f. Natural resources, except for water, shall not be extracted from areas of dedicated open space.

g. Both public and private efforts shall be directed to preserving the open space values of historical landmarks.

h. The zoning and subdivision ordinances shall be implemented to assure that valuable open space resources on both public and private properties will be preserved. Encourage and utilize other existing County programs for protection and enhancement of scenic corridors, including but not limited to: design review, sign control, landscaping and berming, undergrounding utilities, scenic setbacks, density limitations, planned unit developments, grading and tree removal standards, and open space and conservation easements.

i. A variety of vistas shall be provided and preserved ranging from the small enclosed private views to the more distant views shared by the community. The viewsheds of 1-80, Auburn-Folsom Road, King Road, Indian Hill Road, Clark Tunnel Road and Penryn- Taylor Road shall be protected to preserve existing scenic vistas of the Sacramento Valley, Loomis Basin Foothills, high peaks of the Sierra Nevada, and Folsom Lake.

j. Conserve visual resources of the community, including important vistas, wooded areas, and in particular the riparian habitats of Miner's Ravine, Secret Ravine, Mormon Ravine, Antelope Creek and their tributaries, and other natural drainageways which are important in providing low cost natural flood control.

k. Maintain heavily vegetated corridors along circulation routes to preserve their rural nature and perceived value as natural noise buffers. Roads and other public works projects shall incorporate aesthetic values, as well as utility, safety and economy.

l. Require development of all building sites and residences in a manner minimizing disturbance to natural terrain and vegetation, and maximizing preservation of natural beauty and open space. Where urban uses are called for in the Plan, attempt to balance the needs of such projects with this policy.

m. Enhance and protect scenic resources visible from scenic routes in the Plan area. The use of soundwalls to mitigate noise impacts along roadways is generally inconsistent with other policies of this Plan related to maintaining the rural character of the area. Alternative mitigation measures such as setbacks, landscaped berms, or relocation of structures are generally preferred over soundwalls.

n. In cooperation with the Resource Conservation District, identify those segments of watersheds and wetlands affecting the American River/Folsom Lake, Secret Ravine, Antelope Creek, Miner's Ravine, Mormon Ravine, and other waterways important to water resource protection which are in need of rehabilitation through revegetation and implement a plan for same. Wherever development removed vegetation important to watersheds, require as a part of the environmental review process that revegetation methodologies for watershed protection be identified and implemented.

o. Assure that removal of economic mineral resources does not conflict with surrounding land uses or the stated desire for maintaining the natural environment.

p. Protect natural areas along creeks and canals through the use of non-development setbacks with setback distances varying according to the significance of the area to be protected.

4. **Discussion**

Open Space is any parcel or area of land or water essentially unimproved and/or designated for any of the open space uses defined in Section 65560 of the Government Code; open space for the preservation of natural resources, open space for the management and production of resources, open space for outdoor recreation, and open space for health and safety.

a. **Preservation of Natural Resources**

These areas include land providing habitat for fish and wildlife species as discussed in the preceding Natural Resources section. A non-development setback buffer has been designated along the Plan area's perennial and intermittent streams to protect these environmentally sensitive areas from urban encroachment. Folsom Lake is also a unique feature of the Plan area with dramatic views visible from adjacent ridges.

In addition to protecting the area's biological resources, buffer corridors will help maintain water quality and provide for flood protection.

b. **Management and Production of Resources**

Included in this open space category are agricultural lands used in the production of food or fiber. Small farming operations and cattle-raising occur to a limited extent throughout the Plan area.

c. **Outdoor Recreation**

This open space category recognizes public parklands, including County regional parks and the Folsom Lake State Recreation area, and the area's public school properties. Also included are open space areas along major County roadways which provide a scenic drive, as well as mitigation for traffic noise. Additional open space areas are provided on large acreage rural parcels when considered as an aggregate, constitute a sizeable amount of visual open space.

d. **Public Health and Safety**

These open space areas include public agency water reservoirs and sewer ponds located within the Plan area.

5. **Implementation**

The Community Plan allows the ultimate development of approximately 5,000 total dwelling units in the Plan area, in addition to a limited amount of industrial and commercial development. Of the estimated 16,620 acres in the Plan area, over 85 % is designated for Rural Residential (2.3 to 4.6 acre minimum parcel size) or Rural Estates (4.6 to 20 acre minimum parcel size) development. These large acreage land use designations are intended to ensure that country estates and ranchettes can coexist in harmony with small agricultural operations and encourage hobby farms, animal husbandry, and other rural pursuits which together will provide a significant amount of open space in the Plan area.

