

TABLE 1: HERCULES PARKS AND OPEN SPACE

	Name	Existing Acreage	Proposed Acreage	TOTAL
Community Parks	Refugio Valley Park and Linear Path	55 ac		
	Waterfront Park and Waterfront Trail		26 ac	
	Total	55 ac	26 ac	81 ac
Neighborhood Parks	Ohlone Park	11.2 ac		
	Woodfield Park	6.0ac		
	Foxboro Park	3.6 ac		
	Hanna Park	10.2 ac		
	Forest Run Park (Neighborhood 5)		6 ac	
	School Park		5 ac	
Total	31.0 ac	11 ac	42.0 ac	
Mini Parks	Railroad Mini Park	1.3 ac		
	Beechnut Mini Park	1.2 ac		
	Total	2.5 ac		2.5 ac
Open Space	City Open Space Refugio Valley and Lower Refugio Creek Homeowners Ass'n	832 ac		
	Open Space Corridor		20 ac	
	Total	832 ac	20 ac	852 ac

B. OBJECTIVES, POLICIES AND PROGRAMS

PARKS AND OPEN SPACE

OBJECTIVE 1

Provide adequate recreation, park and open space resources as the community expands.

Policy 1a

Expand the community's park, trail and open space system to meet the demands of future growth. The comprehensive park, trail and open space system shall provide linkages between developed and developing areas.

Program 1a.1 Public Open Spaces

The General Plan has been designed to preserve most of the existing high quality vegetation, wildlife habitat and land forms within the public open spaces and conservation areas. Public open spaces are classified into the following areas: riparian, chaparral, oak groves, salt marsh and greenways.

1) Riparian Areas

The major riparian system is Refugio Creek from the easterly city limits to the Bay. Most of the creek east of I-80 will be maintained in a natural condition. The wildlife habitat will be enhanced by planting appropriate vegetation. Small ponds designed to reduce the velocity of water and possible erosion will also encourage wildlife in the riparian areas.

West of I-80, the existing low flow channel will be modified to the south in a multi-use open space corridor. The drainage facility will be designed and landscaped so as to have a natural appearance and enhance wildlife habitat. Some of the draws have springs which can be developed with watering holes and planting to support small animals.

2) Chaparral

The extensive side hill in the southeast portion of the City has large areas of dense coyote brush interspersed with live oaks and buckeye providing good habitat for deer and other wildlife. This area should be left in its natural state except for trails, outlooks and other limited recreational improvements.

3) Oak Groves

The oak groves in canyon bottom and side hills will be preserved in their natural state where possible. Special care should be taken in construction operations to minimize damage to this valuable natural resource.

4) Salt Marsh

The small marshland westerly of the Union Pacific Railroad, adjacent to the Waterfront Park, should be preserved in its natural state. The only improvement to this area could be an elevated walkway for observation of shorebirds and other wildlife.

5) Greenways

These areas are mostly grass covered hilltops and slopes interspersed with residential areas in the easterly portion of the City. As much as practical of this grassland within the public open spaces should be preserved in its natural state because of its value as habitat for many species of raptors.

6) Landscaped Rights-of-Way

Over 300 acres are devoted to freeways, arterial streets and railroads. Other rights-of-way include overhead power transmission lines and underground pipelines. The City should integrate these public and semi-public rights-of-way into the open space system as trails and/or visual open space.

7) Baylands

There are no proposals in the General Plan for development of the baylands with the minor exception of an elevated walkway over the salt marsh. The Recreation Element recognizes the recreational value of the baylands and indicates that potentials be explored with the several agencies having jurisdiction or interest in the future use of this natural resource. Access to the Bay is severely limited in the City because of the existence of the Union Pacific Railroad right on the shoreline. Public access to the Bay will be through the Waterfront Park, a twenty-acre community-type facility. An overhead crossing of the railroad tracks and a boardwalk through the salt marsh are proposed to provide convenient and safe public access to the water.

