first grain in the county, and where travelers of all types were welcomed on their way through the area. The following year, Thomas Hardy was granted the 26,637-acre *Rancho Rio Jesus Maria*. Hardy's grant went without improvements until his death in 1848 when it was sold at auction. The *Rancho Cañada de Capay* was granted to Francisco, Demesio, and Santiago Berryessa in 1846 but ownership changed to Jasper O'Farrell the following year. O'Farrell wasted no time in subdividing the rancho for sale to incoming settlers. The communities of Madison, Esparto, and Capay are on lands included in the 40,079-acre *Cañada de Capay.*

Beginning with William Gordon's ranch on Cache Creek, agriculture was quickly established as the chief economic pursuit in the Cache Creek Valley, though access to water for irrigation was a concern. In 1856, William Gordon deeded land and water rights to James Moore for the purpose of building an irrigation canal. Moore's canal was the beginning of Yolo County's extensive dam and ditch system. Subsequent years saw water from Cache Creek irrigating vast tracts of Yolo County farm land, and the county's irrigation system receiving international notice.

The rural/agricultural character of the Cache Creek Valley has not changed significantly since William Gordon first settled in the area. Though farm acreage, population density, and the kinds of crops produced have changed, agriculture remains the economic base of the valley. Large tracks of land dotted by farm complexes dominate the cultural landscape. Many of the buildings and other landscape features (i.e., dams, canals, and railroad grades) within the planning area can be traced to the first decade of this century or earlier.

Description of Local Environment

Research found that the lower Cache Creek basin contains geologic formations consistent with fossil-bearing deposits, and that paleontological specimens are likely to occur within the planning area. Moreover, the ample and diverse natural resources of the lower Cache Creek basin have made it the focus of human use over an extended period of time, beginning as early as 5,000 years ago and continuing into the present. There are documented prehistoric and historic cultural resources within the planning area. The following cultural resources summary was prepared using published and unpublished literature, maps, existing cultural resources studies (including those for specific mining projects), and the Technical Studies for the Cache Creek Resource Management Plan (EIP et al. 1995).

Twelve prehistoric archaeological sites are present within the planning area; six are within areas for which mining applications have been submitted. Two areas containing historic-era archaeological materials are also within the planning area. Historical resources (and potential historical resources) are more abundant. In addition to fourteen documented historical resources and one historic district, the planning area contains 153 mapped locations of buildings, building complexes, and structures predating 1946. Two historical resources recognized by the State are within the planning area; the Capay School site is listed as a Point of Historical Interest, and the Gordon Cemetery is listed in the California Inventory of Historic Resources.

The present study also reveals that fossil localities are present in the gravels within the boundaries of the planning area. However, these localities are scarce and their position within the planning area is not predictable. No *in situ* paleontological sites are known to exist. The fossils that have been located in the gravels are disarticulated mammoth skeletons which are not in place. Rather, the skeletons, with one exception, have been eroded out of Pleistocene gravels and have been transported by Cache Creek to the sites where they were found. Thus the fossils are usually poorly preserved.

Field inspections of all archaeological deposits within mining application areas were completed to insure the accuracy of their reported locations, and to assess their current conditions. In sum, six prehistoric archaeological sites and two areas containing scattered historical materials were examined. Site conditions were found to be generally the same as those described in existing documentation. With regard to the built environment, field inspection found that many of the buildings and structures shown on historical maps are still standing and currently are in use; most have not been evaluated with regard to their legal significance. Paleontological field inspections were made at six localities, five within Cache Creek and one at the southern end of the Dunnigan Hills. One possible fossil was found within the planning area during the field investigation. It was discovered on the north bank of Cache Creek, north of Capay.

Regulatory Setting

Yolo County addresses the importance of preservation of cultural resources in Exhibit "D" of their General Plan. The policy of preservation of cultural resources is supported by federal and state legislation. On the federal level the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. Section 4321 et seq.) and the National Historic Preservation Act of 1966 (NHPA; 16 U.S.C. Section 106) regulate the treatment of cultural resources. The California Environmental Quality Act (CEQA; Public Resources Code Sections 21083.2, 21084.1), and the State Historical Building Code, regulate the preservation of cultural resources at the state level. In addition, treatment of human remains, if found, is regulated by state Health and Safety codes (Ch. 1492 and Section 7052), and the state Penal Code (622.5) covers the destruction, defacing, or injury of any item or site of archaeological or historical interest. Paleontological resources are protected by the California Public Resources Code 5097.5.

The National Register of Historic Places (NRHP; 36 CFR 60) sets forth criteria for evaluating cultural properties under NHPA. California Public Resources Code 5024.1 establishes criteria of eligibility for resources to be listed on the California Register of Historical Resources. These criteria, which are related to the criteria for eligibility on the NRHP, are used in evaluating the significance of cultural resources under CEQA (Section 21084.1).

