MASTER PLAN

FLOOD COUNTY PARK MASTER PLAN

Prepared By

Parks and Recreation Division

San Mateo County

1983

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I. SUMMARY

Flood County Park is located in the east central portion of San Mateo County, within the limits of the City of Menlo Park. This site is within a stone's throw of the Bayshore Freeway, the major north/south artery of the county. It is located in an urban area of moderate to above moderate homes in an area adjacent to Bay Road. The park is composed of land owned by the County of San Mateo and a sixty foot right-of-way for two large water pipes owned by the City and County of San Francisco, and known locally as the Hetch-Hetchy Aqueduct. The area, including the aqueduct right-of-way, comprises 21 acres.

The park's principal resources are its flatness, its accessibility to high-population areas, and its native oaks and bay trees. Two species of oak are predominant: Quercus lobata and Quercus agrifolia. Its flat topography and location have led to its development for intensive recreational use.

The basic goal of the General Plan is to reassess the existing uses of the park, analyze their impact on the native oaks and bay trees, and to determine how the land can be better used and still maintain and preserve the resource. Traditional uses such as baseball fields, petanque, tennis, and family and group picnicking have been analyzed to determine the highest and best use of the land.

II. INTRODUCTION

PURPOSE

Flood County Park is essentially a community park, operated within a city by San Mateo County. It has achieved this status because it is the second oldest County Park in the County Park System. At the time it was developed (1936), the cities of San Mateo County offered little in the way of recreational parks. Its purpose at that time was to fill a need in this particular part of the county.

The basic purpose of this plan is to assess the natural character and resources, as well as the existing recreational resources, and to propose compatible development and management policies which will best allow the public to appreciate the area and its particular resources. This Master Plan will define some of the special needs and restrictions of the park, and the degree of development and uses that will be allowed. Future specific plans will be a further step in the process of plan implementation.

This Master Plan consists of the following elements:

The <u>Resource Element</u> is a summary of the natural and cultural resources of the area, and sets the management policies for protection and use of these resources.

The <u>Land Use and Facilities Element</u> describes current and proposed land uses and relevant planning issues, and describes proposed facilities and programs.

The Operations Element describes specific operational requirements.

The <u>Interpretive Element</u> outlines the program to be used in interpreting the natural resources of the area to the park visitor.

In preparing the plan, several initial goals and objectives have been established to serve as a general guide. Goals and objectives are:

- 1. To identify the park's cultural and natural resources.
- 2. To identify the site's environmental and use problems, and to provide solutions.
- To determine land use, park development, and visitor activities that are compatible with the purpose of the park and the surrounding area.
- 4. To determine the potential environmental impacts of the land uses and visitor activities.
- 5. To establish policies for maintenance and operations, protection and preservation, development, and interpretation of the resources.
- 6. Establish a sequence of park development.

7. To provide an information document for the public, park commissions, State and County personnel, and other governmental agencies.

PROJECT DESCRIPTION

Flood County Park is located on Bay Road in the City of Menlo Park, between Willow Road and Marsh Road. The park is bordered by Bay Road on the west, middle to moderate income residences to the north and south, and a closed elementary school and the Belle Haven Motel on the east. Its proximity to heavy population and service areas attracts people with diverse backgrounds and needs from the local area, the county, and from the entire Bay Area.

The project area is completely developed. Every square foot of the park has been disturbed in some manner by park development, such as parking areas, picnic sites, a baseball field, a softball field, a petanque court, volleyball courts, restroom, tennis courts, a playground, a maintenance area, a Park Ranger residence, and an administration building.

PROJECT HISTORY

In the early 1930's, a special tax was levied in the County of San Mateo to provide for parks and recreation facilities in various regions of the county. It was at this time that funds became available for the purchase of 21 acres in the Menlo Park area of a portion of the old Flood Estate. Most of the estate was being sold off for subdivisions at that time. This particular portion had been used for the grazing of cattle and horses. It was primarily flat grassland, with scattered oaks, such as one observes on some of the Stanford property in Palo Alto today. Funds, however, were not available for development. About 1936, it was determined that the development of Flood County Park would become a project of the Works Progress Administration (WPA), a relief agency established at that time to provide work for those without jobs during the Great Depression. An engineer named Ronald Campbell was hired to supervise the program and prepare development plans for the park. All the work accomplished at that time was done by WPA labor, donated materials and services, and financed by a grant from the Federal Government.

The facilities installed at that time were the Administration Building, swimming pool, the maintenance area, the residence, and picnic sites. After World War II, and in the early 1950's, parking, a baseball field, a softball field, and tennis were added. During that period, the County administered recreation programs at Flood. The cities had not yet developed facilities for this capability and were entirely dependent upon the County. Flood became a mecca for county residents and for San Franciscans seeking warm weather and relief from the fog.

Since that time, very little development has been added to the park, and it has been maintained very much as it was in those early days. Uses have changed, however, and all of the cities in the county now have active recreation programs and facilities of their own, no longer

relying on the County. Facilities such as the swimming pool have succumbed to the ravages of time, and have been removed. The emphasis on use at Flood has gradually changed to more of a regional use. Its cheif use is for group picnics and baseball games.

Attempts have been made to have funds appropriated for redevelopment, particularly for the rehabilitation and regeneration of the prime resource, which is the Heritage Trees. But, demands for other facilities in the county, and the emphasis on the Charter for Parks Program of acquiring and developing new facilities have made it difficult to have funds set aside for Flood, which is essentially an established park, with established uses. In the 1982/83 budget, \$50,000 was appropriated for a new Master Plan. A consultant was selected, and a contract presented to the Board of Supervisors, which decided that a better expenditure of the funds could be made elsewhere. The Board did, however, allow a \$5,000 stipend to be set aside for a student intern program to assist in evaluating the facilities at Flood, and determine what could be done to improve the existing facilities. A student intern was hired, and prepared a very thorough Master Plan Analysis, which is the basis for this Master Plan document. Based on the analysis, schematic plans were prepared, and it was determined that the major emphasis should be the rehabilitation of the area containing the major Heritage Trees; Quercus lobata, Quercua agrifolia, Unbellularia californica, and Sequoia sempervirens. It was also determined that the bulk of the existing facilities could remain and be accommodated, along with a better utilization of space. The Parks and Recreation Commission, in 1983, approved this approach, and authorized the preparation of this Master Plan.

III. RESOURCE ELEMENT

INTRODUCTION

The purpose of the Resource Element for Flood County Park is to establish the long-range resource management objectives and policies necessary to protect and perpetuate the resources on which the park was established. This element identifies significant resource features, and establishes guidelines for acceptable levels of development and use. The specific application of these resource management guidelines will require further study, testing, and field application. In the long run, a successful program of resource monitoring will help to confirm the specific methods of management to achieve the objectives outlined here. This Resource Element is divided into two parts. The first is an inventory summary; the second part is the policy portion of the document, which begins with Unit Classification and extends through Specific Resource Management Policies to find the allowable use intensity for various areas of the park.

NATURAL RESOURCES

Climate

Climate is generally mild, typical of California coastal valley and foothill areas. Slight afternoon breezes off the Bay moderate the temperature so that extremes are rare. Winds are predominately from the northwest and southeast. Wind speeds are highest in Spring and Summer, and lowest in Fall and Winter. Night and morning winds are frequently light, or calm, during all seasons. Summer afternoons and evenings are often windy. The area air pollution potential has been termed high, due to the restriction of lateral mixing of pollutants by the topography, and a high frequency of low wind speeds.1

Average annual rainfall: 15.3 inches

Rainy season: November - April

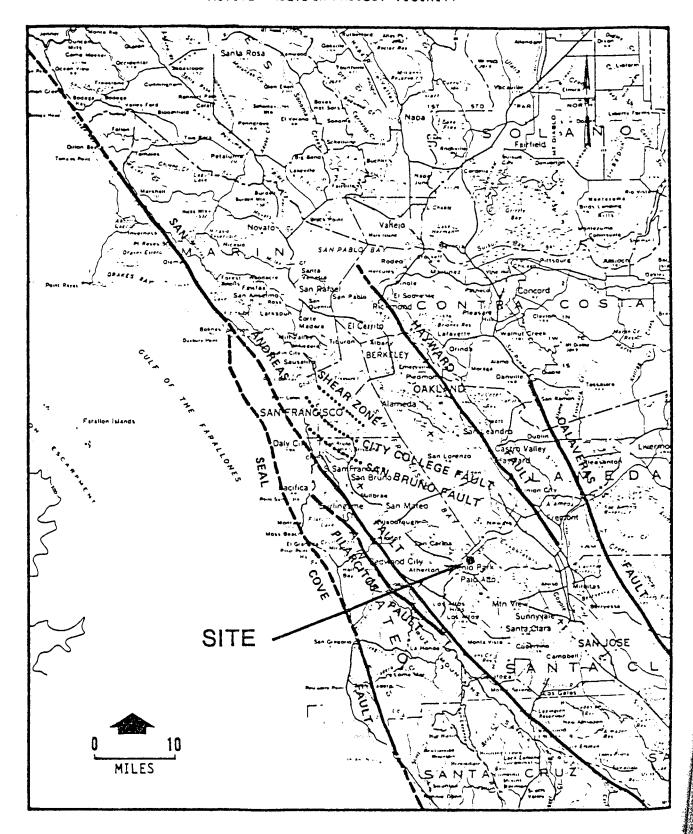
Average January temperature range: 37 low, 55 high

Average July temperature range: 54 low, 77 high

Average relative humidity: 54%

1 - Bay Area Air Pollution Control District 1971

ACTIVE FAULTS IN PROJECT VICINITY



SOURCE: Woodward-Clyde Consultants

FIGURE 2

Geology and Soils

The park is underlain by medium dense to dense sandy and silty clays, which overlie silty clays and claystone containing lens-like deposits of sand and gravel. There are many active faults in the region (Fig. 2). A detailed report would be necessary to determine the density and strength of the soil materials and the earthquake hazards for park structures.2

Topography and Hydrology

Topography does not vary more than eight feet over the entire site, but this does not result in major drainage problems. Ponding does occur in such places as the parking areas, certain lawns, the softball infield, the baseball infield, the buffer area near the gas shed, and in Picnic Areas No. 1 and 4.

The only drainage facility is the open channel along the Flood School and Belle Haven Motel boundary and a catch basin in that same area. A drain pipe extends from Bay Road easterly along the southern boundary and connects to this catch basin, but no connections to this pipe are evident.

2--See U.S.G.S. Field Study Map MF575 - Lajoie and Others

Plant Life

The plant life at the park is composed of both native and endemic plants, and introduced exotics. The only native plants existing today on the site are the so-called Heritage Trees, which include old growth Quercus lobata, Quercus agrifolia, Umbellularia californica, and some Sequoia sempervirens, which were introduced and are not endemic. Other introduced native plants are Quercus engelmannii, Sequoiadendron gigantum, Pinus radiata, Pinus ponderosa, Pseudotsuga menziesii, Prunus illicifolia, Prunus lyonii, Arbutus menziesii, Aesculus californica, Libocedrus decurrens, and Heteromeles arbutifolia.

There are a variety of non-native tree and shrub species which have also been planted in the area over the years, some of which achieved considerable size, and are noteworthy for that reason. There are also extensive lawn areas consisting of non-native grasses, which are heavily irrigated and maintained for intensive uses, such as baseball and softball. A complete list of the tree and shrub species found in park can be found in the Appendix.

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Animal Life

Flood Park provides habitats for squirrels and for numerous birds. The establishment of additional habitats is hindered by intense use of the site, and the adjacent urban development. No rare, endangered, or threatened species occur on the site. Domestic animals are excluded from the park.

Squirrels

- 1. The eastern gray squirrel is an introduced species from the eastern U.S. These tree dwellers are gray or gray-brown, and look much like the western gray squirrel, but are smaller and the tail is more sparse. The body is usually 8 to 10 inches long. They are usually in the areas near the oaks.
- 2. The Chickadee or Douglas Squirrel is a tree-dwelling squirrel that can be seen scurrying under the trees after the people leave the park. It is typically dark, reddish-brown, and is approximately 8 to 12 inches long.
- 3. The western gray squirrel is a large, leaping tree squirrel with a fluffy plume-like tail. They feed on acorns, and are the largest squirrels in the park, with a body about 12 inches in length. They can be seen in the same areas as the above two squirrels.

Birds

1. California Quail

This is one of the more rare birds in the park, seen only occasionally. Its habitat in the park is the area near Bay Road and the entrance of the park, by the ranger's house. These native birds are generally associated with bushland and adjoining grassland areas. (9"-11".)

2. House Sparrow

This immigrant from Europe was introduced to the U. S. over a century ago, and it has taken over rapidly. It is not really a sparrow, but a finch. In Flood Park, it generally stays in the trees adjacent to buildings, as the name implies. (5"-6".)

3. Mockingbird

This gray and white bird is common to areas with mixed brush and open country, and can be seen in almost any area in the park with tall trees. This bird is native to the lower Sierra areas and westward, from the Mexican border to Sonoma County. (10"-11".)

4. Brewer's Blackbird

Usually, these blackbirds can be seen foraging in the grasses of the baseball field. They are a common bird in suburban areas, and wherever there is open grassland. (8"-10".)

5. Mourning Dove

The mourning dove is one of the more shy birds in Flood Park. It is seen mainly on the high wires surrounding the park, hiding in the monterey pines along Bay Road, and in the south end of the park. $(10\frac{1}{2}"-13".)$

6. Brown Towhee

This towhee looks much like a robin, except for the absence of the big red breast. They forage for insects in the areas along the fences where the leaves cover the ground, and they blend in well with the environment. (8"-10".)

7. Robin

Commonly associated with open woods and grasslands, the robin is widespread in Flood Park, staying close to the trees, and sometimes foraging out in the baseball field. (10"-11".)

8. California Thrasher

This bird also likes to forage for insects, with its long beak, under the oaks in the park.

9. Black-Capped Chickadee

Mainly inhabiting oaks and twittering in groups of two's and three's, these small birds are residents of the coastal slopes and forests and oak woodlands. They stay mainly high in the trees. $(5"-5\30".)$

10. Plain Titmouse

This small bird stays high in the trees and probes for insects in the cracks of branches. They stay in the area by the ranger's house, and are shy when people come near. In California, they reside in bushes and streamside woods. $(5"-5\frac{1}{2}".)$

11. Scrub Jay

The most abundant bird in the park, this jay can be seen in all areas of the park; high in the trees, or foraging in the leaves. These birds are very common in parks, and in areas with mixed woods, oaks, and streams. They are not as afraid of people as many of the other birds. (11"-13".)

Deby Basher West Valley College Intern, 1978-1979

ESTHETICS

Flood Park provides a variety of colors, forms, and space for enjoyment by park users. The most important esthetic resources are the heritage oaks, and bays because of their size, beauty, and historical relationship to both the natural environment and the James Flood Estate. The lawn areas are also important, because they provide urban open space for passive and active recreation, and allow park users to view the landscape.