A majority of the Plan area's remaining undeveloped land has been zoned to facilitate Planned Unit Developments (PUDs) located in the Penryn Parkway area, and the area between Folsom Lake and

Auburn-Folsom Road in the southeast portion of the Plan area. PUDs allow for the retention of large open space areas in exchange for clustering the project's developable areas away from sensitive natural resources.

Open space areas can also be provided by implementing the following measures during the review of future development proposals.

a. Require dedication of open space easements and other appropriate conditions during the review of development projects to preserve and protect open space resources.

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit Fees

b. Use specific zoning classifications to implement appropriate land use development criteria including minimum parcel size, setbacks, height restrictions, maximum lot coverage, and limitations on the use of land.

   Responsible Agency/Department: Planning Department
   Time Frame: As part of the adoption of the Horseshoe Bar/Penryn Community Plan
   Funding: General Fund

c. Encourage PUDs where appropriate as a tool to preserve environmentally sensitive open space areas.

   Responsible Agency/Department: Planning Department
   Time Frame: On-going
   Funding: Permit Fees

d. Impose setbacks from wetlands for projects subject to discretionary review including, but not limited to, tentative subdivision maps, conditional use permits, design review, grading permits, etc.

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit Fees

e. Require appropriate conditions of approval to provide open space as a component of the land development review procedure.

   Responsible Agency/Department: Development Review Committee
   Time Frame: On-going
   Funding: Permit Fees

D. CULTURAL AND PALEONTOLOGICAL RESOURCES

1. Purpose

The areas identified in the Horseshoe Bar/Penryn Community Plan have both shaped the lives of the people who resided there and been shaped by those people and their diverse cultural traditions. The Community Plan area, and all of Placer County, derives much of its sense of

identity from the rich fabric of our local history. This heritage is retained and made more tangible to the present generation through the existence of the historical properties and prehistoric sites that have survived the passage of time.

It is imperative that strong measures be taken to preserve and protect these material elements of our heritage from the encroachment of development. If these physical remnants of our history are allowed to deteriorate or be destroyed, we will be losing a significant portion of our identity as a community. Such losses are irreversible and a tragedy for both present and future generations.

The following goals, policies and implementation recommendations are intended as measures to assure that future generations will have the opportunity to form a sense of community pride and identity from the achievements of the people that lived before them.

2. GOALS

a. PRESERVE AND PROTECT THE SIGNIFICANT PALEONTOLOGICAL, PREHISTORIC, HISTORICAL, AND NATURAL RESOURCES, INDIVIDUALLY AND COLLECTIVELY FOR FUTURE GENERATIONS.

b. ASSIST THE CITIZENS OF THE PLAN AREA IN BECOMING ACTIVE GUARDIANS OF THEIR COMMUNITY'S CULTURAL RESOURCES. EXPLORE INCENTIVE PROGRAMS TO ENCOURAGE THE PRESERVATION AND ENHANCEMENT OF CULTURAL RESOURCES.

c. COORDINATE WITH AND COOPERATE WITH THE SURROUNDING JURISDICTIONS FOR THE MUTUAL GOAL OF PRESERVING THE CULTURAL HERITAGE OF PLACER COUNTY. ENCOURAGE NEIGHBORING COMMUNITIES TO UNDERTAKE CULTURAL RESOURCES INVENTORY TO CREATE A COMPLETE RECORD OF CULTURAL RESOURCES FOR PLACER COUNTY.

d. INITIATE CONTACT WITH LOCAL NATIVE AMERICAN ORGANIZATIONS AND REPRESENTATIVES TO ASSURE THAT THE NATIVE AMERICAN COMMUNITY HAS EARLY ACCESS TO THE PLANNING PROCESS.