8) Private Open Space

Cluster housing neighborhoods and apartment complexes will have internal recreation areas and greenways which add to open space in the community. These areas will be integrated into the Open Space/Conservation Plan in terms of linkage and landscape design. Preservation of valuable vegetation will be an integral part of urban design considerations in site planning for new residential development.

Program 1a.2 City Parks

The General Plan has been designed to provide for adequate parks to serve the community. City parks include:

- Neighborhood parks
- Water front park
- Community parks
- Mini Parks
- Picnic grounds, and
- Bicycle and hiking trails

1) Neighborhood Parks: The five-acre neighborhood parks adjoining elementary schools may include pre-school totlots, multi-use fields, baseball diamonds, rest rooms and storage buildings.

2) Waterfront Park: The Waterfront Park facilities shall include a pier, waterfront trail, multi-use fields, picnic areas and parking. Much of the park will be maintained in a natural condition reserved for passive recreation. The feasibility of building a public pier along the waterfront should be explored.

3) Community Park: Community parks include the Refugio Valley Park and the Waterfront Park. The Refugio Valley Park is more oriented towards active recreation, along with passive recreation and trails. The Waterfront Park is more oriented towards passive recreation with natural areas and the waterfront trail.

4) Mini Parks: Small parks that may include picnic tables, barbecue facilities, and child play areas.

5) Picnic Grounds: Picnic tables, benches and barbecue facilities will be located in scenic locations in the public open spaces and parks.

Program 1a.3 Bicycle and Hiking Trails

A comprehensive system of bicycle and hiking trails will connect open spaces and activity areas in the community and link with regional trails in Refugio Valley. The trail system will be separated from streets and highways where practical. The types of trails shown in the open space/conservation plan include:

- Regional riding trails
- Regional hiking trails, and
- Local trails

The regional riding trail would connect with the riding trail shown in the County Riding Trails Plan. This trail would penetrate the City at the easterly extremity of Refugio Valley, but would not continue through the City. The regional hiking trail corresponds to the proposed County Hiking Trail Plan and would follow Refugio Creek and the multi-use open space corridor to the Waterfront Park. It is proposed that, if feasible, this trail might continue southward to Pinole Creek looping back and connecting with the County trail in Pinole Creek. Other local paths may be either hiking trails, bicycle paths or both.

A paved trail that connects the Historic District with the Sycamore/San Pablo intersection needs to be preserved and maintained. As Lower Refugio Valley is developed, internal trails serving the new development should be required with linkages to the main paved trail.

Trails along the Rodeo Creek corridor shall be required with the development of Franklin Canyon and the sphere of influence.

Program 1a.4 School Athletic Fields

The Recreation Element provides that athletic facilities on the elementary and high school sites should be integrated into the recreational program for the community. Elementary school athletic courts and fields would adjoin City parks permitting joint use of facilities. The trail system connects school yards with public open spaces and residential areas.

Policy 1b (Park-1a:)

The City shall continue to work closely with the East Bay Regional Park District (EBRPD) in implementing the Shoreline Trail through Hercules.

Policy 1c (Park-1b:)

The City shall ensure that new development funds its share of costs associated with the provision of park facilities by attaching project-specific mitigation as conditions of approval.

Policy 1d (Park-1c:)

The City may consider development agreements that will provide additional community parks and recreation facilities, such as ballfields and other areas for organized recreation, in exchange for allowing development at greater than the "typical" FAR, as specified in the proposed Land Use Element Update.

Policy 1e

The City shall continue to honor the Briones Hills Agricultural Preservation Agreement that was adopted jointly with Lafayette, Martinez, Orinda, Pinole, Pleasant Hill, Richmond and Contra Costa County. The agreement protects a 64 square mile area from development through a joint policy of not annexing any land within the preservation area to urban service districts or cities.

WILDLIFE

OBJECTIVE 2

Preserve seasonal freshwater wetlands.

Policy 2a

The City shall require project proponents to design construction footprints to avoid any wetlands and buffer zones around the wetlands. If avoidance is not possible projects shall be redesigned so as to impact the least amount of wetlands. Any areas that are classified as wetlands and will be affected by project development shall be recreated either on or off site in accordance with CDFG and COE.