CULTURAL RESOURCES

Native American

Flood Park is located within the ethnographic confines of the area formerly occupied by the Costanoan dialect group, a sub-unit of the Penutian linguistic group. The Costanoan occupied the area generally located south of the intersection of the Sacramento and San Joaquin Rivers with San Francisco Bay, west of the Mount Diablo Coastal Range, and north of Point Sur. This area included the southern section of the San Francisco Bay. The Costanoan practiced the hunting, fishing, and gathering economy, and traded primarily with the plains Miwuks, Sierra Miwuks, and Yukuts. Limited information is available regarding the Costanoans and their culture due to the fact that they were dominated and integrated with other regional native American cultures in a relatively short period of time by the Spanish/Mexican mission system.

The available information regarding this culture has been derived from a combination of ethnographic records, mission records, and excavation and interpretation of the shell mounds surrounding San Francisco Bay. The mission period generally existed from 1770 to 1835. Most Costanoans were recruited to work in the missions and were sent either to Mission Dolores in San Francisco, Mission San Jose in Fremont, or Mission Santa Clara in San Jose.

By the time of the secularization of the missions, the aboriginal populations were amalgamated into a uniform culture. This process was completed by the westward movement of the Anglo population, and the Costanoans were considered extinct as a distinct population group by the late 1920's.

The Flood Park site has never been subjected to detailed archaeological surveys. No evidence of aboriginal habitation, however, exists in the park today, inasmuch as all available space has been developed in some way, shape or manner. There are no features of prehistoric significance noted within the park area.

Euro-American

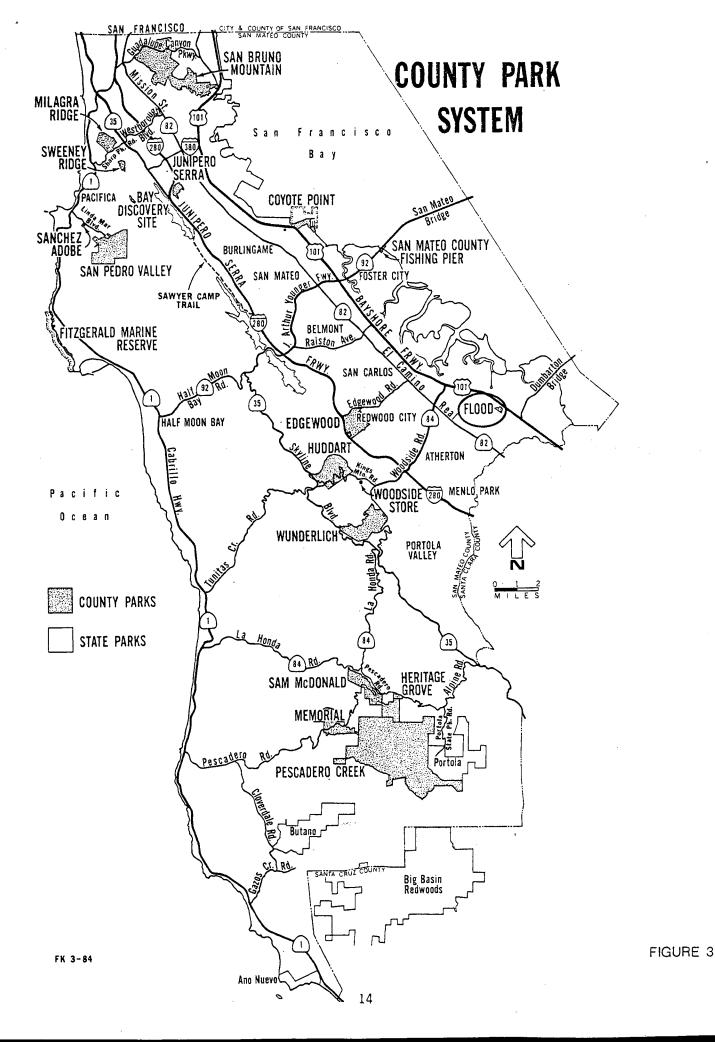
Flood Park is located within the old Spanish Rancho de las Pulgas, which included most of present-day Redwood City, Atherton, and Menlo Park. Most of the area within the initial historic record period came under the rule of the Spanish Mission System, and was

used for cattle and sheep grazing range land. In 1821, Mexico declared independence from Spain. In 1824, the new country adopted the Federal Constitution of the United Mexican State. In conjunction with the new constitution was the secularization of the Pueblo (church) lands, and the adoption of the Colonization Act of 1824. This latter act provided for the grant of ranchos and certain properties to Mexican citizens. Conditions of the grant included the necessity of physically occupying the land, including the construction of buildings, and the stocking of the area with cattle or other livestock. Between this period and American occupation most of the valuable grants were conferred, and the better portion of the country settled upon and claimed by private parties.

In April 1846, war was declared between the United States and Mexico. Prior to the commencement of the war, there were probably less than a dozen foreign settlers within the limits of San Mateo County. Following the close of hostilities, however, immigrants were rapidly settling in the country due to the discovery of gold in January of 1848. This produced an enormous tide of immigration, which lasted until about 1853. The first legislature convened in San Jose in 1849, and the area known as San Mateo County was embraced within the limits of the County of San Francisco. In April 1856, San Mateo County was formed.

By the Treaty of Peace between the United States and Mexico, signed in 1848, the former government stipulated to respect and confirm all existing Spanish and Mexican grants in California, and in March of 1851, the Congress of the United States passed an act aimed at settling private land claims in the State of California. Under the act, three commissioners were appointed to carry the law into effect. Claims on 11 ranchos in San Mateo County were confirmed, the first of which was Rancho de las Pulgas, considered the most valuable in every way, and the most important grant in the county. In 1852, Maria de la Soledad Ortega d'Arguello, and her two brothers, Jose and Luis were confirmed as the grantees on an area bounded on the south by San Francisquito Creek, on the north by San Mateo Creek, on the east by San Francisco Bay, and on the west by the eastern boundary of Rancho Canada de Raymundo. As the years progressed, portions of the rancho were sold off, subdivided, and developed.

It was in 1874, that Menlo Park was incorporated. Prior to the passage of the Southern Pacific Railroad in 1863, there was not even the nucleus of a village, but with that event Menlo Park grew into the proportions of a small town. It was about this time that James Clair Flood, the son of an Irish immigrant who cashed in on the Comstock Lode and became an extremely wealthy man, purchased a 600-acre tract known as the Carroll property in Menlo Park. It was bordered by parts of Middle field Road, Sweeney Avenue, San Francisco Bay, Willow Road, and Ringwood Avenue. It was on this property, just off Middlefield Road, that James Flood built an opulent residence known as Linden Towers.



Recreation Resources

Following, are the original buildings at Flood Park:

- 1. A park ranger residence is located along Bay Road, between the entrance and the maintenance area, constructed of adobe brick made on site. The site occupies approximately 10,000 square feet, and the building, 1,000 square feet.
- 2. The shop building was located adjacent to the old children's playground, and was divided into four areas. The woodshop area was in the raised portion of the building with the loading dock, and occupied approximately 500 square feet. The office area was next to the woodshop, and was approximately 60 square feet. Across the hall from the office, and next to the woodshop, was a storage room of about 1,000 cubic feet. The main workshop was approximately 750 square feet, and was at ground level.
- 3. The quonset hut was a temporary storage building next to the shop, and was divided into three areas. The building, used for additional storage of tools and supplies, was about 75 feet long and 20 feet wide (1,500 square feet).
- 4. The gas shed was located along the adobe wall bordering the first parking area, and was used for storage of flammable materials.
- 5. The office complex was located between the petanque courts and the main lawn, and was composed of two structures. The first was the administration building, which was made from on-site adobe. This building was composed of the following:
 - Meeting Room, 500 square feet
 - Remodeled breezeway, now the office, 220 square feet
 - Lunch room
 - First-aid room, 100 square feet
 - Bathroom
 - Hallway, with lockers

The second was the former concession building.

- 6. The utility building was located on the east end of the petanque area. It was also made from on-site adobe. It was originally part of the swimming pool complex, and later served as a shelter for the park electrical meters and boxes.
- 7. The ballfield equipment building was used for storage or equipment for maintenance and operation of the field.

8. The restrooms:

No.	Location C	onstruction	Stalls	Men Urinals	Sinks	Women Stalls	Sinks
1	Adjacent to west Parking Area	Adobe	1	1	1	2	1
2	In Loop Area	Adobe	2	Trough	1	6	2
3	Betw.softball & tennis cts	. Adobe	1	1	1	2	. 1
4	Baseball field	Cinder Bloc	k 1	1	1	1	1

-- See Facilities Inventory 1975

At the time this Master Plan was prepared, the following facilities existed:

- (1) Baseball Field 355' fence, bleachers for 300
- (4) Tennis Courts (4) Asphalt
- (1) Volleyball Court asphalt
- (7) Picnic Areas

Areas	# Tables
1	24
1A	13
2	10
3.	15
ЗА	8
4	14
Birthdayland	6

90 Tables for groups

57 Tables for families

- (1) Recreation Softball field 175
- (4) Open lawn areas
- (2) Pentanque Courts

- (1) Children's Playground
 - (4) Swings
 - (4) Creative play structures
 - (3) Tubes
 - (1) Whirl
 - (1) Rings
 - (1) Helix slide
 - (2) Horizontal bars
 - (1) Sandbox
- (5) Horseshoe Pits

Walking, jogging, bicycling paths

The utilities which existed at the time the Master Plan was prepared are:

Sewer:

There are two main sewer lines within the park. Restrooms #3 and #4 are connected to a line in Iris Lane. Restrooms #1 and #2 and the bathroom in the office are connected to a line in Bay Road.

Electrical:

There are two electric lines that enter the park from Bay Road. The first, is to the maintenance area. The second, passes through the oaks over lawn #3 to the old pool utility building, and is underground through some of the picnic areas, and overhead to the office. Restrooms #3 and #4 do not have electricity.

Water:

Water lines cover most of the park and all of the water is potable. The main valve is by the entrance at the end of Iris Lane. Exact locations are unknown.

Gas:

The office is provided with gas for the stove, water heater, and the furnace. The line passes through lawn #1 from Bay Road. The exact location is unknown.

Storm Drain:

The only storm drain is the open channel adjacent to the east property line.

Solid Waste

Solid waste is collected in up to 80 cans distributed throughout the park, or is picked up by hand. The cans are dumped by hand into a dump truck. Solid waste collection consumes a large majority of the total available manhours during the peak season.

Circulation, Access, and Parking

The majority of existing users drive and park personal vehicles. These people use routes which include some combination of U. S. Highway #101, the Dumbarton Bridge, Willow Road, Marsh Road, or Ringwood Avenue. Less than 5% use the bus, which stops at a sheltered location less than one block from the park entrance. Other park users ride bicycles, or walk. The people from the east side of U. S. Highway #101 cross the pedestrian/bicycle bridge just south of the park and use the east side pedestrian gate.

Circulation and access within the park outside of the parking areas is for pedestrians and bicycles only. Vehicular access is permitted for loading, unloading, and for handicapped persons.

Handicap circulation is excellent, due to the topography and pathways. There is no handicap access to the office and the restrooms. No special parking spaces are provided for the handicapped.

User Fees

Menlo-Atherton High School (Baseball Field) \$500.00/year

Peninsula Winter League (Baseball Field) 450.00/year - \$25.00/game - 18 games

Parking 2.00/car - 23,350/year

.25/person - from county

.35/person - out-of-county

\$7,520.00/year

TOTAL 1982 REVENUE - \$34,677.00

Picnic Reservations

RESOURCE POLICY FORMATION

Classification of Management Objectives

The Parks and Recreation Element of the County General Plan describes six classifications for recreation resources in the County Park System:

1. Park

- 2. Recreation Area
- 3. Natural Preserve
- 4. Wild area
- 5. Linear Park and Trail
- 6. Historic Site

The definitions of these classifications indicate that Flood Park is best classified as a recreation area. The following planning and management guidelines for a recreation area are listed below:

- 1. The prime objective should be the accommodation of a variety of compatible forms of recreation. Alteration of the environment and extensive maintenance may be necessary to handle intensive public use.
- 2. Nature interpretive facilities should be provided where opportunities exist, or where opportunities can be artificially created.
- 3. Development of park user facilities should receive prime consideration. Public facilities could be such that intensive public use is accommodated and special man-made features can dominate.

Policies

- 1. The County should provide outdoor park and recreation facilities that cannot be furnished physically, economically, or appropriately at the municipal level, or are difficult to accommodate in urban areas.
- 2. County facilities must be of county-wide significance (i.e., serve more than one city) and provide a uniform level of service to all residents.
- 3. The County should not duplicate the services provided by the State, and should not support facilities which primarily serve a regional or State-wide population. The County's role lies somewhere between municipal and State capabilities.
- 4. County facilities should emphasize the appreciation and enjoyment of natural outdoor settings, and provide activities which allow park users to be active participants.

- 5. The County must assure that sufficient funds are available for the appropriate maintenance and operation of its system. A balance must be struck between recreation need, environmental suitability, and fiscal capability during the formulation of any expansion program for the County Park System.
- 6. Coordination and cooperative agreements in acquisition, development, maintenance, management, and operation of recreation resources are encouraged.
- 7. Alternative sources of funding should be actively sought.
- 8. A transfer responsibility for operation and maintenance of facilities should be made where practical.

RESOURCE MANAGEMENT POLICIES

Flood County Park is managed by the San Mateo County Parks and Recreation Division. Its management will be generally guided by the goals and objectives outlined in this Master Plan, and within the broad requirements of preservation and enhancement of the natural features of the park. In addition, specific policies for management of the resources are as follows:

Soils Resources

Soils Susceptible to Erosion

Due to the flat topography, little or no erosion occurs within the park. There are no unstable soils, although the heavy clay consistency has a tendency to compact with great numbers of users.

Policy

All soils shall be protected from indiscriminate traffic, particularly those areas supporting heritage oaks and bay trees. Revegetation of these areas shall be made in a manner prescribed in Appendix 6.

Hydrologic Resources

Drainage

There are no specific hydrologic resources within the park. Inasmuch as there is a variation of only eight feet in the topography, the area is flat and poorly drained. Drainage structures consisting of an open paved ditch and a catch basin and culvert connecting into the city's storm drain system exist adjacent to the east boundary. All drainage in the park moves in this direction. Water, however, ponds in certain areas, particularly in the lawn areas in the southern portion of the park.

Policy

Consideration shall be given to the installation of an interior storm drain system as practicable, particularly the paved areas of the park.

Elimination of low areas within the park should be a high priority goal, inasmuch as soggy soils are difficult to maintain, and usually produce bad plant materials.

Plant Resources

Heritage Trees

The most significant natural features in the park are the heritage oaks, Quercus lobata and Quercus agrifolia, and the bay tree, Umbellularia californica. Certain of these trees have reached significant proportions and are outstanding examples of these species in this area. Due to overuse and unnecessary irrigation, many of these trees are suffering from rot, insect infestation, and other diseases. Some regeneration is occurring, but because of heavy overuse these individuals are sparsely located.

Policy

Impacts of development and human use shall be minimized in areas of heritage oaks and bays. All development shall be removed from the areas of highest concentration of these species, and intrusion minimized. Revegetation of the ground surface, using native, or other, grass and vegetation species, shall be undertaken, and only sufficient irrigation to sustain these species at the outset shall be used. A program of monitoring these species shall be undertaken by park staff in order to note changes of either a positive or negative character. A record of the monitoring shall be kept in written and/or photographic form.