3. POLICIES

a. Identify and protect from damage, destruction and abuse, Placer County's important historical, archaeological, and cultural sites and their contributing environment (i.e. setting). When possible, incorporate these resources, particularly historical vegetation or vista points, into Open Space areas.

b. Create and implement a Placer County Cultural Resources Ordinance to identify, evaluate, and mitigate impact to all categories of significant cultural and natural resources.

c. Require site-specific studies as part of the environmental review process, for paleontological, prehistoric, historical and natural elements in all instances where land development or property demolition has the potential to have a detrimental impact on a possibly significant cultural resource or historic structure (i.e. buildings aged 45 years or older). Whenever possible, projects should be planned to avoid adverse impacts to cultural resources. Avoidance strategies are preferred over mitigation of the impacts.

d. Develop an effective program of landmark designation, utilizing the standards of the existing state and national programs, and develop local criteria to assure that significant cultural resources are recognized and protected. All documentation of cultural resources shall conform to the standards and formats recommended by the California Office of Historic Preservation

e. Develop an effective educational program which stresses the importance of the County's cultural resources, and purports ways to maintain the integrity of these resources. Encourage the owners of both identified and unidentified cultural resources to perceive these resources as assets rather than liabilities.

f. Develop a master plan for the acquisition and management of cultural and natural resources that are either very significant to the region, or are in imminent danger of destruction.

g. Structures of historic or architectural significance shall be identified and documented, and efforts shall be made for their preservation.

h. Use existing and promote proposed legislation for the identification and protection of cultural resources.

i. Designate the stand of historical palm trees located along English Colony, Butler, Del Mar, Sisley, Clark Tunnel, and Newcastle Roads as "landmark" trees pursuant to the Placer County Tree Ordinance.

j. Protect portions of Taylor Road from the east entrance of the Newcastle tunnel to Callison Road, and Sisley Road from Callison Road to Taylor Road, as historical resources that should be maintained in their historic concrete fabric. (Board of Supervisors' Resolution #93-289)

4. **Archaeological and Historical Resources**

a. **History**

The first inhabitants of the area were Indians who resided in many small villages located adjacent to the streams of this upper portion of the Dry Creek watershed. The Maidu Tribe of the Penutian Empire, the predominate tribe in the basin, subsisted primarily on the long acorns from the great oaks growing in this gently rolling and hilly foothill area. This manner of life was disturbed as early as 1825 by Yankee trappers and hunters coming down the water course of the "Rio de los Americanos", the American River.

Even before the Gold Rush in 1849, a few hardy pioneers had passed through the area. Claude Chana, preceding the Donner Party by a few weeks, brought with him the seeds of fruits and nuts which he planted successfully in nearby Bear River Valley. Chana also discovered gold in the immediate area of Ophir shortly after the initial discovery by James Marshall at Coloma. Change to the basin came soon, almost overnight. Sturdy prospectors swarmed into the area, washing the stream beds and digging the hillsides in search of their treasure.

During the 1850's, miners worked Secret Ravine and a few farmers and ranchers moved into the area. With the organization of Placer County in 1851 and the influx of miners, farmers, and businesses into the area's settlements, a considerable amount of travel was generated.

Passengers and freight made their way to and through the area on the stage coach routes from Sacramento. Small settlements, consisting mainly of road houses sprang up at the overnight coach stops. In the 1860's, the ground work was laid for the area's sustained growth and prosperity. In 1861, the first of many granite quarries began operation in the areas of Rocklin and Penryn. These quarries became an important factor in the economic well-being of the basin providing both revenue for the owners and jobs for local residents.

In 1864, the Central Pacific Railroad pushed up from the railroad junction City of Roseville through the basin to Newcastle. In addition to the farmers and miners who originally settled in the area, many Chinese immigrants who were brought in for construction of the railroad remained after its completion. The towns of Rocklin, Loomis, Penryn, and Newcastle arose along the railroad tracks.

In 1868, the tracks were pushed over the Sierra's and by 1872 had made the transcontinental link with lines to the east. This established an overland route and opened the way to eastern markets for the fruits beginning to come into production in the area. As early as 1868, cultivation of deciduous fruits on a commercial scale had begun around Loomis, Penryn and Newcastle.

By 1880, considerable acreage had been planted and the many mining ditches of early days were put to use carrying irrigation water to the orchards. From the 1860's to the present, the area's history has generally centered around the granite quarries and fruit industry.

Many remnants of past history remain in the area today. The Bradley Station, Union House, Rose Spring House, Auburn Station, and Long Valley House were sites along the stagelines and railroads which came into existence, and were sustained for a time by the area's inhabitants and travelers.