Program 2a.1

Prior to construction in areas of wetlands, the City shall support CDFG and Corps permitting process. A project sponsor shall be required to obtain a Streambed Alteration Agreement from CDFG and/or a Section 404 Corps permit prior to any development within any wetland.

Program 2a.2

If flood control improvements are required along Refugio Creek the City shall work with the Corps to create the flood control area wide enough to provide for establishment within the flood control area of native vegetation to provide for wildlife habitat. The City shall allow a transition area between proposed land uses and this natural community, as described in Program 13B of the proposed Land Use Element.

OBJECTIVE 3

Protect the Refugio Creek riparian corridor from encroaching development.

Policy 3a

Design of building footprints along any riparian corridors shall be outside the CDFG- and/or COE-pre-approved buffer zone. Sensitive riparian habitats shall be marked by a qualified biologist to deter any destruction by equipment during construction.

Program 3a.1

Prior to construction in areas of riparian corridors or wetlands, the City shall support CDFG and Corps permitting process. A Streambed Alteration Agreement from CDFG and/or a Section 404 Corps permit shall be obtained by the project applicant prior to any development within any creek or discharge of fill into any creek.

Program 3a.2

Development along any riparian corridor shall incorporate measures to avoid impacts during construction, including:

- i) Construction of any access bridge shall be limited to the bridge footprint area only.
- ii) Parking of large equipment shall be on the upland grassland area or on the paved street. Construction workers cars shall have designated parking areas.
- iii) Basins for oil leaks from the equipment shall be installed if equipment is parked on-site over night.

OBJECTIVE 4

Protect riparian and wetland communities from degradation through introduction of urban pollutants in stormwater runoff.

Policy 4a

The City shall require project proponents to design facilities to prevent degradation of riparian and wetland communities from urban pollutants in storm runoff.

Program 4a.1

To minimize pollution downstream from sedimentation, the City shall require installation of sedimentation and grease basins in the storm drain system in parking lots in accordance with NPDES regulations and shall require that property owners maintain the basins annually, or as required by NPDES regulations. Parking lots shall be swept periodically to decrease the amount of debris that could potentially contaminate the riparian or wetland habitat.

OBJECTIVE 5

Preserve salt marsh zones along San Pablo Bay.

Policy 5a

The city shall review development proposals for consistency with minimizing impacts to salt marsh zones. Buildings shall be located on existing developed or graded areas, where practicable.

Program 5a.1

The City shall work with CDFG, BCDC, East Bay Regional Park District, and the Corps to determine appropriate buffer zones along the Bay to protect tidal habitat when designing a bay access trail linkage between Pinole and Rodeo. Public access and pedestrian pathways shall be limited within the buffer zone, and when possible, located along the edges of the buffer zone. Bicycles shall be encouraged to stay on bike paths through the use of signage and fencing.

Program 5a.2

The City shall require developers to provide signage and fencing to enforce leash laws around remaining areas of sensitive habitats such as salt marsh wetlands and mud flats as conditions of approval.

OBJECTIVE 6

Protect native plant communities and habitats for special status plant and animal species.

Policy 6a

The City shall continue to utilize environmental review under CEQA to review development projects that not exempt from the California Environmental Quality Act for impacts on sensitive species and their habitat.

Policy 6b

The City shall require that development within the General Plan area incorporate features to preserve habitat for sensitive species.

Program 6b.1

Areas that could provide habitat for sensitive species shall be surveyed by qualified biologists provided by project sponsors prior to project design. Surveys in sensitive areas shall be conducted prior to any development. Sensitive areas within the study area includes eucalyptus groves, freshwater wetlands and adjacent trees, open grasslands, ponds and creeks, and buildings which are abandoned or slated for destruction. If any species is present, coordination with the CDFG will be required for mitigation of impacts and redesigning of the project footprint to avoid any sensitive species or sensitive habitat. If avoidance is unavailable coordination with the CDFG will be required for relocation of these species and for determining replacement of habitat.