Exotic Eradication

Because of the large numbers of exotic species planted in the park over the years, it would be virtually impossible to remove them without severe aesthetic impact. Where exotic plants threaten the native heritage trees, however, it is necessary to remove them.

Policy

Measures shall be taken to limit the growth of exotic and non-endemic species in areas now occupied by heritage oaks and bays. Existing mature trees shall be allowed to remain, if they do not represent a competitive element to the heritage trees. New seedlings, however, shall be permanently removed. Over the years, existing exotic and endemic species shall be thinned to permit better growth of individual trees, and allow more light at ground level for understory growth. Care shall be taken to preserve existing tree patterns for purposes of providing shade to users.

Animal Resources

Squirrels

The squirrels are actually the only evident wildlife within the park. The Eastern Grey, the Douglas, and the Western Grey occupy similar

habitats within the park compatibly, and seem to be interbreeding. They are pleasant to observe, and do not appear to be overbreeding, or otherwise damaging the habitat.

Policy

All effort should be made to encourage and protect the squirrel population in the park. Habitat areas shall be monitored for positive or negative changes.

Birds

The variety of birds inhabiting Flood Park are useful to the habitat, and enjoyable to observe.

Policy Policy

All bird species shall be protected and preserved in the most effective manner possible. Habitats and uses shall be monitored for positive or negative changes.

Feral and Domestic Animals

Because of the close proximity of urban development to the park, feral and domestic animals, especially cats, are frequently found in the park. Feral animals hunt and disturb native wildlife.

Policy

Feral and domestic animals shall be controlled and removed from the park.

Visual Resources

The generally open natural appearance of the park, particularly its native trees, is one of its great resources to the surrounding zones of development.

Policy Policy

In the planning and construction of future park facilities, care shall be taken to minmize their appearance and visual impact upon the surrounding areas. Whenever practical, facilities shall be located in zones screened from adjacent development. Native plantings and design shall be used to hide or soften exposed visual impacts.

IV. LAND USE AND FACILITIES ELEMENT

LAND USE

Flood Park provides a variety of existing local and regional park facilities. The main land uses are the baseball field, picnic areas, multi-use lawns, softball field, tennis courts, petanque courts, playground, maintenance area, residence, and the parking areas. (Fig. 4)

Use Patterns

Low Season (Mid-October-Mid-April)

The low season attendance is highly influenced by the weather because there are no indoor facilities at the park. However, it can reach 2,000 persons/week, or 700 persons/day on Saturday or Sunday. Most of the activity occurs around the playground, in the loop area, and on the multi-use lawns. In March, Menlo-Atherton High School begins its baseball season.

High Season (Mid-April-Mid-October)

Normal attendance ranges from 4,000 - 9,000 persons/week, or 1,200 - 2,400 persons on Saturday or Sunday. Weekday use at Noon on a clear day can bring over 200 people for picnic lunches, but afternoons are not busy. Weekends bring people who arrive before Noon, and stay for at least a five-hour period. When Saturday or Sunday attendance reaches about 1,800 people, and a baseball doubleheader is being played, space for picnic activity is limited. The picnic areas, softball field, lawn areas, and volleyball courts receive intensive use throughout the high season. The ball field is used as an overflow area for the rest of the park when possible, but is rarely used for anything other than baseball.

EXISTING PARK USES

Allowable use intensity is an estimation of the carrying capacity of a piece of land, and is a means for formulating a land use plan. Allowable use intensity is determined by analysis of three elements: management objectives, visitor perceptions, and potential environmental impact of development. The management objectives for Flood County Park are detailed under Resource Policy Formation, but generally include protection of the existing natural environment, while permitting use by the public for enjoyment of the site's resources. The second component, visitor perceptions and attitudes, involves assessing the social objectives of the County Park System; what park visitors perceive as an acceptable recreation environment; what degree of isolation or crowding is acceptable, and other perceptions and attitudes pertaining to the quality of the visitors' recreation experience. The third, and most important, component in determining allowable use intensity involves an analysis of the natural, cultural, and aesthetic resources to determine the areas's physical limitations for development of facilities, and the ability of the ecosystem to withstand human impact. This analysis is based upon a number of considerations, including cultural and aesthetic

resources, sensitivity, soils and their erodibility and compaction potential, geologic factors, such as slope stability and relief, hydrologic considerations, including the potential for pollution of surface waters, flooding, and depleting surface and ground water through water use, vegetation characteristics, such as durability, fragility, wild fire hazard and regeneration rates, and wildlife considerations, such as tolerance to human activity, wildlife population levels and stability.

Additional considerations in determining ecological sensitivity are: rare and endangered plants and animals, unique biotic features or ecosystems, and examples of ecosystems of regional or state-wide significance. Based upon the inventory summary, and other environmental investigations, a constraint map can be compiled. This constraint map will summarize the various environmental elements, which would limit or constrain the potential recreation development of any great magnitude. From the constraint map and the environmental inventory, allowable uses can be determined, ranging from low to high.

TOTAL ATTENDANCE BY ACTIVITY PER YEAR

Activity	1982	<u>1981</u>
Baseball	6,827	6,007
Birthday Party Land	1,346	1,777
Tennis	8,800	7,550
Softball	13,400	12,512
Volleyball	13,550	12,029
Spectators	7,818	7,346
Sightseeing	5,225	7,103
Playground	25,950	17,029
Horseshoes	3,400	2,561
Lawn Activity	35,950	26,915
Family Picnics	22,150	24,403
Group Picnics .	44,844	36,484
Petanque	600	?
Bicycles	3,530	3,521
Joggers	2,830	2,545
Total	189,131	165,782

USER GROUPS

Company Groups

Family Groups

Clubs and Organizations

Church Groups

Menlo-Atherton High School

Peninsula Winter League

Babe Ruth Baseball League

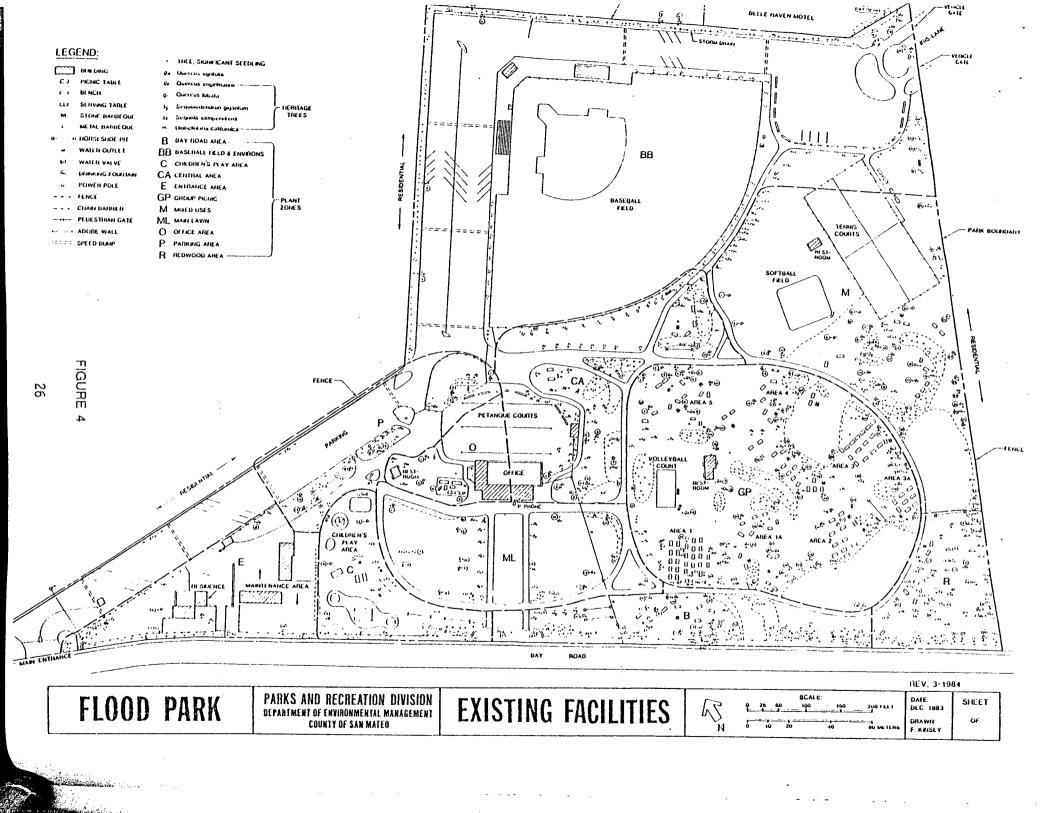
American Petanque Association

TOTAL ATTENDANCE BY ACTIVITY PER YEAR

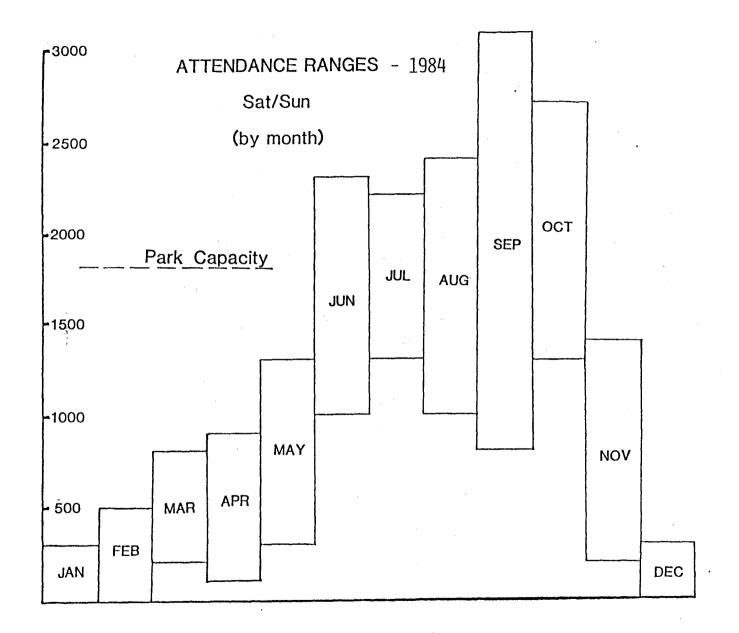
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USER GROUPS

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Family Groups
Clubs and Organizations
Church Groups
Menlo-Atherton High School
Peninsula Winter League
Babe Ruth Baseball League
American Petanque Association







ATTENDANCE BY GROUP RESERVATIONS BY AREA OF ORIGIN

Tabulated from 1982 Reservation Slips

County	# of Reservations	<u>0</u>	ut-Of-County	# of Reservations
Redwood City	79	S	an Francisco	41
Menlo Park	63	P	alo Alto/Stanford	19
San Mateo	32	M	ountain View	9
Burlingame	16	S	an Jose	5
San Carlos	14	. G	reenbrae	2
Daly City	13	R	ichmond	2
South San Francisc	o 12	L	os Altos	T
Belmont	12	N	ewark	. 1
San Bruno	8	S	anta Clara	1
Atherton	6	F	remont	1
Millbrae/S.F.Airpo	ort 5	U	nknown out-of-county	1
East Palo Alto	5	T	OTAL OUT-OF-COUNTY	<u>78</u> ·
Pacifica	5			
Foster City	3		78.3% From the County	
Brisbane	2		21.7% Beyond the Count	·
Portola Valley	1		11.1% San Francisco	
Half Moon Bay	1		6.7% Palo Alto, Mt. V	iew, Los Altos
Moss Beach	1		3.9% Others	
Hillsborough	1			r
Unknown in County	1	4	4,844 Group Picnickers	in 1982
TOTAL SAN MATEO CO	OUNTY 280			

TOTAL RESERVATIONS TABULATED - 358

REGIONAL RECREATIONAL NEEDS ANALYSIS

General

Flood Park is serving a dual role in area recreation by providing community facilities, such as tennis courts, playground, baseball field, urban open space, and regional facilities, such as large group-picnic areas and related activities. Recreation needs involve both types of these facilities.

California's recreation needs were assessed by the State Department of Parks and Recreation in 1982. The following is a summary of the results:

- Safe, secure recreation areas.
- Recreation areas and programs which increase opportunities for social inter-action, and bring people together.
- Recreation opportunities which do not require long travel time.
 (Improved public transportation networks.)
- Effective ways of informing people about recreation opportunities.
- Recreation opportunities which accommodate non-traditional leisure schedules.
- Nature-oriented parks in, and near, metropolitan areas.
- Concentration of new local parks where deficiencies exist, or in rapidly growing communities.
- Improved landscaping, maintenance, and security patrols for parks in inner-city areas.
- Incentives to promote private sector provision of nature-oriented facilities and programs.

Other Findings Are:

- Trends suggest that the largest increase in participation will be in non-strenuous outdoor activities. Strenuous activities will not increase at a rate as great as population growth.
- Parks should provide a maximum feeling of open space, with a minimum of support facilities for outdoor activities.
- Special populations (Black, Hispanic, Filipino, disabled, elderly, low-income, and autoless) engage in passive, readily available, close to home, and safe activities, are interested in nature-oriented activities, and feel social interaction and family-oriented activities are very important.

CONSTRAINTS

Social

The park's location and history have created social barriers which may turn visitors away. Some people may feel the site is "off limits," or that the park may still be having local problems as it did in the Sixties.

Political

It is a low priority park for development funds, due to its size and character relative to other county resources and its established development.

Some uses of the park have become traditional and would be difficult to change.

Financial .

The Charter for Parks Program expired in 1982, and funds are no longer available from this source. Local taxpayers are reluctant to vote tax increases. As a result, revenue for park improvements and maintenance will become increasingly difficult to obtain.

Reasonable user fees cannot cover all cost.

Site

The Hetch-Hetchy right-of-way passes directly through the park. No trees can be planted on the right-of-way, nor can any structures be built.

PLAN OBJECTIVES

Plan objectives for the park are:

- To protect and preserve the significant and unique natural resources of the park, including the Heritage Oaks and bays, as well as the existing animal population.
- 2. To preserve the outstanding scenic quality and open space character.
- 3. To minimize environmental damage caused by either the recreational development of the park, or urban development in surrounding areas.
- 4. To provide opportunities for a variety of recreational activities consistent with the character of the park site, and the protection of its resources.
- 5. To interpret the natural and cultural features of the park consistent with their long-term preservation.
- 6. To preserve the natural character of Flood Park as a landmark of local and regional prominence.

Objectives and Recommendations

To maximize mixed use of all areas and facilities compatible with the primary uses of each area or facility, consistent with the current and future needs of the people in the area.

Revise the design and the ballfield area to make more effective use of space, and to make it easier to maintain.

Relocate special interest uses, such as petanque, and the maintenance yard to peripheral areas.

Relocate the children's play area to a more central location.

Redevelop the parking areas so that circulation is more effective, and space is utilized more efficiently.

To adjust present use intensity to eliminate situations and circumstances which lead to public irritation, conflict, and environmental deterioration:

Create new use areas to eliminate use in the heritage tree zone.