A number of sites have also made their way onto State registers of historical sites. The town of Ophir and the Pioneer Express Trail have been designated as State Monuments, and Penryn has been designated as a point of historical interest by the State of California. .

b. **Discussion**

There have been a total of 52 cultural resources recorded as archaeological sites or isolated features within or immediately adjacent to the Plan area. As of June 1992, 21 of these sites and 2 isolated artifacts/features have been reviewed by the State and/or North Central Information Center. The remaining 29 sites have not been formally reviewed and processed. The sites which have been reviewed include 6 prehistoric village sites, all with surface artifacts and associated bedrock mortars (grinding rocks). Some of the villages are known to include human remains, burials, and at least one Indian cemetery. The majority of the remaining recorded sites include primarily bedrock mortar features, some of which have scattered stone artifacts and early historic artifact debris. Historically, major ditches associated with early mining and settlement have been recorded, as well as four quarries (granite/gravel) and other locations of old foundations, rock walls, etc. This range of sites is very typical of the foothill region which was one of the most densely populated areas both during prehistoric and early historic times.

In addition to the historic sites which have been recorded by archaeologists, there are also many features which have been recognized as State Landmarks, National Register properties or other points of special interest. These include the Griffith House and Griffith

Quarry in Penryn, the route of the Pioneer Express Trail and the route of the First Transcontinental Railroad. In addition to the Pioneer Express Trail, the old Auburn-Folsom Road and a section of the California Passenger Railroad are located within the Plan area. Several stations along the roadway include the Mountaineer House, Franklin House, Long Valley House, and Carlands. Historical old towns include Loomis, Rocklin, Penryn and Stewarts Flat.

The Plan area also includes the Penryn and Rocklin Mining Districts, including the noted Mary Len, Alabama and Sicily mines. Specific locales of intensive mining activities include Secret Ravine, Horseshoe Bar, Lacy's Bar, Manhattan Bar and Rattlesnake Bar. Also important to the local history, although not specifically identified, are the numerous water ditches which traverse the Plan area. Most of these canals were originally constructed during the Gold Rush, even though many have been altered to meet modem standards.

Furthermore, there are a total of 32 reports of archaeological surveys and 3 special studies within the Plan area. Seven of these have been processed into the North Central Information Center's library, with the remaining Pending future review. These various studies have resulted in the survey (field inspection) of less than 5 percent within the Plan area.

In addition, the Placer County Board of Supervisors recently adopted Resolution #93-289 designating portions of Taylor and Sisley Roads in the Penryn area as a historic resource worthy of protection. These roadways were part of the first inter-continental highway system (Lincoln Highway) built in the United State between 1913 and 1916.

Today, portions of the original road still exist with the original concrete roadbed intact. Two sections of this original highway are Taylor Road from the east entrance of the Newcastle Tunnel to Callison Road, and Sisley Road from Callison Road to Taylor Road. These sections of highway still retain their historic concrete fabric and will remain undisturbed pursuant to the Board of Supervisors Resolution.

These pieces of road meet the criteria set by the California Office of Historic Preservation for built historical resources, and also are potentially eligible for inclusion in the National Register of Historic Places.

c. **Implementation**

Based upon archaeological reports and historic references, the local topography, numerous drainages and a wide variety of natural resources, as well as what we know from the ethnographic literature, the Horseshoe Bar/Penryn area is generally of high sensitivity for both historic and prehistoric resources. The results of the survey work support this assessment (32 reported site surveys as of June, 1992). Almost all survey reports discuss one or more finds.

The amount of acreage that has been surveyed is estimated to be less than 5% of the total Plan area. Based on the number of resources already identified in such a limited area of the Plan, it is anticipated that at least 1000 of the sites or isolated artifacts could be discovered if a 100% survey was done.

There are variations in the sensitivity level throughout the Plan area. Zones near water sources such as creeks, rivers and springs were generally preferred living areas and of course much of the early mining was concentrated near the creeks and ravines. Also critical

for portions of this area are the granite outcrops that were used for early day stone quarries, the old transportation routes, and the settlements of Penryn, Rocklin, and Loomis The areas adjacent to drainages and immediately around known historic features are classified as high sensitivity, with most of the remainder considered in the moderate to high range.

The Horseshoe Bar/Penryn Community Plan area is a region with a particularly rich cultural heritage. Based on the study of existing archaeological records conducted as part of the Placer County Cultural Resources Inventory, Phase II (See The Report of the Placer County Cultural Resources Inventory, Appendix J), it appears that the probability of prehistoric sites being on any given parcel would be moderate to high. Protection of these resources cannot be stressed enough.