IMPACTS AND MITIGATION MEASURES

Standards of Significance

This project would have a significant effect on cultural resources if it would:

- Disturb paleontological resources.
- Disturb archaeological resources.
- Disturb historical resources.
- Disturb cultural resources that are: a) listed upon or eligible to be listed upon the National Register of Historic Places(NRHP); b) registered or eligible to be registered as a State Historic Landmark; or c) included in any responsible local inventory of historic properties.
- Have the potential to cause physical change which would affect unique ethnic cultural values.
- Restrict existing religious or sacred uses within the potential impact area.

Impact 4.11-1
Potential Impacts to Cultural Resources

Draft OCMP and Implementing Ordinances

The OCMP would allow a substantial increase in surface mining to occur over the next 30 years in the lower Cache Creek area. The process of surface mining would significantly impact cultural resources where they occur within or adjacent to areas of land modification in the planning area. Direct impacts to cultural resources would result from ground disturbing activities (e.g., gravel mining, bank stabilization, construction, use and maintenance of access roads). Indirect impact could result from collection of fossils and artifacts by mining personnel, and by the public where land is reclaimed for recreational use. These would be significant impacts requiring mitigation.

The draft OCMP addresses cultural resources in Performance Standard 2.5-3; it reads:

> If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If any cultural resources such as chipped or ground stone, historical debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the County.

As written, the performance standard for cultural resources in the draft OCMP (above), and the associated section of the draft Off-Channel Surface Mining Ordinance (10-4.405), does not adequately address the issue of cultural resources. The performance standard lacks provisions for identifying cultural resources prior to commencement of aggregate mining, and for evaluation of cultural resources by a qualified professional.

Alternative 1a: No Project (Existing Conditions)

Under this alternative the County would not adopt the OCMP, and mining would continue based on 1995 actual production.

Current in-channel mining permits were issued in 1980 and were subjected to environmental review at that time. The County attached no specific conditions of approval regarding cultural resources. An archaeological survey was conducted for the EIR by ACRS, Inc. (1979), and five prehistoric archaeological sites were identified. Cultural resources management standards have changed significantly since that time, especially in terms of the built environment, historical archaeological sites, and paleontological remains. Review of previous studies pertinent to existing mining permits found that they do not conform to current cultural resources management standards. Specifically, historical resources (i.e., buildings, structures, and historical archaeological deposits) were not taken in to account during archival research and field study. Direct impacts to such resources would occur through ground disturbing activities such as mining; construction,

use, and maintenance of access roads and processing facilities; and demolition of buildings. Indirect impacts would result from alterations of the settings of historic buildings, and from the collection of fossils and artifacts by mining personnel. These would be significant impacts requiring mitigation.

Alternative 1b: No Project (Existing Permits and Regulatory Condition)

Under this alternative the County would not adopt the OCMP, and mining would continue based on currently approved maximum allocations. Existing permits and regulatory conditions would remain in effect.

Current in-channel mining permits were issued in 1980 and were subjected to environmental review at that time. The County attached no specific conditions of approval regarding cultural resources. An archaeological survey was conducted for the EIR by ACRS, Inc. (1979), and five prehistoric archaeological sites were identified. Cultural resources management standards have changed significantly since 1980, especially in terms of the built environment, historical archaeological sites, and paleontological remains. Review of previous studies pertinent to existing mining permits found that they do not conform to current cultural resources management standards. Specifically, historical resources (i.e., buildings, structures, and historical archaeological deposits) were not taken into account during archival research and field study. Direct impacts to such resources would occur through ground disturbing activities such as mining; construction, use, and maintenance of access roads and processing facilities; and demolition of buildings. Indirect impacts would result from alterations of the settings of historic buildings, and from the collection of fossils and artifacts by mining personnel. These would be significant impacts requiring mitigation.

Alternative 2: No Mining (Alternative Site)

Under this alternative no mining would occur within the planing area, and there would be no impacts to cultural resources. However, there is the potential for impacts to cultural resources in off-site mining locations.

Alternative 3: Plant Operation Only (Importation)

Under this alternative no mining would occur within the planning area. Existing plants would continue to operate processing raw material imported from outside the county. There would be no impacts to cultural resources within the planning area. However, there is the potential for impacts to cultural resources in off-site mining locations.

Alternative 4: Shallow Mining (Alternative Method/Reclamation)

This alternative would permit shallow mining within the same total mined acreage (2,932 acres) assumed for the OCMP, and would result in substantially less gravel tonnage than is assumed for the OCMP. The process of surface mining would significantly impact

cultural resources where they occur within or adjacent to areas of land modification in the planning area. Direct impacts to cultural resources could result from removal of soil, and from creation, use and maintenance of access roads. Indirect impacts could result from the collection of fossils and artifacts by mining personnel. These would be significant impacts requiring mitigation. Under this alternative, direct and indirect impacts to cultural resources would be the same as those for the OCMP.