Redistribute group picnic areas throughout the park.

Reorganize spatial relationships between clustered tables, facilities, and areas.

To minimize normal maintenance and operation expenses:

Modernize or reconstruct restroom facilities and irrigation systems.

Improve the solid waste collection process.

Develop a park maintenance program, including priorities, scheduling, and techniques for efficient use of time and money.

To assess reasonable user fees for special facilities:

Reevaluate current policies on fees.

Consider new techniques for generating revenue from park use.

To develop a specific management plan for the heritage tree resource:

Encourage the transition from an Oak Woodland ecology to a more tolerant ecology consisting of Oaks and more Bays, Redwoods, and other natives.

Properly maintain the best Oaks, even at the expense of the marginal Oaks.

To maximize usable space, open space, and visibility by removing spatial barriers:

Remove hedgerows.

Eliminate or change types of some fences.

Remodel the office for use as a visitor center.

To improve the aesthetic character of the park:

Utilize consistent and well designed signs.

Develop unified architectural design standards.

Improve maintenance capabilities.

Improve the parking areas and pathway systems.

To reduce risks from accidental injury:

Implement a pruning program as part of the maintenance manual.

Relocate softball fields to the ballfield area.

Improve emergency access; relocate the park entrance.

To provide information and facilities for public education and interpretation:

Establish a nature walk.

Develop a historical display reflecting Flood history and the Works Progress Administration's (WPA) role in park development.

To improve circulation:

Relocate the entrance.

Restructure, resurface, and reduce the size of the parking areas.

Meet handicap standards in all restrooms and public buildings.

Landscape Maturity

Many existing plant materials are mature, and should be replaced, where appropriate, with new plants to insure continuity, and improve eye-level attractions in the landscape.

PROPOSED LAND USE

The proposed land use in the park has evolved after an analysis of various alternatives. Inasmuch as the park has existed, and been heavily used, for almost 50 years, certain traditional uses and facilities have been considered "givens," and have been incorporated.

Among the important "givens" is the baseball field, which occupies approximately 30% of the usable park area, and directly serves fewer than 5% of the park's users. It also requires considerable maintenance, while producing less than \$1,000 per year in revenue. The space is psychologically and physically restricted to most park users, and additional use of this area could generate significantly higher revenues and annual attendance, thereby alleviating excessive uses in other areas. Inasmuch as it is the only high-standard baseball field in the area, and inasmuch as it serves local youth groups and highschool teams, it was considered necessary to keep the baseball field in some way, shape, or form.

Another "given" is the existing office complex. While the present use is inefficient and wasteful, and the building was planned for much different uses 50 years ago, the character and workmanship have historic value, particularly in relationship to the WPA era of the Great Depression when the park was constructed as a make-work project.

Another "given" is the Park Ranger Residence. While this residence, too, is almost 50 years old and needs extensive remodeling and rehabilitation, it is of the same era as the offic complex and has some historic significance. It also provides some measure of security for the park.

Additional "givens" are the tennis courts. The four existing courts are not nearly enough to meet the great demand, but they do serve the surrounding neighborhood, and they are used rather extensively. While the space could be used to a greater advantage, their location does not inhibit redevelopment of the surrounding area.

The last "given" to consider is the parking area. The westerly parking area is located within the Hetch-Hetchy Right-of-Way and contains two massive underground pipelines carrying water from the Sierra Nevada to San Francisco and Peninsula cities. Use of this right-of-way is restricted by the City and County of San Francisco. No buildings can be constructed, and no trees planted thereon. It seems logical that this portion of the parking area should remain in parking use. The easterly parking area, which connects to it, logically serves the easterly portion of the park very effectively, and seems to be a good use for the area.

With the aforementioned facilities as "givens" to be accommodated in the park Master Plan, a number of alternatives were considered:

- 1. Development as a regional park. This concept considered regional uses, such as family and group picnics, organized baseball, tennis, and petanque, along with related activities, as the prime uses. It featured large, open meadow areas for field games and lawn picnics, development of oak woodland habitat to preserve heritage trees, and redistribution of existing picnic facilities. Softball was to be accommodated in the baseball outfield.
- 2. Development as a community park. This involved redesigning the park to meet local park needs and requirements so that it would become attractive as a city park operation. Such a plan might feature organized field sports, tennis, court games, family picnicking, and recreation programs with a minimum of on-site parking.

3. Other alternatives.

- Park expansion. This alternative would require that the County purchase and redevelop the adjacent Flood School property, along with the adjacent Belle Haven Motel property. This would provide space for better relationships between uses and resources, and include existing buildings which, perhaps, could be used for community purposes. The acquisition would provide approximately seven additional acres of land between the Bayshore Freeway and the park. It has numerous advantages, but the cost of the acquisition (approximately \$575,000 for Flood School and, perhaps, \$300,000 for the motel) could not be justified without new revenue sources. Both sites would require extensive redevelopment before they could be used for park purposes.
- b) Sale of the park for residential uses. Flood Park could be sold, and the property used for housing, which is in great demand. The revenue from the sale, and the annual savings of operating expenses could be directed to other units of the Park System. Based on recreation needs, however, attendance figures and the Parks and Recreation Element of the County General Plan, the elimination of Flood Park as a recreation resource makes little sense. It is especially valuable because of its native environment, climate, proximity to diverse ethnic and income groups, and the continuing popularity of its facilities. It is unlikely that such a combination of park qualities and natural features could be replaced.
- No project alternative. The no project alternative would require no new changes in design or policy. All of the present uses would continue as they now exist. The no project alternative is unacceptable because the most valuable resource of the park, the Heritage Trees, is declining, and requires immediate management action. The most significant problem is a lack of regeneration caused by extreme overuse. A management program for the existing trees, and a redevelopment program for the existing facilities are necessary for the survival of this resource. The no project alternative would allow the current use to continue, and would speed up the gradual decline of the resource.

PROPOSED VISITOR FACILITIES

Based on the previously described given elements, the apparent need to provide regional facilities for families and large groups, and the reluctance on the part of the local government to accept Flood Park as a community facility, a regional park development incorporating the previously described "givens" has been proposed.

1. Park Entrance

The proposed park entrance will be located just easterly of the existing Park Ranger residence, passing through a major portion

of what is now the park's maintenance area from Bay Road. It will be a two-lane, paved road with curbs and gutters on either side terminating in an island containing a gatehouse. The existing park entrance will be abandoned, and it, and a portion of the parking area, will become the new maintenance yard.

2. Picnic Facilities

All of the group picnic facilities, now located within the heritage tree area, consisting of Areas 1, 1A, 2, 4, and 5, will be relocated and consolidated in other areas of the park. Group picnic facilities will be designed to accommodate units of 80 people. These units will be combined in a variety of shapes and configurations so that groups of up to 800 persons can be accommodated in one particular area. Facilities will include tables, work tables, serving tables, and barbecue pits. Tables will have wooden tops with metal bases, and the surface material beneath them, initially, will be wood chips, hopefully becoming asphalt paving at a later date.

3. Playground

The playground will be located in a central part of the park, just northeasterly of the Visitor Center. It will be largely wooden play structures of various types, comprised of multilevel platforms, swings, and various types of slides. The existing playground area will be assigned for development of group picnic facilities.

4. Baseball Field

The baseball field will remain in relatively the same location, except that it will be moved 60 feet in a southerly direction, and 40 feet in an easterly direction, occupying the existing parking space adjacent to Flood School and Belle Haven Motel properties. A new backstop, bleachers, dugouts, and restrooms will be provided. Right field sideline fencing and outfield fencing will be eliminated in order that softball fields can be provided in the left and right outfields, and a feeling of unrestricted open space can be achieved.

5. Parking

Parking will remain in relatively the same areas as now exist, except that a portion of the westerly parking area will be taken up by the maintenance yard and the layout will be reconfigured so that the main circulation will be on the northerly side adjacent to the property line fence. The easterly portion of the parking area will be expanded to include a portion of the existing ballfield. This will provide for an additional lane of parking and a reconfiguration, again providing for the main circulation access to be on the northerly side. With these reconfigurations and additions, parking loss along the easterly boundary will be recovered, and approximately 400 cars will be accommodated.

6. Heritage Tree Area

Approximately 2.6 acres containing the bulk of the old-growth oak and bay trees will be set aside as a preserved area. All facilities within this area will be relocated to other sections of the park. The area will be rehabilitated to bring back a natural condition beneath the trees. All exotic trees and shrubs shall be removed. Replanting of heritage oaks and bays will take place, and minimal irrigation will be maintained. A natural split-rail fence will be erected around the entire area to prevent indiscriminate use, and to encourage preservation. Two trails through the area will be maintained so that it can be used as an interpretive feature.

7. Miscellaneous Facilities

a) Petanque Court

The petanque court will be relocated to the extreme easterly portion of the park, in what was formerly a parking area. The present petanque court was constructed by volunteers, as will be the new court.

b) Volleyball

Four volleyball courts will be located in two sections of the park: two at the group area adjacent to the entrance; two at the group area adjacent to the tennis courts. If proven feasible, one of these could be utilized as a basketball court.

c) Tennis Courts

The existing tennis courts will be maintained in their present location. Use will be monitored, and should it be determined that use does not merit their retention, they will be phased out at some time in the future.

OPERATIONAL AND ADMINISTRATIVE FACILITIES

1. Maintenance Area

The maintenance area will be located at the extreme westerly portion of the park. The yard itself being within the Hetch-Hetchy Right-of-Way, and the building adjacent to it, and just off the right-of-way. The building will be approximately 2,400 square feet, containing space for two vehicles, a shop, small equipment, employees' locker room and showers, a gas pump, a flammable materials storage building will be located adjacent to and outside of the main building. The entire area will be fenced. Access to the maintenance area will be from the parking area.

2. Visitor Center

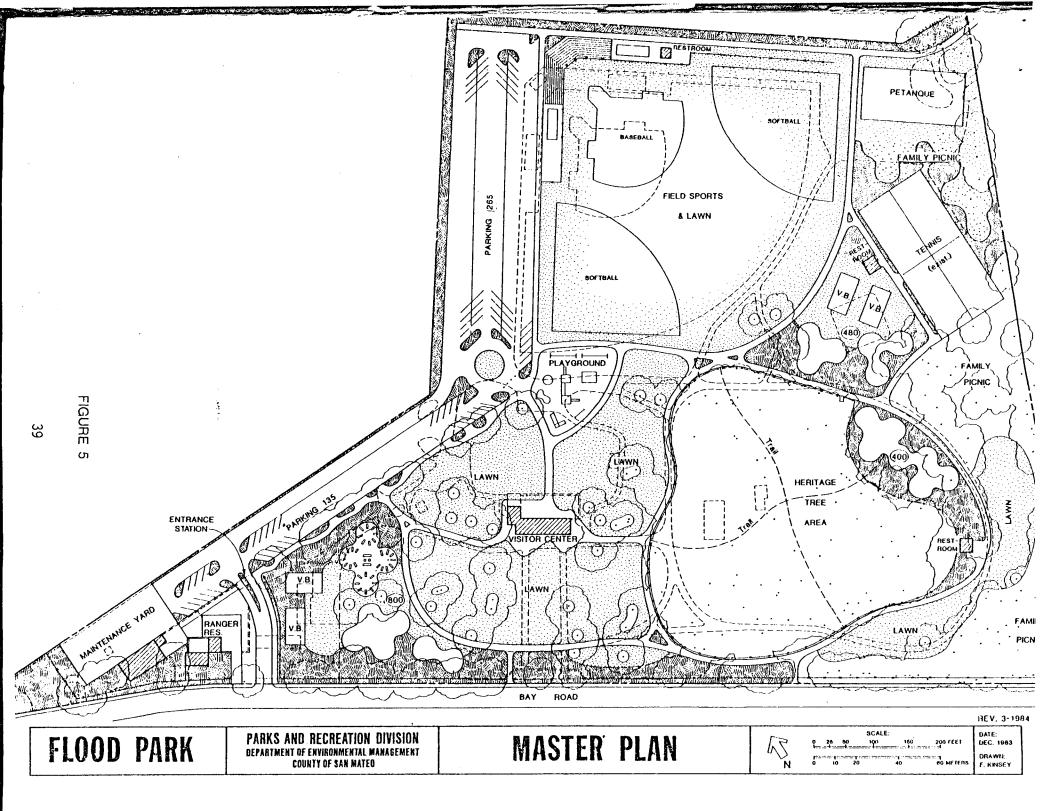
The existing Park Office complex will remain in its present location, and will be remodeled as a Visitor Center, providing offices for park administration, a restroom in the old Concession Building, a Visitor Information Desk, and an interpretive exhibit in the old meeting room. The exhibit will feature the history of Flood Park, telling the story of the WPA and the early construction, and something of the Flood Family history. It will also include a natural history exhibit, explaining the heritage trees, and what is being done for their preservation and enhancement.

3. Restrooms

All existing restrooms in the park are substandard, and will require extensive remodeling or reconstruction. If feasible, the old Concession Building adjacent to the Visitor Center could be converted into a restroom to replace #1, in which case #1 would be razed. Restroom #2, within the heritage tree area, will be retained until such time as a new facility can be constructed adjacent to the family picnic area in the southerly portion of the park, after which time, it too will be razed. Restroom #3, adjacent to the tennis courts, will be remodeled to bring it up to standard and provide handicap access. A new restroom, somewhere adjacent to the baseball field, will be constructed at such time as the baseball field facilities are moved.

PHASING AND DEVELOPMENT COSTS

Phase 1	
Playground, fencing, relocation of walks	\$ 45,000
Phase 2	
Restroom renovation, walk relocation, irrigation system	200,000
Phase 3	
Parking renovation, baseball field relocation	200,000
Phase 4	
Visitor Center renovation, utilities replacement	200,000
Phase 5	
New entrance, service area relocation	300,000
Total	\$945,000



OPERATIONS ELEMENT

· V.

HISTORICAL THEME

Flood Park can become a place which describes the history of a poor Irishman who became one of the four "Silver Kings." The park can develop the theme to any level of sophistication. The final phase might include:

- 1. A museum
- 2. A historic walk featuring: mining implements, ornamental trees, and the natural environment
- 3. A theme entrance
- 4. Thematic architecture and landscaping
- 5. Ornamental gardens

This kind of use could be designed around existing uses, and would help to bring people to the park in off-peak periods. This project could be planned, financed, and supported in part by local historical societies through donations by the Flood Family and/or by the large companies that use the park.

HERITAGE TREE REHABILITATION AND MANAGEMENT

The heritage trees, oaks, bays, and redwoods are an important part of the Flood Park environment. The rehabilitation and management program is based on the following precepts:

- The heritage trees provide a link to the history of the area and the natural environment.
- The heritage trees provide an attractive environment for park users.
- Intense use, old age, and health problems are shortening the life expectancies of many trees, and have virtually eliminated the oak life cycle in the existing group picnic area.
- The heritage trees are an even age stand, leading to a period of simultaneous decline.

The program consists of three inter-related activities; design changes, habitat management, and natural processes, which will take place in three phases. The three phases are divisions of an ongoing process to reach the following objectives:

- 1. To maintain the link with the history of the area and the native ecology.
- 2. To maintain the aesthetic effects of the heritage trees.
- 3. To insure continuity of the resource.