The survey also pointed to the increasing loss of historical properties that relate to the agricultural era of Placer County's history. Care should be taken to preserve the remaining remnants of this era, both in the form of built resources (farm houses, fruit sheds, etc.) and in the form of historic plantings (canopy palms, old orchards, and historic landscaping).

Perhaps, most critically, Placer County needs to take steps to preserve the few remaining properties that can be directly associated with the English Colony or Citrus Colony.

Care should also be exercised to preserve the physical remains of the granite quarrying industry in this region. A number of the quarries have already been filled in, making those still existing resources all the more important to preserve.

Finally, in order to retain the rural character and charm of this region, steps should be taken to preserve it's historic roads and bridges, wherever possible. The following implementation measures should be followed to ensure that the goals and policies of this chapter are realized:

1. Because of the moderate to high sensitivity rating for most of the Plan area, it is believed that all future projects which will involve potential ground disturbance be requested to provide a project specific record search as a part of environmental review. Based on the results of the record search, specific recommendations for archaeological or historical field survey, archival research, architectural evaluations, etc. could be made. In most cases, a field survey would be required.

   Responsible Department: Department of Museums/Planning Department
   Time Frame: On-going
   Funding: Permit Fees/Impact Fees

2. If, as a result of an archaeological or historical field survey, sites of significance are discovered, the sites should be made known to the Placer County Department of Museums' office whose staff and volunteers are currently conducting a cultural resource inventory throughout Placer County.

   Responsible Department: Department of Museums/Planning Department
   Time Frame: On-going
   Funding: Permit Fees/Impact Fees

3. In the event that Native American remains and/or associated grave goods are discovered at any time during project review or construction, the project proponent shall stop work (if during construction or excavation) and contact the County Coroner and the Department of Museums.

   Responsible Department: Department of Museums/Planning Department
   Time Frame: On-going
   Funding: Permit Fees/Impact Fees

4. Except for extremely sensitive archaeological sites, all sites not recognized and identified by signs or monuments as part of some State or Federal program should be identified and nominated for appropriate historical designation by the Placer County Historical Advisory Board.

   Responsible Department: Department of Museums/Planning Department
   Time Frame: On-going
   Funding: Permit Fees/Impact Fees

5. It is important that all historical sites are protected from destruction or demolition. Therefore, avoidance/protection is preferred over recordation and destruction. The few remaining significant structures in the area should be protected by the existing owners or purchased by the appropriate public agencies.

   Responsible Department: Department of Museums/Planning Department
   Time Frame: On-going
   Funding: Permit Fees/Impact Fees

6. Hire a Cultural Resources Officer.

   Responsible Department: Department of Museums
   Time Frame: 1993
   Funding: General Fund

7. The mature stand of palm trees located along English Colony, Butler, Del Mar, Sisley, Clark Tunnel and Newcastle Roads are recognized as historical vegetation unique to the Penryn area as defined in the County's Cultural Resources Inventory. These trees should be preserved and replaced as necessary utilizing Tree Preservation Fund monies. In addition, these palm trees should be designated as "landmark" trees pursuant to the Placer County Tree Ordinance.

   Responsible Agency/Department: Departments of Museums and Planning/Parks Division
   Time Frame: Commencing in 1995/0n-going
   Funding: Tree Preservation Fund

5. **Paleontological Resources**

a. **History**

Much of the paleontologic interest in the Plan area stems from the potential for discovery and identification of marine and terrestrial vertebrate, and paleobotanical fossils. This

important and rare attribute of the Sierra Nevada foothills region is a result of its former position at or near the shoreline of the inland seaway that occupied the present Central Valley area during most of the time represented by its rock record. Sea level fluctuations caused alternating deposition of marine and nonmarine sediments, providing potentially favorable conditions for preserving fossils of animals and plants of both environments. The area thus provides temporal links between the sequences of fossil assemblages ("time scales") historically developed independently for the terrestrial and marine environments. Such links have increased in importance as geological and paleontological research has focused on short-term worldwide events such as mass extinctions and possibly environmental change.