Alternative 5a: Decreased Mining (Restricted Allocation)

This alternative would limit gravel extraction to 2.26 million tons annually over thirty years, and would limit mining to half of the land area (1,105 acres)assumed for the OCMP. This process would significantly impact cultural resources where they occur within or adjacent to areas of land modification in the planning area. Direct impacts to cultural resources could result from removal of soil, and from creation, use and maintenance of access roads. Indirect impacts could result from the collection of fossils and artifacts by mining personnel, or by the public where land is reclaimed for recreational use. These would be significant impacts requiring mitigation.

In comparison to the OCMP, the potential for impacts to cultural resources is reduced under this alternative since the total acreage subjected to surface mining is less than is assumed for the OCMP.

Alternative 5b: Decreased Mining (Shorter Mining Period)

This alternative would permit mining off-channel though allocations would be assumed on half the land area (1105 acres). The duration of mining permits would be limited to 15 years, with a potential 10-year permit renewal based on performance. Permits would be reviewed every five years to account for unanticipated changes in environmental or regulatory circumstances. The process of surface mining would significantly impact cultural resources where they occur within or adjacent to areas of land modification. Direct impacts to cultural resources could result from removal of soil, and from creation, use and maintenance of access roads. Indirect impacts could result from the collection of fossils and artifacts by mining personnel, and by the public where land is reclaimed for recreational use. These would be significant impacts requiring mitigation.

The potential for impacts to cultural resources is reduced under this alternative since the total acreage is less than is assumed for the OCMP. Moreover, periodic permit review would allow upgrading of cultural resource studies in light of changing management standards.

Alternative 6: Agricultural Reclamation (with Mining Operations as Proposed)

This alternative would allow off-channel mining to occur as proposed in the OCMP, but would require that reclamation be 80 percent agricultural and 20 percent slopes, habitat, and/or open lakes. This alternative would increase the total amount of disturbed acreage

to 5,250 acres through earth-borrow activities on lands not proposed for mining in order to generate pit fill material. This process would significantly impact cultural resources where they occur within or adjacent to areas of land modification not only in mining areas but also in earth-borrow areas. Direct impacts to cultural resources could result from removal of soil, and from creation, use and maintenance of access roads. Indirect impacts could result from the collection of fossils and artifacts by mining personnel, and by the public where land is reclaimed for recreational use. These would be a significant impacts requiring mitigation. Compared to the OCMP, this alternative more than doubles the amount of acreage subjected to earth-disturbing activities, and increases the potential for impacts to cultural resources.

Mitigation Measure 4.11-1a (OCMP, A-4, A-5a, A-5b, A-6)

An additional performance standard shall be added to the OCMP to protect cultural resources as follows:

> *Damaging effects on cultural resources should be avoided whenever possible. If avoidance is not feasible, the importance of the site shall be evaluated by a qualified professional prior to commencement of mining operations. If a cultural resource is determined not to be important, both the resource and the effect on it shall be reported to the County, and the resource need not be considered further. If avoidance of an important cultural resource is not feasible, a mitigation plan shall be prepared and implemented. The mitigation plan shall explain the importance of the resource, describe the proposed approach to mitigate destruction or damage to the site, and demonstrate how the proposed mitigation would serve the public interest.*

In addition, Performance Standard 2.5-3 of the OCMP shall be modified as follows:

> *If human skeletal remains are encountered during excavation, all work within seventy-five (75) feet shall immediately stop, and the County Coroner shall be notified within twenty-four (24) hours. If remains are of Native American origin, the appropriate Native American community identified by the Native American Heritage Commission shall be contacted, and an agreement for treating or disposing, with appropriate dignity, of the remains and associated grave goods shall be developed. If any cultural resources such as chipped or ground stone, historical debris, building foundations, or paleontological materials are encountered during excavation, then all work within seventy-five (75) feet shall immediately stop and the Director shall be notified at once. Any cultural resources found on the site shall be recorded by a qualified archaeologist and the information shall be submitted to the County.*

The modified performance standard described above would mitigate potential impacts to archaeological resources to a less-than-significant level.

Mitigation Measure 4.11-1b (A-1a, A-1b, A-2, A-3)

None required. Impacts to cultural resources within areas where mining currently is permitted or in off-site areas are subject to existing State and Federal regulations and restrictions related to the disturbance of cultural resources.

Implementation of the above mitigation measure would reduce potential archeological impacts to a less-than-significant level.