HERITAGE TREES MAINTENANCE CHECKLIST

ACTIVITY

AREA

PERIOD

	Islands	Other	
Plant Nurse Crops	•		October
Plant Acorns, Seeds and Seedlings	@		November
Check/Correct Soil pH	6	6	December and March
Check/Correct Porosity and Permiability			October - November
Fertilize	Ø	•	Early Spring Late Spring
Water	•	•	As needed, taper off Monthly, between April and October. Avoid within 4 ft. of duplex.
Prune/Remove Trees	•	8	Every four years May and November
Control Weeds and soil Build-Up Around Trunks	6	•	Every four years May and November
Add Mulch		0	Monthly, as needed
Repair Old Scars	0	•	Immediately
Check/Treat Pest and and Disease Problems	•	③	November - March, as needed
Inspection by Horticulturist	6	., ©	October - April
Update Tree Assessment Sheets	•	•	See Assessment Process Description



Relocate Picnic Activity

Increase Usable Space and Open Space in Other Areas

Define "Island" Areas



DESIGN CHANGES

Develop Environmental Education Program

Redefine Use Zones



Redefine Use Zones

Redefine "Island" Areas Ongoing Process



HABITAT MANAGEMENT

Prune and Remove Trees, Improve Habitat

Repair Wounds

Treat Pests and Diseases

Prepare Island Areas

Plant Nurse Crops and Acorns, Seeds, and Seedlings



Prune and Remove Trees, Improve Habitat

Treat Pests and Diseases

Monitor and Improve Island Plantings, Remove Nurse Crops



Prune Trees

Maintain Habitat

Treat Pests and Diseases

Prepare New Island Areas

Plant Nurse Crops and Acorns, Seeds, and



NATURAL PROCESSES

Low Acorn Production

Peripheral Germination

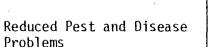
Extensive Pest and Disease **Problems**

High Mortality Rate



Moderate Acorn Production

Some Central Germination



Reduced Mortality Rate



High Acorn Production

Sufficient Age and Species Diversity to Insure Continuity

Table

DESIGN CHANGES

The use areas should be more clearly defined to prevent trampling of large areas, and to separate groups. This should be done by the location and orientation of facilities, plants, and natural barriers. The rehabilitation and management of the trees should be supplemented by an environmental education program which describes the process and creates an awareness of environmental sensitivity.

HABITAT MANAGEMENT

Habitat management consists of activities to maintain existing trees and start new trees. The process is summarized in the heritage tree maintenance checklist. The rehabilitation and management of the trees should be supplemented by an environmental education program which describes the process and creates an awareness of environmental sensitivity.

The maintenance of existing trees is costly. Management of the trees, with a limited budget, should seek to properly maintain the best trees at the expense of the marginal trees, and should include expenditures for planting new trees.

Periodic assessments of individual oaks and use areas should be made to monitor changing health conditions and maintenance requirements. (See assessment sheet and assessment and maintenance glossary.) Marginal trees should be evaluated according to the following criteria:

- Indication of recent decline in health.
- Indications of dangerous leaning to a degree which threatens tree balance.
- Existing cabling or need for new cables.
- Rot in the trunk or major limbs.
- Indications of poor circulation, growth characteristics, or pest and disease problems.
- Aesthetic acceptability.
- Replacement trees growing nearby.

The planting process involves definition and isolation of areas where rehabilitation can occur without impact from park use. Naturally defined areas found throughout the park are quite productive. Natural barriers or fences, when necessary, should be used to inform the public of the process.

Site preparation should include loosening the soil, fertilizing, and planting of Hypericum calycinum as a nurse crop. Acorns, seeds, and seedlings should be planted in November or December after the Hypericum becomes established (2 months).

Watering should be frequent enough to maintain the Hypericum and should taper off as the trees become established. Pruning and thinning should be done after four years, and should be done according to the recommendations made by a specialist.

The management process also includes continuing the present mulching program and coordinated inspections by a professional regarding the following:

- The Rahabilitation Program.
- Pests and diseases.
- Soil porosity, permeability, fertility, and pH.

LANDSCAPE ENHANCEMENT

Flood Park's landscape is in its mature state and needs to be enhanced. Many of the plant materials have become overgrown and/or no longer serve their original purpose.

Area improvements listed below can be implemented immediately:

1. Entrance and Parking Areas

The existing entrance and parking areas need to be improved with planting areas between spaces to break up the appearance of a "sea of cars." Inasmuch as the westerly lot is part of the Hetch-Hetchy Right-of-Way, and trees cannot be planted in this area, low maintenance shrubs should be used. In the other areas, trees should be used to provide some shade and variety.

2. Along Bay Road and the Peripheral Areas

These areas are changing rapidly. Volunteer oaks are successful along these relatively undisturbed peripheral areas. Volunteer oaks should be evaluated regularly, then be encouraged or removed. Growth conflicts are already distorting canopy profiles and some fences. The peripheral areas should serve as buffer zones, but should allow periodic openings for public view. Species diversity is important, but natives should be favored.

3. The Area between the Office and the Right Field Fence

Many of the plant materials are mature, no longer serve their original purpose, are unattractive, and can be removed.

AREA MAINTENANCE PRIORITIES BY TASK TYPE*

Table 6

				TASK	TYPES	
Area	Priority	Tot.	Risk Mgmt.	Natural Resource Mgmt.	Visitor Services	Facility Maint.
Turf Areas	1	6	١٠	1	2	2
Trees, General	6	13	4	3	4	. 2
Heritage Trees	1	6	1	1	3	1
Shrubs, Ground Covers (Landscaped) 7	14	5	2	3	4
Restrooms	3	9	2	5	1	1
Tools, Equipment	5	12	1	5	5	1
Installed Machinery	7	14	3	5	5	1
Tennis Courts	6	13	2	5	3	3
Children's Playground	2	7	1	4	1	2
Parking Areas, Paths	7	14	3	5	. 4	2
Petanque**	10	19	5	5	4	5
Horseshoe Pits	8	15	5	5	3	2
Volleyball Courts	6	13	3	5	3	2
Softball Infield	4	11	2	5	2	2
Picnic Areas	3	9	2	4	1	2
Basefield Infield	4	11	2	5	2	2
Backstop Area	5	12	2	5	2	3
Office	8	15	4	4	3	4
Peripheral/Buffer	9	17	4	3	5	5

^{*} Current Design Values ** Maintained by Petanque Organization

^{1 -} High Priority

^{5 -} Low Priority

MANPOWER AND EQUIPMENT

Staff	1981	1982	1983
Ranger III	1	1	1
Ranger II	1	1	1
Ranger I	2	2	2
Park Aides	3	2	3
Volunteer Manpower	0	0	0
Social Service Volunteer	1200 hrs.	1200 hrs.	1200 hrs.
Court Referral	1000 hrs.	1000 hrs.	1000 hrs.
Acculturization Program	1600 hrs.	0	0
Youth Employment Program	1728 hrs.	1728 hrs.	1728 hrs.
Work Furlough	160 hrs.	0	160 hrs.
Regional Occupation Program	0	0	. 192 hrs.

Equipment:

1-1/2 Ton Dumptruck

1/2 Ton Pickup Truck

1/4 Ton Jeep

21 Inch Rotary Mower

6 Foot Rotary Mower

48 Inch Turf Vacuum

Power Edger

Blower

Chain Saw

VI. INTERPRETIVE ELEMENT

The primary interpretive potential inherent at Flood Park is the Heritage Tree area and its history. Secondary interpretive themes may involve a self-guided interpretive trail and a bird and animal exhibit. Because there is no evidence of sites of native American culture, this interpretive resource can be considered only in a general way.

As discussed in the Inventory Section of this report, Flood Park is one of the last remaining publicly owned open spaces with a considerable growth of native oaks and bays. It is believed that these trees represent some of the natural preexisting biotic conditions prevalent in this area prior to urban development. While the species are not rare or endangered, as considered on a county-wide basis, they are endangered at Flood because of past resource management practices and the impact of heavy overuse immediately surrounding the trees. Care should be taken to protect this resource, and to interpret to the visitor the value of this protection. The opportunity exists to explain to the visitor how these protective practices and methods are being carried out. Several media or methods are available for interpretive exposition. First, a nature interpretive exhibit is proposed as a part of the Visitor Center building. Such an exhibit would house graphic displays, showing aspects of biotic interest. It would also feature the history of Flood Park, telling the story of the WPA and the early construction, along with the Flood Family history. Second, self-guiding nature trails into the Heritage Tree area could be set up on a loop pattern, starting from the Visitor Center. The trails could be used independently, or in conjunction with a visit to the Center. A third interpretive vehicle could be display panels throughout the park at points of interest, such as the Hetch-Hetchy aquaduct, which delivers water from the Sierra Nevada to San Francisco Peninsula cities. Panels illustrating early uses of the park could also be displayed.

MAINTENANCE SCHEDULES

I Tur

cf	Area	as					
		Main Lawn Main Lawn Main Lawn By Area 2	5. 6. 7. 8.	By Area 3 By Tennis Cou	urts Field	9. 10. 11.	Softball Field
	Tasl	< S		licable units	Fre	equency	Comment
	Mow	& Vacuum		9	2/1	Week	
			1-8	,10,11	1/1	Week	
	Wate	er		0	2-3	3/Week	Varies
	Feri	tilize		н	3/`	Year	
	Aer	iate		u	1-2	2/Year	
	Weed	d		n	0ng	going	
	Seed	d	•		1-2	2/Year	
	Add	Sod		ıı ·	1-2	2/Year	
	Edge	Э		11	8/`	Year	
	Clea	an Up		ii .	Da ⁻	ily/Weel	kly
	Spra	ay		Н	As	Necessa	ary
	Remo	ove Thatch		u	Anı	nually	
e:	s, Si	nrubs, Ground	Covers				
	1.	Entrance	5.	Office		9.	Redwood

II Tre

Tas	sks		pplicable ubunits	Frequency		Comment
2. 3.	Entrance Parking Children's Main Lawn	6 Play 7	OfficeCentral AreaBay RoadGroup Picnic	10.	Redwood Mix Ballfield	Area

Tasks	Subunits	Frequency	Comment
Health & Safety Inspections Park Staff Professional	All L	2/Month Annually	
Prune/Remove	н	2/Year	
Spray	п	As Necessary	
Fertilize	tt.	Annually	
Clean Up	П	As Necessary	

		Tasks	Applicable Subunits	Frequency	Comments
	•	Hoeing/Till	п	As Necessary	
		Miscellaneous	п	п	
		Monitoring	II	11	See Heritage Tree Program
III	Buil	dings			
		1. Restrooms a) #1 b) #2 c) #3 d) #4	 Office Concession Shop 	5. Quonset H 6. Power Bui 7. Gas Pump	
		Tasks	Applicable Subunits	Frequency	Comments
		Minor Repairs	AT1	As Necessary	
		Painting	1A-D	1-3/Year	
			2-7	4/Year	
		Cleaning	1A-D	As Necessary	
			2	2/Week	
			. 3	As Necessary	
			4	Weekly	
			507	As Necessary	
IV	Tool	s, Equipment, Insta	lled Machinery		-
		Tasks	Applicable Subunits	Frequency	Comments
		Required and Preventative Maintenance	All	As Recommended By Manufacturer's Specifications, As Necessary	
٧	Tenr	nis Courts			
		Tasks	n aktor	Frequency	Comments
		Resurface		1/7 Years	Variable
		Fence/Gate Repair		As Necessary	
		Net Repair		44	
		Sweep		H ·	
		Wash		п	

VI Children's Play	ground
--------------------	--------

Inspect for Hazards	,	Tasks	Frequency	Comments
Paint Annually Hoe 3/Year Rake Weekly Weed As Necessary Spray Never Prepare Ground for Safe Use Weekly Clean Up Daily Pick Up Litter Daily Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake * Add Gravel * Roll *		Inspect for Hazards	2/Month	
Hoe 3/Year Rake Weekly Weed As Necessary Spray Never Prepare Ground for Safe Use Weekly Clean Up Daily Pick Up Litter Daily Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake * Add Gravel * Roll *		Replace Worn or Vandalized Parts	As Necessary	
Rake Weekly Weed As Necessary Spray Never Prepare Ground for Safe Use Weekly Clean Up Pick Up Litter Daily Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake * Add Gravel * Roll *		Paint	Annually	
Weed . As Necessary Spray Never Prepare Ground for Safe Use Weekly Clean Up Daily Pick Up Litter Daily Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Spray " Organization Rake * Add Gravel * Roll *		Ное	3/Year	
Spray Never Prepare Ground for Safe Use Weekly Clean Up Daily Pick Up Litter Daily Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Spray " Organization Rake * Add Gravel * Roll *		Rake	Weekly	
Prepare Ground for Safe Use Clean Up Clean Up Pick Up Litter Water Sandbox VII Parking Lot and Pathways Fill Holes Pick Up Litter Paint Wheel Stops Speed Bumps Sweep/Rake Hoe Annually Spray VIII Petanque Hoeing/Weeding Spray Rake Add Gravel Roll * Weekly As Necessary " Whork Done By Petanque Organization * Add Gravel Roll		Weed .	As Necessary	
Clean Up Pick Up Litter Daily Water Sandbox Z/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops Speed Bumps " Sweep/Rake Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake Add Gravel * Roll *		Spray	Never	
Pick Up Litter Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops Speed Bumps " Sweep/Rake Hoe Annually Spray " VIII Petanque Hoeing/Weeding Spray " VIII Petanque Rake Add Gravel Roll *		Prepare Ground for Safe Use	Weekly	
Water Sandbox 2/Week VII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake Add Gravel * Roll *		Clean Up	Daily	
VIII Parking Lot and Pathways Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake Add Gravel * Roll *		Pick Up Litter	Daily	
Fill Holes As Necessary Pick Up Litter Daily/Weekly Paint Wheel Stops As Necessary Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Spray " Rake Add Gravel * Roll *		Water Sandbox	2/Week	
Pick Up Litter Paint Wheel Stops Speed Bumps Sweep/Rake Hoe Annually Spray VIII Petanque Hoeing/Weeding Spray Rake Add Gravel Roll As Necessary Annually Weekly As Necessary Annually Weekly As Necessary Annually Weekly As Necessary Annually Weekly Annually Weekly Annually Weekly Annually Weekly Annually Weekly Annually Work Done By Petanque Organization Add Gravel * Roll *	VII Pa	rking Lot and Pathways		
Paint Wheel Stops Speed Bumps Sweep/Rake Hoe Annually Spray VIII Petanque Hoeing/Weeding Spray Hoeing/Weeding Spray Annually * Work Done By Petanque Organization Rake Add Gravel Roll *		Fill Holes	As Necessary	
Wheel Stops Speed Bumps " Sweep/Rake Hoe Annually Spray VIII Petanque Hoeing/Weeding Spray " Annually * Work Done By Petanque Organization Rake Add Gravel Roll *		Pick Up Litter	Daily/Weekly	
Speed Bumps " Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Spray " Organization Rake * Add Gravel * Roll *		Paint	,	
Sweep/Rake " Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Spray " Organization Rake * Add Gravel * Roll *		Wheel Stops	As Necessary	
Hoe Annually Spray " VIII Petanque Hoeing/Weeding Annually * Work Done By Petanque Organization Rake * . Add Gravel * Roll *		Speed Bumps	n .	
VIII Petanque Hoeing/Weeding Spray Rake Add Gravel Roll Hoeing/Weeding Annually * Work Done By Petanque Organization *		Sweep/Rake	II.	
VIII Petanque Hoeing/Weeding Spray Rake Add Gravel Roll * Work Done By Petanque Organization * *		Ное	Annually	
Hoeing/Weeding Spray Rake Add Gravel Roll * Work Done By Petanque Organization * * * * * * * * * * * * * * * * * * *		Spray	н	
Spray "Petanque Organization Rake * Add Gravel * Roll *	VIII Pe	tanque		<u> </u>
Spray "Organization Rake * . Add Gravel * Roll *		Hoeing/Weeding	Annually *	
Rake * . Add Gravel * Roll *		Spray	H	retanque Organization
Roll *		Rake	* ,	
		Add Gravel	*	
Replace Boards *		Roll	*	
		Replace Boards	*	