All but the youngest of the formations have been tilted from their original horizontal position by geologic forces that caused the uplift of the Sierra Nevada range. Gradual, long-term erosion has removed parts of these formations so that rocks and included fossils of various ages are not at or near the surface throughout most of the Plan area. Those formations or parts of the formations now exist at or near the surface as bands outcrop with varying width across the terrain, but are obscured in most areas by soil, vegetation, or thin deposits of surficial sediment. Thus, visual detection of fossils is possible in those areas where natural erosion or human-made excavations have removed this cover.

For land use planning purposes, those areas shown as Tmh (Mehrten Conglomerate) in Exhibit G are areas of high sensitivity and potentially contain paleontological resources. In addition, all areas south of Horseshoe Bar Road, especially low-lying areas, are categorized with a high sensitivity rating.

b. **Discussion**

The potential for finding fossils in the Plan area has been estimated on the basis of the distribution of known nearby localities, local geologic trends, and details of rock characteristics in the area. The reliability and resolution of these estimates depends on the amount of data available for the immediate vicinity. Published literature and museum records provided preliminary data and revealed broad-scale trends. Field survey for new development projects will considerably improve the resolution of these estimates, but surficial coverage of large areas is likely to prevent highly detailed delineation of possible small-scale fossiliferous zones. Because vertebrate fossils are typically rare, even in areas considered to have "high" potential, the absence of known localities cannot be taken as evidence for the absence of fossils.

Locality data is therefore supplemented, when possible, with detailed information about specific rock characteristics. Fossils may exist in nearly all types of sedimentary rock or unconsolidated alluvial deposits because the entire southern two-thirds of the Plan area contains potentially fossiliferous rock units. Such rock or deposits are at and near the surface; therefore, paleontological resources could be present, and impacts could occur at any point along the route. However, very young sedimentary deposits are of such limited paleontological interest that impacts on them may be considered inconsequential. Additionally, in agricultural areas, deep cultivation probably has already adversely affected or destroyed any fossils that may have existed.

c. **Implementation**

Buildout of the Community Plan will potentially disturb significant paleontological resources important to the scientific community. However, incorporation of the following implementation measures during the review and approval of new development projects should adequately protect these sensitive resources for future study.

(1) Implement the preceding goals and policies intended to preserve and protect significant paleontological resources.

Responsible Agency/Department: Planning Department in consultation with Department of Museums
Time Frame: On-going
Funding: Permit Fees

(2) During the design and review of new development projects, developers shall consult with the Placer County Planning Department and Department of Museums regarding the need for a site-specific paleontological resources report which contains the following elements:

(a) Identify and evaluate paleontologic resources by intense field survey where potential impacts are considered high.

(b) Assess effects on identified sites.

(c) Consult with the institutional/academic paleontologists conducting research investigations in the geological formations that will be affected.

(d) Obtain comments from researchers.

(e) Proceed with the project in light of researchers' comments to mitigate adverse effects. The concerns of other interested persons will be considered throughout the mitigation process.

Responsible Agency/Department: Planning Department in consultation with Department of Museums
Time Frame: On-going
Funding: Permit Fees