	Tasks	Frequency	comments
	Paint	*	
	Chalk	*	
	Signs	*	
	Litter Pickup	Weekly	
IX	Horseshoe Pits		
	Rake/Grade	Weekly	
	Replace Backstop Boards	As Necessary	
	Add Base Materials	п	
	Moisten Base	Weekly	
	Repair or Replace Stakes	As Necessary	
	Weed	n	
Х	Volleyball Court	· .	
	Resurface	As Necessary	
	Maintain Net	2/Year	
	Sweep	Weekly	
	Wash	Monthly	
ΧI	Softball Infield		
	Drag/Rake	Weekly	
	Fill Holes	Weekly	
	Spray/Weed	Annually	
	Repair Mound	Weekly	
	Water	11	
	Replace Plate and Bases	Annually	
	Repair Backstop	н	
	Repair Bleachers	u ,	
	Paint	н	
	Weed Around	As Necessary	
	Rake Under	Weekly	
	Pick Up Litter Under	Daily	
	iv	-	

	Tasks	Frequency	Comments
	Bleachers (Continued)		
	Repair or Replace Boards	Annually	
	Clear Base Attachments	Daily	
ΧI	I Picnic Areas		
	Tables		
	Clean	Weekly	•
	Repair Boards	Annually	
	Replace Boards	1/3 Years	
	Barbecues		
	Clean	Weekly	Steel-2-4 Yrs.
	Repair	As Necessary	Stone-Repair Annually
	Replace	u	Annuarry
X	III Baseball Infield and Backstop Area		
	See Turf Area #9		Requires Special Maintenance
	Rake, Hoe	2/Week	Game Days
	Drag/Grade	1/Week	
	Fill with Special Material	Annually	
	Spray	2/Year	
	Chalk	2/Week	Game Days
	Backstop		
	Paint	Annually	
	Repair	, u	
	Replace Boards	As Necessary	
	Repair Fences	Annually	
	Bleachers		
	Paint	и	
	Weed Around	2/Year	
	Rake Under	Weekly	

STATE OF THE STATE OF

Tasks	Frequency	Comments
Bleachers (Continued)		
Pick Up Litter Under	Daily/Weekly	
Repair Boards	Annually	
Replace Boards	As Necessary	
Dugouts		
Rake/Grade	Weekly	
Repair Boards	Annually	
Replace Boards	As Necessary	
Paint Boards	n	
Edge Baselines and Skinned Area	2/Month	
Replace Plate and Bases	Annually	
Pickup Litter	Daily/Weekly	

TREES

Botanical Name	Common Name	
Quercus lobata	Valley Oak	
Quercus agrifolia	Live Oak	
Quercus Engelmannii	Mesa Oak	
Sequoia sempervirens	Coast Redwood	
Sequoiadendron gigantum	Giant Sequoia	
Umbellularia californica	California Laurel Bay	
Pinus nigra	Austrian Black Pine	
Pinus radiata	Monterey Pine	
Pinus ponderosa	Ponderosa Pine	
Pseudotsuga menziesii	Douglas Fir	
Prunus illicifolia	Holly Leaf Cherry	
Prunus lyonii	Catalina Cherry	
Prunus atropurpurea	Japanese Plum	
Arbutus unedo	Strawberry Tree	
Arbutus menziesii	Madrone	
Ligustrum japonica	Glossy Privet	
Leptospermum laevigatum	Australian Tea Tree	
Fraxinus pennsylvanica	Red Ash	
Platanus acerifolia	London Plane Tree (Sycamore)	
Aesculus californica	Buckeye	
Schinus molle	Pepper Tree	
Populus nigra 'Italica'	Lombardy Poplar	

Southern.Magnolia

Magnolia grandiflora

Trees (Continued)

Araucaria bidwillii

Cupressus arizonica

Liquidambar styraciflua

Acacia retinodes

Betula populifolia

Cordyline australis

Acer platanoides

Eucalyptus citridora

Libocedrus decurrens

Chamaecyparis lawsoniana

Pittosporum undulatum

Heteromeles arbutifolia

Bunya-Bunya

Arizona Cypress

Sweet Gum

Acacia

Gray Birch

Dracaena Palms

Norway Maple

Lemon-Scented Eucalyptus

Incense Cedar

Port Oxford Cedar

Victorian Box

Toyon

Shrubs

Pyracantha coccinea

Nerium oleander

Ligustrum lucidum

Pittosporum tobira

Nandina domestica

Rhus diversiloba

Agapanthus orientalis

Juniperus sp

Abelia grandiflora

Cotoneaster lacteus

Elaegnus angustifolia

Hypericum moserianum

Photinia serrulata

Firethorn

01eander

Wax Leaf Privet

Pittosporum

Heavenly Bamboo

Poison Oak

Lily of the Nile

Juniper

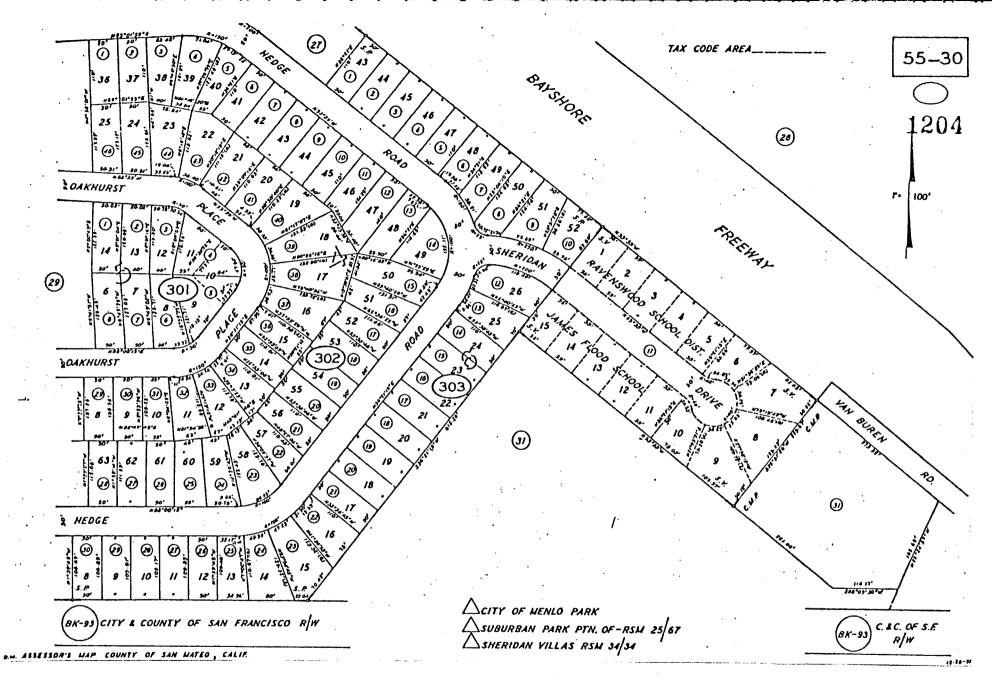
Glossy Albelia

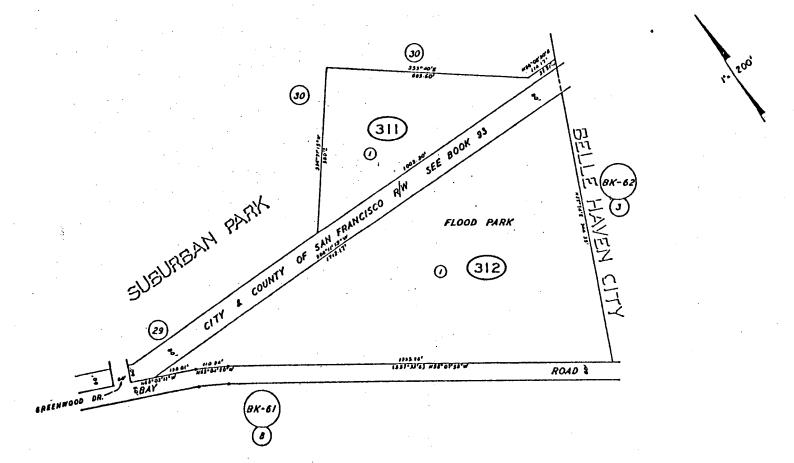
Wax Leaf Cotoneaster

Russian Olive

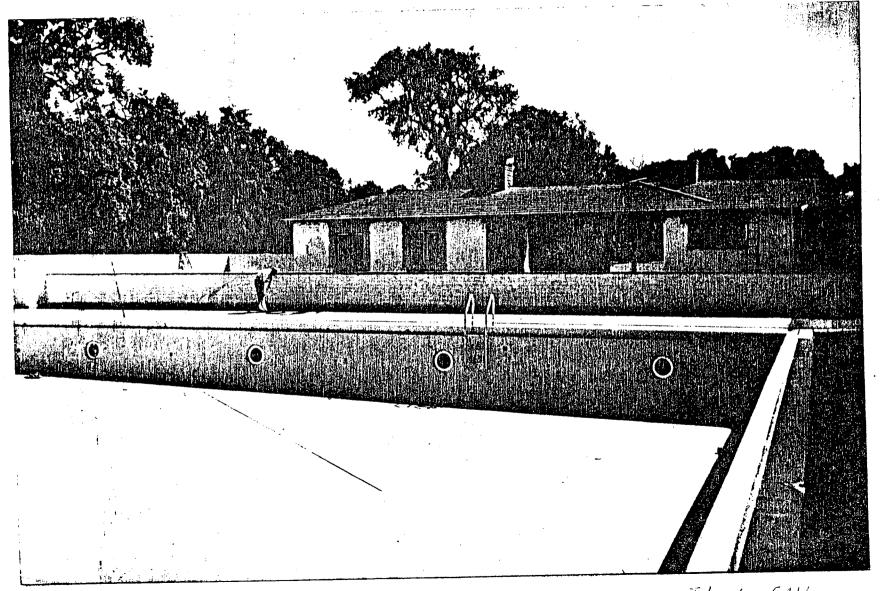
Gold Flower

Photinia





Flood Park Pool - looking South May 1942

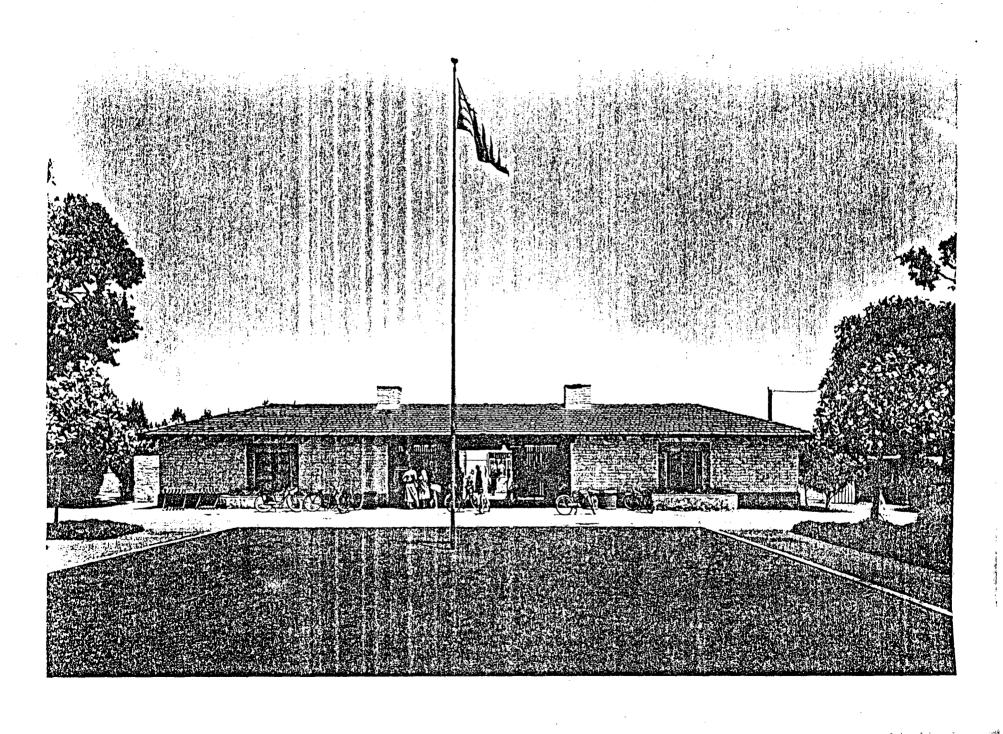


Taken by EAW.

Neg # 42

File # 791-1

Appendix 5



TIMES, SATURDAY, JANUARY 14, 1950

Editor at bat by EVC

Was there a stirring Monday night, I wonder, among the ghosts that haunt the beautiful a Lindenwood subdivision, once the fabulous country estate of Bonanza King James C. Flood?

Was there a rustling as Connie May Gavin took her place among the shadows—the shadows : of an Irish saloonkeeper who wrested a fortune from the Comstock Lode; of his son and heir, James L. Flood; of the latter's first wife, "Rosie" Fritz, and the soubrette Connie May Gavin called "mother"; of Judge George H. Buck, who halted the sensational trial of Mrs. Gavin's claim to a daughter's share of the Flood estate by ordering a verdict for the Bonanza King's heirs; of Judge Maxwell H. McNutt, Mrs. Gavin's attorney, who replaced Buck on the bench, and of Eugene Aureguy, the heir-hunter who helped Connie May establish her claim that she was the "love child" of James L. Flood and Eudora Willette,

—These shadows were the actors in a California cavalcade of venture, shrewdness, discovery, exploitation, tragedy, romance, giamor, and litigation . . .

It was nearly a century ago, 1858, that James Clair Flood and William S. O'Brien were running a liquor store at 125 Washington St., San Francisco. Flood, an Irishman. had come west with the forty-niners and dug out \$3000 or so, but his most successful mining was done through the saloon: the partners bought claims, grubstaked discouraged miners, speculated in stocks, and finally teamed up with two other Irishmen, James G. Fair and John W. Mackay, to develop the famous Nevada silver mine, the Comstock Lode.

Soon a millionaire many times over. Flood built the brownstone mansion on Nob Hill which is now the Pacific Union Club, and, between '75 and '78, the elegant and rococco "Linden Towers" near Menlo Park.

"Linden Towers," with its 42 rooms, furnishings that cost \$1 million, and art treasures assembled by three generations of Floods, was dismantled in 1934 after an auction of some of its contents.

—Inside three months the great house, which looked like a white-frosted wedding cake, had disappeared. All that remain behind

2 nd TP: The Trial

the ornate gates and brick wall on Middlefield Road now are the lodge, the carriage house, the barn, the swimming pool. And, of course, the many beautiful trees, including the linden which gave the place its name. In 1946, the Lindenwood subdivision was opened and new homes began to go up ...

But to get back to our story. Although James Clair Flood lost something like \$10 million in the wheat market crash in 1887, he left a good-sized fortune to his son and daughter when he died in Heidelberg in 1889.

The son, James L. Flood, married Marie Rosina Fritz. After her death, her sister Maude became his second wife. She is still living in San Francisco. He died in 1926, leaving about \$18 million to her and the two children, James Jr. and Mary Emma (now Mrs. Theodore Stebbins).

Not long after that, San Francisco and Peninsula social circles were horrified by Constance May Gavin's story that she had Flood illegitimate daughter. Assisted by Auregay, she presented Mrs. Eudora Willette, a retired actress, as her mother and the case went to trial in 1931 in Judge Buck's court in Redwood City.

Things were apparently going Mrs. Gavin's way when Judge Buck sprang a sensation
of his own. He took the case out of the jury's
hands and called for a verdict in fayor of
the Floods. There were boos in the courtroom and the jurors signed under protect.
Two years later the supreme court said Mrs.
Gavin could have another trial...

While the new trial was pending, the case was settled out of court for an approximate \$1.2 million—not because the Flood heirs admitted her as a member of the family, but because they wanted to stop the litigation. This didn't work out, for Connie May was back in court in 1935, '41, '45, and '47. The first time it was over attorneys' fees, the second because she said the Flood heirs had gypped her out of part of what she should have had, the third in an effort to recover "income taxes" she had had to pay on what she claimed was not income but inheritance, and the last in a successful hearing of the tax case before the Ninth Circuit Court of Appeals in San Francisco.

Even from the grave she reached out yester-day to make another headline. In her will she disinherited the "mother" who helped her win the Flood money, and left her estate to research—to be earried on, preferably, at Stanford, a few miles from the gates of "Linden Towers."

Bala alta Line Dak

PALO ALTO, CAL., - JUNE, 1901

State University Property.

THE University of California owns. some most valuable property, just north of Menlo Park and but little more than a mile from Palo Alto. This property was donated to the State University about three years ago by Miss Jennie Flood, and comprises four hundred and fifty acres of valuable arable land and an additional large tract of land lying along the bay and adapted to dairy purposes and grain growing. Upon this property are two dwelling houses and six fine barns. The larger of these dwellings is known as the Flood mansion and is perhaps the most magnificent and expensive country residence ever erected in California. It is three stories in height above the basement and contains forty rooms. It is not only provided with every modern convenience, but is also finely furnished throughout.

The mansion stands in the midst of ample grounds which are laid out with the finest landscape effects and ornamented with the rarest and most beautiful flowers, shrubs and trees that could be collected. The place is, indeed, one of ideal beauty and completeness, and is not surpassed in loveliness by any home in California.

One of the conditions of Miss Flood's gift (which also included four-lifths of the stock of the Bear Gulch Water Company, producing an annual income of eight thousand dollars) was that the State University should institute a commercial department. President Benjamin Ide Wheeler is now in the East to secure new members for the faculty, and among the new men will be a head for this department. It has been suggested that the Flood mansion may be utilized to accommodate this commercial school. It has also been suggested that the land may eventually be used for the experimental farm, connected with the State University. However this may be, this valuable;

Miss Flood's Gift Conditions

Trie.

Mansion

The Partnership

property is destined to be devoted to some of the educational purposes of the University of California and to become a prominent adjunct thereof.

We are indebted to Captain Charles Harkins, a retired officer of the regular army, for a sketch of the life of Mr. James Flood, who accumulated a vast fortune, and built this mansion for a country home for himself and family, although they never occupied it, and, in fact, it has remained vacant since it was finished and so elegantly furnished.

Mr. Flood came to California in the early fifties. For a time after his arrival he followed his trade of wagonmaker, but he soon gave this up and started an eating house, combined with a saloon, in partnership with William O'Brien. The business proved prosperous and in a few years the firm had accumulated a considerable fortune. One day two miners from Nevada, Fair and Mackay, dropped into the establishment and after a few social drinks with the barkeeper, O'Brien, they became confidential and told him that while employed in the mines they had discovered a vast body of rich ere and that no one knew of the existence of the ore bed but themselves; and that if they had a small capital to purchase the stock of the mine they could make an immense fortune. Flood and O'Brien, after satisfying themselves that Fair and Mackay had made a genuine discovery, entered into partnership with them and advanced the money to purchase enough stock of the mine to give them control of it. This was the afterton se the Consolidated Lymna and

years, under their management, the same stock sold for eight hundred dollars a share. The mine paid out over sixty millions of dollars in dividends and it is estimated that it produced a hundred and twenty-five millions before the Bonanza firm, as it was called, gave up control of it. This was the source from which came the great fortune possessed by Mr. Flood, a part of which he devoted to purchasing and beautifying this Menio Park property.

The mines fortune ALO ALTO TIME JUN 23 1934

We're Wrecking Linden Towers

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IRVING E. KESTERSON and CINNEBAR

Breeding Farm Will Be Moved

INNEBAR, proud stallion and half-brother to Eperor Hirohito's former mount, will be one of the 50 or more horses who will be moved from their present quarters on the old James C. Flood estate in Atherton to make way for new homes.

Irving E. Kesterson, retired lumberman of Atherton, recently sold the 166 oak-dotted acres of the old park, which he has been using as a breeding farm for fine blooded horses, to the Lindenwood Development Company.

An American saddle-bred and Arabian horse, Cinnebar was named by his owner for the metal of the same name. He has appeared with Mr. Kesterson in parades and events in which the Mounted Patrol of San Mateo County has taken part. The Mounted Patrol was organized during the war to work with the sheriff as an emergency unit in the event of invasion. Entirely separate from the Sheriff's Posse, the organization has remained intact for pleasure and social purposes, according to Mr. Kesterson, who is an active member.

PENINSULA LIFE, SEPTEMBER, 1948

FLOOD TRACT MAY BE PARK

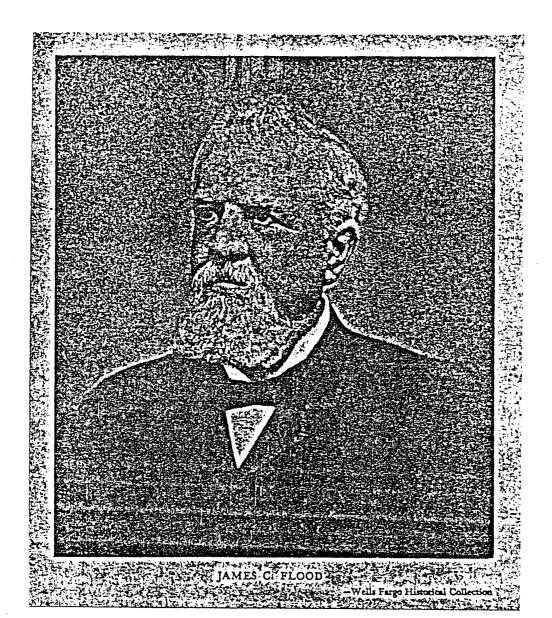
Wooded Acres Sought By S. M. County As Recreation Area

REDWOOD CITY, June 4 (Special to the Times)—Negotiations were in progress today for the purchase of 15 heavily wooded acres of the Flood estate on the Bayshore highway between North Fair Oaks and East Fulo Alto. It is planned to use the land as a county recreation center, the planning commission announced today.

As proposed by Commissioner Charles Minert, representing the southern end of the county, federal work relief funds would be used for the building of a public park embracing swimming pools, bath houses, baseball, tennis, volleyball, horseshoe and picnic grounds.

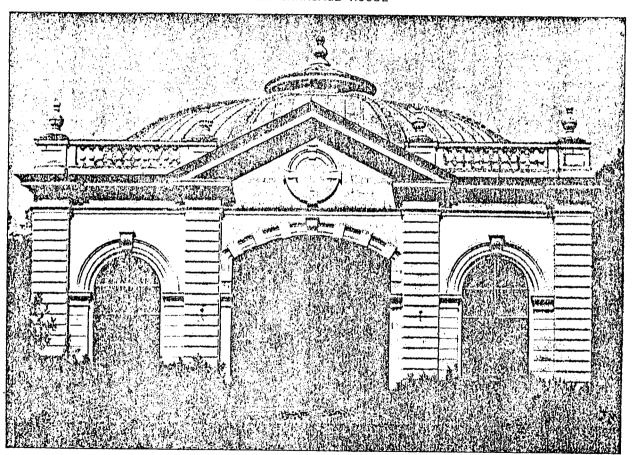
Engineer Ronald Campbell is at work on a set of proposed plans, and Giles Johnson, right-of-way agent, has entered into negotiations for the purchase of the property.

Approval of the board of supervisors and the planning commission will be necessary, but the latter group has already considered the park and will endorse the move if the federal grant is obtained.

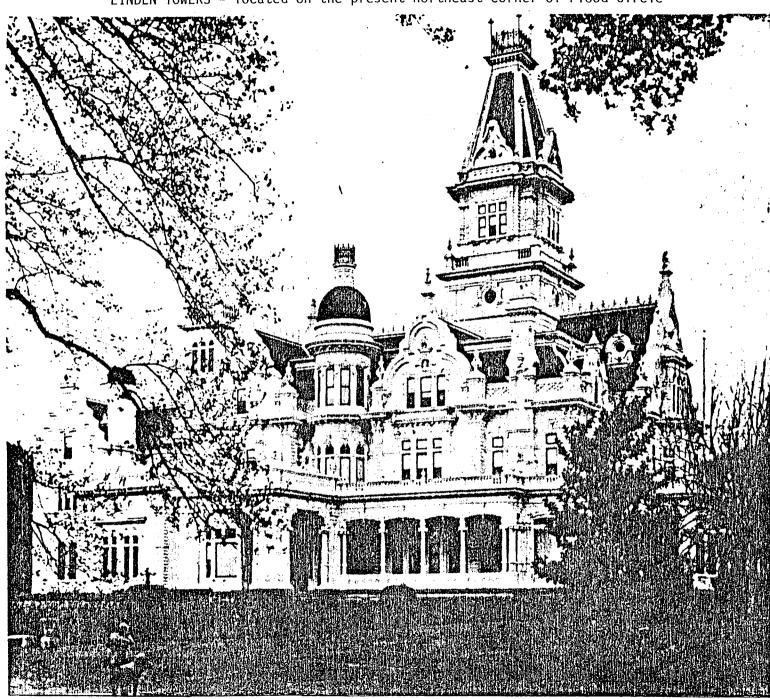


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THE CARRIAGE HOUSE



LINDEN TOWERS - located on the present northeast corner of Flood Circle



Planting Guidelines

- 1. Dig a hole twice the size of the root ball, and about 6 inches deeper. (1 to 2 weeks before planting, if possible.) Be sure to dig deep enough to avoid soil compaction problems.
- 2. Saturate soil; observe drainage.
- 3. Loosen, or cut, and remove matted, circling dead or diseased roots. ($\frac{1}{4}$ to $\frac{1}{2}$ of roots in outer 1 inch of root ball may be removed without plant damage.) Spread roots in the bootom of the hole. Cradle the root ball; never use the trunk as a handle.
- 4. Backfill with original soil and 20% to 40% organic material.
- 5. Tamp soil firmly around roots. Root crown should be 1 to 2 inches above ground.
- 6. Provide 30 by 40 inch drainage basin.
- 7. Fill basin with water and let it percolate into ground. Repeat.
- 8. Put 1 inch of organic material in drainage basin.
- 9. Prune lightly to balance. Thin out crossing and broken branches. Remove branches within 6 inches of ground.
- 10. Water deeply every 4 to 6 weeks in dry season. Taper off over next two years.
- 11. After 6 months, check root growth and potential growth problems.
- 12. Stake as required.

How To Plant An Acorn:

Select shiny, plump, fallen acorns, free of worm holes. Remove caps. Plant acorns on or just beneath soil surface, on their sides, and put up screen to protect from jays and squirrels. Surer way, is to gather newly sprouted acorns, or to sprout fresh ones between layers of damp peat moss (takes 2 weeks). Plant those with strong root sprouts. Make crater deep enough so acorn can be just covered with soil. At bottom of crater, poke vertical hole to take sprouted tap root. Insert root and press soil around it. Water. Expect first leaves in 6-8 weeks. If you plant several acorns in one area, you can thin later to best seedling. After planting, water weekly (when there is no rain) the first 2 months, then monthly.

How To Transplant An Oak:

It seems not to hurt oak seedlings of any size up to 5-8 feet to have their vertical roots cut in transplanting if root ball is otherwise big and firm enough. Tree may wilt or lose leaves after roots are cut, but if watered well, it should show new growth in 4-6 weeks. Oak seedlings from nursery containers usually will not show spiraling of tap roots at bottom of containers. The better growers will cut a seedling's tap root when planting into nursery container so young oak will develop branching root system.

How To Train A Young Oak:

By nature, many young oaks grow twiggy. Growth is divided among so many twigs that none elongate fast. To promote fast vertical growth, pinch off tips of unwanted small branches, meanwhile retaining all leaf surface possible in order to sustain maximum growth.

Island Planting Guidelines

- 1. Plant between 4-7 trees in each island area (don't over plant).
- 2. Use the following plant combinations:

Bays and Redwoods

Oaks and Prunus

Bays and Oaks

Maples

Alnus and Prunus

Do not combine oaks and redwoods. Use Prunus on the outside of plant groups.