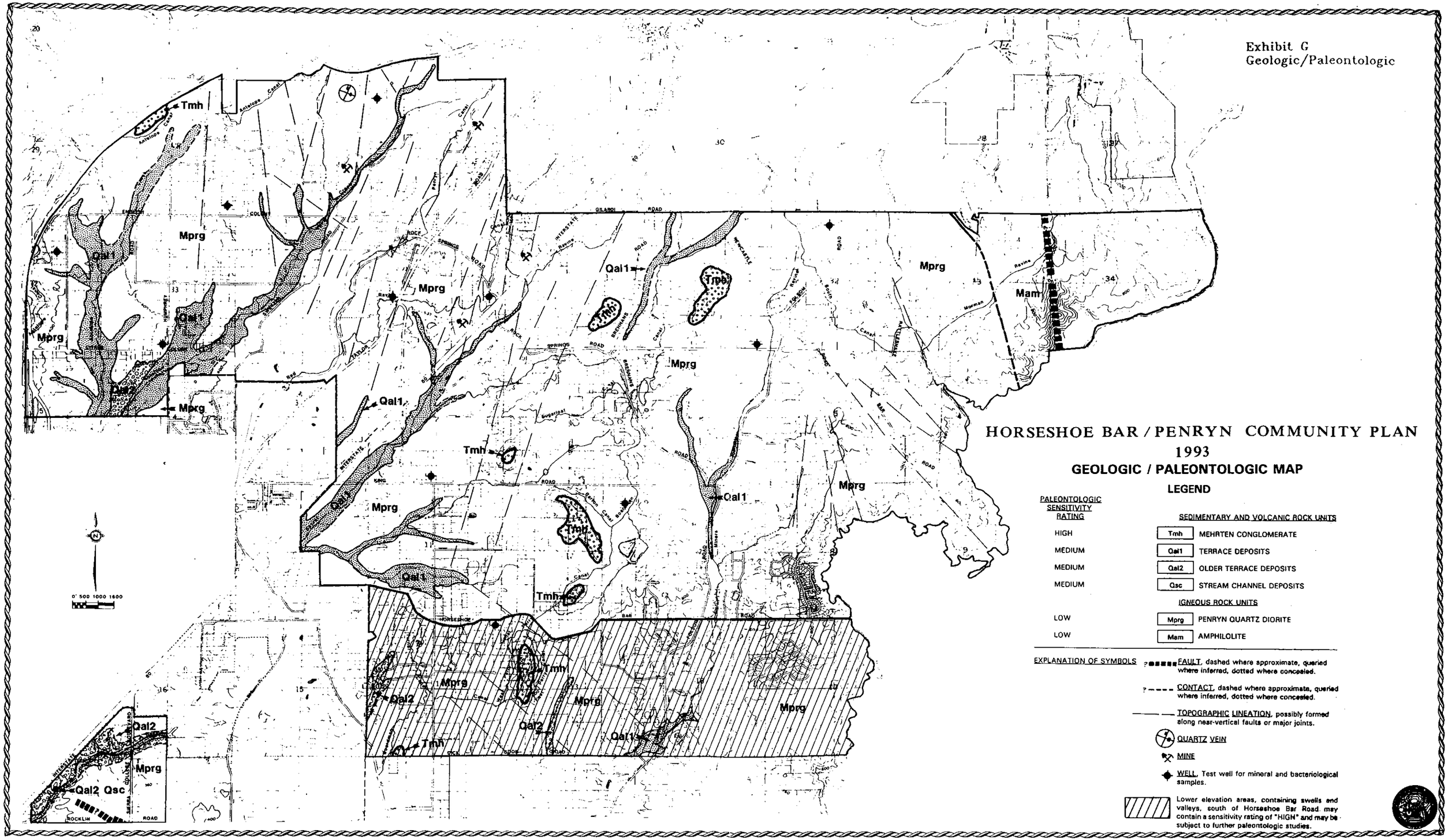
(3) Construction should be located to avoid known paleontologic resources only where these resources have been determined by detailed investigation to be considered unique in a particular geologic rock unit or formation (e.g. vertebrate faunal or paleobotanical floral - quarry site).

Responsible Agency/Department: Planning Department in consultation with Department of Museums
Time Frame: On-going
Funding: Permit Fees

(4) Generally, residential lot sizes of 2.3 acres or greater are not found to have any potential for significant impacts due to the reduced possibility for intense soil disturbance.

Responsible Agency/Department: Planning Department
Time Frame: On-going
Funding: Permit Fees

Exhibit G
Geologic/Paleontologic



HORSESHOE BAR / PENRYN COMMUNITY PLAN
1993
GEOLOGIC / PALEONTOLOGIC MAP

LEGEND

PALEONTOLOGIC SENSITIVITY RATING		
		SEDIMENTARY AND VOLCANIC ROCK UNITS
HIGH	Tmh	MEHRTEN CONGLOMERATE
MEDIUM	Qal1	TERRACE DEPOSITS
MEDIUM	Qal2	OLDER TERRACE DEPOSITS
MEDIUM	Qsc	STREAM CHANNEL DEPOSITS
		IGNEOUS ROCK UNITS
LOW	Mprg	PENRYN QUARTZ DIORITE
LOW	Mam	AMPHILOLITE

EXPLANATION OF SYMBOLS

- ?■■■■■ FAULT, dashed where approximate, queried where inferred, dotted where concealed.
- ?- - - - CONTACT, dashed where approximate, queried where inferred, dotted where concealed.
- ——— TOPOGRAPHIC LINEATION, possibly formed along near-vertical faults or major joints.
- QUARTZ VEIN
- MINE
- WELL, Test well for mineral and bacteriological samples.
- Lower elevation areas, containing swells and valleys, south of Horseshoe Bar Road may contain a sensitivity rating of "HIGH" and may be subject to further paleontologic studies.