ASSESSMENT AND MAINTENANCE GLOSSARY

Item	What to Look For	How to Treat/Improve
Canopy Profile/Posture Structure	Rounded evenly distributed limbs and branches, balance, stability	Prune to form balanced rounded canopy, eliminate V-shaped branch forks. Don't strip lower branches.
Growth Cracks	Cracking or splitting of the bark due to growth, parallel color bands, with flesh-colored wood inbetween, evidence of good growth, most in Qa.	Heals natural Fertilize
Root Flare	The trunk should widen at ground level.	Remove soil to expose to flare.
Foliage	Large, bright, vigorous leaves, leggy shoots in canopy demonstrate good circulation, relative to other trees	Improve environment use intensity, pH porosity and permiability drainage, fertiliz
Witches Broom, Powdery Mildew	Deformed reddish leaves are a response to unusually wet conditionswitches broom, powdery white coating on leaves.	Keep dry, prune to allow better circulation, consult a professional regarding severity and treatment.
Acorn Production	Acorn visible Oct Nov. More produced after drought years. Big acorns are better. Viable acorns sink in water. Lower branches ripen first.	Improve health.
Calus Growth	Rounded growth surrounding wounds	Seal open areas. Do not damage calus growth.
Fragrance	Sour wine smell is a sign of poor health	
Armillaria Mellea Oak Root Fungus	Fan shaped plques of white or cream colored fungus tissues at ground level	See U. C. Bulletin

Item	What to Look For	How to Treat/Improve
Gypsy Moth Tussock Moth Oak Leaf Moth	See Bulletins Larvae, Pupa, Moths, de- foliation of trees.	Consult the California Dept. of Food and Agriculture for treatment.
Anthracnose Fungus	Infected leaves and shoots as they emerge in Spring. Older leaves have irregular brown blotches, severe in wet Springs. Causes twig die back and cankers.	Keep dry, prune infected twigs and branches. Consult a professional for treatment.
Heart Rot	Rotten wood, water leaking from trunk.	Dry, drain, remove bad wood, seal exposed areas. Do not damage calus growth.
Crown Rot	Rotten wet bark, evidence of slime, mold, mushrooms.	Prevent standing water around tree trunk.
Flatheaded Borer	Bore holes in tree trunks or limbs.	Consult a professional for treatment.
Pit Scale	Stationary waxy shells that stick to the stems, lumps or fat sliver, a sticky substance that molds and darkens leaves.	Consult a professional for treatment.
Bay Mold Problem	Black, tar-like substance on bay leaves.	This can be serious. Contact a professional for treatment.

ASSESSMENT PROCESS DESCRIPTION

<u>Characteristics</u> :
Height (Estimate)
Diam. (4 ft.) <u>(Estimate)</u>
Crown Size to Drip Line (Estimate Width)
Posture/Structure <u>(General)</u>
Growth Characteristics (General
Canopy Profile (General)
Growth Cracks (Extent)
Visible Root Flare (Extent)
Acorn Production (Estimate Quantity & Viability
Smell: GoodSour Wine(Note if Unusual)
Foliage: Color (General) Size (General) Density (General) Balance (General) Damage (Type, Extent)
Environment:
Soil Type (General)
pH(Measure)
Permiability/Drainage (Estimate)
Soil Moisture Content (Estimate)
Leaf Litter_(Estimate, Relative)
Chips/Mulch(Extent)
Surrounding Ground Surface Under Drip Line:
(Use and Condition of Ground)
Neighboring Plants (Significant)
Within Drip Line (Significant)
At North Side (Significant)

Pruning (History, Extent)
Cabling (History, Condition)
Mildew (Extent)
Witches Broom (Extent)
Rot_(Extent, Treatment)
Old Scars (Extent)
Caluses - Healing Process (Quality)
Amount of Fertilizer (Quantity)
Amount of Watering (Estimate)
Health and Vigor Rating (10 Excellent, 0 Remove)
Comments: (Other Problems, Misc.)
WORK COMPLETED (Everything)
DATE: (Every Assessment)

ASSESSMENT PROCESS CALENDAR

1. February - March - Weekdays

Annually - Cables, Posture, Structure, Profile

Annually - Root Flare, Smell, Rot

Once - Soil Tupe

1/4 Years -Height, Diameter, Crown Size, Healing Process

Annually - pH

2. April, One Day/Week

Annually - Health and Vigor Rating, Growth Characteristics

Annually - Foliage: Color, Size, Density, Balance, Damage

Annually - Permiability/Drainage, Soil Moisture Content

Annually - Leaf Litter

3. June, One Day/Week

Health and Vigor Rating, Growth Characteristics

Foliage: Color, Size, Density, Balance, Damage

Leaf Litter

Pruning/Work Completed

4. August, One Day/Week

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Health and Vigor Rating, Growth Characteristics

Growth Cracks

Foliage: Color, Size, Density, Balance, Damage

Soil Moisture Content

5. October, One Day/Week

Acorn Production

Health and Vigor Rating, Growth Characteristics Foliage: Color, Size, Density, Balance, Damage Ground Condition, Chips/Mulch

Amount of Fertilizer and Irrigation

SUMMARY NOTES ABOUT ALL OAKS

- 1. Variable response to changes in environment and construction disturbances. Do not change grade at tree bark.
- 2. May adapt from seedlings to increased water environments within first 20 years.
- 3. California native oaks generally drought-tolerant as a group. This contributes to their long life. Under cultivation they probably won't live as long.
- 4. Limited field observation shows many oaks with roots extended beyond dripline.
- 5. Many oaks self-sterile, self-incompatible and need others nearby to produce acorns.
- 6. Improper watering to an old oak causes general weakening of whole tree.

 Oak root fungus, <u>Armillaria mellea</u> occurs naturally, and grows more rapidly under wet conditions. Together the above cause slow decline and death of tree. Watering may produce mildew and witches broom to old oaks.
- 7. Watering oaks in general: established oaks do not need summer water at all, in natural state. No irrigation water to plants within 10' of base of oak. Oak and other plantings may be able to take watering every 6 weeks in sharp drainage. Young oaks, see Chart, are very adapable to lawn plantings with higher water intake. Watering oaks requires added site observation and maintenance.
- 8. Shaping or pruning oaks: Generally, let them seek their own natural form. After 4' tall, can do some selective branch removal. During construction projects, use extreme caution in pruning. Root removal not to exceed more than 1/2 existing root system. Most chaparral oaks send out leggy shoots under cultivation. Prune mainly to remove dead wood, increase air circulation.
- 9. Understory plantings at oaks: The more natural rain at tree, the more lush and successful the understory plantings. Choose dry shade plants, Ribes quercetorum, Ribes viburnifolium, Heuchera sp., Polystichum, Ceanothus griseus h. No plants should be located within 6' of base of tree. Avoid plantings which would alter tree's natural drainage. Remove vines, soil and debris from base of any oak. Best plant locations, beyond drip line on North side.

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Q. lobata. Valley Oak, California White Oak

Deciduous. Zones 1-3, 6-16, 18-21. Native to interior valleys, Sierra foothills and Coast Ranges away from direct coastal influence. California's mightiest oak, often reaching 70 feet or more with equal or greater spread. Trunk and limbs massive, with thick, ashy gray, distinctly checkered bark. Limbs often picturesquely twisted; outer branches long and drooping, sometimes sweeping ground. Deeply lobed leaves, lobes rounded; 3-4 inches long, deep green above, paler beneath.

Tolerates high heat and moderate alkalinity in its native range. Best in deep soils where it can tap ground water-and in such situations it can grow fast $(2\frac{1}{5}-3)$ feet a year). Magnificent tree for shading really big outdoor living area (debris makes it difficult for beds of small plants or heavily used paved areas). This is tree that gives much of California's Central Valley its parklike look.

"Oak balls" are lightweight, corky spheres about size of tennis balls, black and tan when they fall. They result from insect activity, do not harm tree.

Habit

Habitat

Character, Ecological Niche, Landscape Use & Other Comments

Deciduous

south slope.

Mature Height: 36-90'

Mature Width: 40-100'

Growth Rate: Fast for first 15 years, then slows to 15-

2' yearly.

Acorn Production: Mature 1st vear.

Bark: In checked pattern, thick covered by gray

scales.

Trunk: to 12'

Roots: Shallow, often wider than dripline.

Sun: Tolerates much heat. Prefers a

Water: Affected by reduction of natural water table. Very sensitive to water on lower trunk and roots.

Soil: Prefers rich loam, deep soil. Plant Range: Valley slopes, below

2000', South to Los Angeles County. Insect Activity: Oak moth, susceptible

to oak root fungus, anthrachose, powdery mi dew.

Fire Tolerance: Evidence to date shows no regeneration after fire, no crown

resprout. May be fire tolerant.

Plant Character & Ecology: Stately, broad, graceful, open crown, curved down on sides.

> Natural reproduction scarce. Probably California's largest oak.

Landscape Use: Use as wide space specimen.

Naturally grows open, solitary, as seedlings adapt in lawn.

Other Comments: Forms wide groves along stream banks. May adjust to limited construction work, subject to heavy mistletoe infestation. Very subject to heart rot. Summer high temperature stress may cause limbs/old trees to fall.

Q. agrifolia. Coast Live Oak

Evergreen tree. Zones 7-10, 12, 14-24. Native to California Coast Ranges. Round-headed, wide-spreading tree to 20-70 feet high, often with greater spread. Smooth dark gray bark. Dense foliage of rounded, hollylike, 1-3 inch long leaves, slightly glossy on upper surface. As planted tree from nursery or acorn, it can grow as high as 25 feet in 10 years, 50 feet in 25 years. Attractive green all year unless hit by oak moth larvae. Has greedy roots and drops almost all its old leaves in early spring just when gardening time is most valuable. Regardless of these faults, it's a handsome and quite worthwhile shade tree or street tree. Can be sheared into handsome 10-12 foot hedge.

Habit

Habitat

Character, Ecological Niche, Landscape Use & Other Comments

Evergreen

Mature Height: 30-75 Mature Width: 40-150' Growth Rate: Moderate to fast.

Acorn Production: May mature first season. Bark: Smooth or with broad checked ridges with age.

Roots:

Sun: 1/2 to full. Water: Tolerates water from seedling. mature wild tree exists with only natural water. Cannot tolerate frequent water on lower stem or roots. Soil: Needs good drainage. Plant Range: Sonoma to south. California Coast ranges below 3000' lower mountain slopes, rocky hills, usually in draw. Fire Tolerance: In silt may survive; exhibits crown resprouting after

fire.

Plant Character & Ecology: Broad, symmetrical crown to open, picturesque, often grows with O. wislizenii, O. kelloggii. Leaf is convex. hairy veins on underside. A shrub in chaparral areas. Grows wide and stubby to get shade on trunk. Landscape Use: Large evergreen tree for park, estate. Could be used as 12' high hedge. Thrives near coast. Good bonsai. Other Comments: Very susceptible to oak root fungus and oak decline. Tends to bleed at wounds.

Q. engelmannii. Mesa Oak

Evergreen. Zones 18-24. Native to Southern California. Wide-spreading tree of character, to 60 feet high. Leaves oval or oblong, 2 inches long, usually smooth edged in its area, it has the same cherished native status as the coast live oak.

MAINTENANCE

Maintenance of a well utilized park demands priorities to efficiently utilize limited funds and man hours. The following section outlines County management priorities, ideal maintenance schedules, by area and task type, and calculates priorities by area. It concludes with some recommendations for improving park maintenance. (Also, see Master Plan Objectives and Recommendations).

I Risk Management

Risk Management consists of protecting park resources and facilities from vandalism and from natural disasters such as fire and flood, as well as protecting visitors and employees from possible injuries. It also includes controlling the activities of visitors and responding to any public disturbance in the parks. These activities must be carried out whether the parks are open or closed because the parks cannot be totally protected from the elements, or sealed off from outside visitors.

Tasks

- 1. Develop a division-wide safety program to protect the public, as well as the employees, from preventable accidents.
- 2. Enforce all applicable Park Rules, Regulations, and Laws to the degree that visitors and their property are made safe, and peace and public order is maintained and preserved.
- 3. Analyze all enforcement problems with a view toward seeking solutions, other than increased law-enforcement actions.
- 4. Review and analyze all accident and incident records, and implement appropriate preventive measures.
- 5. Conduct annual hazard inspection of all facilities and areas by qualified personnel.

II Natural Resource Management

Natural resource management is the protection, rehabilitation, and enhancement of the parks' natural resources. It is particularly emphasized in the parks where the natural resources are the prime sources of visitor attraction. Typical activities include erosion control, tree trimming and thinning, the replanting of native vegetation, and the eradication of encroaching exotic plants.

Tasks

- 1. Maintain and enhance natural and historic resources in accordance with the Master Plan.
- 2. Implement the program to monitor park resources to provide necessary data to carry out an ongoing resource management plan.
- 3. Enforce all applicable Federal, State, and County Regulations which apply to resource management and protection.

- 4. Seek to reduce man's impact on the environment by knowledge gained through educational programs.
- 5. Maintain trees and shrubs for maximum life expectancy, and free of dead or dangerous branches, or harmful pests and diseases. (Designated Preserve or Natural Areas will be maintained to meet the objectives of these areas.)
- 6. Encourage the growth of native plants, suitable exotics.
- 7. Maintain ground covers to be free of objectionable weeds and provide sufficient density to protect the soil and prevent erosion from water, wind, or traffic.

III Visitor Services

This area has traditionally received the highest priority throughout the park system. With increased knowledge and understanding of ecological and environmental needs and management techniques, this area of service is receiving less emphasis. Typical activities include keeping parks open for visitor use, visitor orientation, responding to visitor questions and requests, and generally maintaining the parks in a clean and attractive condition (cleaning restrooms and picnic areas, removing garbage, operating the gatehouse, etc.).

Tasks

- Manage visitors' recreational activities in County Parks to provide for all appropriate uses that can be accommodated without impairment or degradation of the resources of the area.
- 2. Encourage visitors to participate in authorized recreational and educational activities consistent with resource protection and visitor health and safety.
- 3. Provide for the specific needs of special groups (aged, blind, handicapped, etc.) when appropriate.
- 4. Develop year-round interpretive programs to assist visitors in understanding the park environment and its natural and/or historic relation to the total environment.
- 5. Involve the public in implementation of interpretive programs by utilizing qualified volunteers to serve as docents at interpretive centers, and in the field.
- 6. Develop interpretive centers and/or natural or historical areas where more in-depth information is provided for the interested visitor.
- 7. Develop informative publications that will assist the visitor better to understand the park environment.
- 8. Encourage and assist local educational groups to use available programs and park facilities.

9. Solicit and monitor visitor reactions to evaluate existing facilities and programs, and recommend continuation, revision, or elimination of programs as appropriate.

IV Facility Maintenance

This is essentially the maintenance of structures and use areas in general. In those parks that receive a large number of visitors, the commitment to facility maintenance can be quite extensive. Facility maintenance includes activities to prevent deterioration from normal wear and tear, and repairs of the damage. Typical activities in this area include painting, repairing or replacing worn or broken parts (windows, doors, benches).

Tasks

- 1. Maintain all sewage disposal systems free of obstructions and leaks with effluent discharge which meets State and local public health standards.
- 2. Maintain all water systems free of leaks and deliver water which meets public health standards in a continuous flow to meet existing quantity and pressure demands.
- 3. Maintain all buildings, electrical, mechanical and safety equipment in a safe and functional condition.
- 4. Maintain all drainage structures free of debris or obstructions that retard or divert water from its intended channel.
- 5. Maintain all roads and trails to conform to designed sections, profile, alignment, and free of extreme variations in height, hazardous obstructions, or dangerous holes.
- 6. Maintain all buildings, shelters, picnic facilities, campgrounds and surrounding areas in an attractive and useful condition, free of litter, debris and evidence of vandalism.
- 7. Maintain all interpretive facilities and displays so that they are attractive, informative, and free of vandalism, or excessive natural deterioration.
- 8. Preserve, restore, and maintain artifacts and specimens by approved methods in order that they may be utilized for study or exhibition.
- 9. Maintain all signs and exhibits according to design, specifications, and in a clean, legible condition, with no evidence of vandalism.