Policy 6c

As much open space as possible within sites proposed for development shall be retained as informal open space for wildlife habitat, rather than as formal, landscaped parks or grounds. The City shall require that native plants from local area be used in landscaping, and in areas with a lower water table, native drought tolerant species shall be used in landscaping.

Program 6c.1

Development, subdivision and planned development plan applications shall be reviewed and conditioned to implement the following:

- i) Wildlife areas shall be revegetated with native or non-native grassland and native species of shrubs requiring no irrigation and little management beyond the first year after planting.
- ii) Wildlife habitat shall be consolidated into "preserves" that are as large as possible.
- iii) Habitats on adjoining parcels shall be as contiguous as possible, to create wildlife corridors.
- iv) Wildlife open space shall be placed adjacent to other wildlife habitat, to preserve the greatest ecological value.
- v) Public access to wildlife habitat shall be minimized by placing trails close to buildings so as to provide the largest area of habitat possible with the least amount of impact from the public.
- vi) Open space areas shall be designed into the footprint of proposed projects and shall be located adjacent to existing open space areas, providing a larger continuous area for wildlife to use.
- vii) Open space areas, if disturbed during construction, shall be landscaped with native species.
- viii) Trails, if any, shall be placed close to buildings so as not to disturb wildlife nesting/denning areas.

WATER SUPPLY

OBJECTIVE 7

Ensure an adequate water supply for the community.

Policy 7a

The City shall cooperate with East Bay Municipal Utility District planning efforts to help ensure an adequate water system for existing and future residents and to maintain adequate water reserves.

Policy 7b

The City shall implement programs of water conservation to make efficient use of its water supply

Program 7b.1

Ensure that the new development pays its share of the costs associated with the provision of facilities to conform to EBMUD requirements for water conservation by attaching project-specific mitigation requirements as conditions of approval.

Program 7b.2

The City will practice water conservation in management of parks and requirements for landscape design development

Policy 7c

Encourage effective water conservation practices by residents and businesses including household conservation and use of drought-resistant landscaping and reclaimed wastewater.

Program 7c.1

The City will encourage the installation of dual plumbing systems in large developments to accommodate future use of reclaimed wastewater for non-domestic purposes such as landscape irrigation, commercial and industrial process uses and toilet flushing in non-residential buildings. Dual systems may be installed at time of construction or later when reclaimed water becomes available.

Program 7c.2

The City shall require the installation of low-flush toilets and other low-flow plumbing fixtures for new residential and commercial development.

WATER QUALITY

OBJECTIVE 8

Adequate wastewater treatment capacity to serve the existing and future demands.

Policy 8a

The City shall initiate studies and programs to identify wastewater treatment requirements to meet existing and future demands, and implement effective funding mechanisms.

Program 8a.1

The City shall ensure that new development pays its share of the incremental capacity costs associated with the provision of wastewater treatment facilities by attaching project-specific mitigation as conditions of approval.

Program 8a.2

The City shall initiate a wastewater treatment study and shall implement programs to ensure adequate wastewater treatment capacity prior to approval of development that would generate demand for treatment in excess of capacity, including increased capacity improvements now planned. This study may include the following information:

- i) Inventory of existing facilities, including collection systems, treatment plants, and pumping stations. [This inventory has been accomplished as part of the planning for improvements described in the EIR Setting.]
- ii) An alternative analysis of the City's three options to treat additional wastewater expected at buildout of the proposed Land Use Element Update.
- iii) Identification of funding sources.
- iv) Coordination with the City of Pinole, EBMUD and other agencies involved in wastewater treatment and/or water reclamation.
- v) Appropriate uses of reclaimed water within the City.

Program 8a.3

The City shall implement a Capital Improvement Program (CIP) for the selected wastewater treatment alternative(s). The CIP shall include funding, scheduling and development programs for the selected alternative which shall meet RWQCB standards.

Program 8a.4

The City shall pursue implementation of wastewater treatment plant improvements to upgrade effluent treatment to a level that it can be reused as reclaimed water.

OBJECTIVE 9

Improve surface runoff water quality

Policy 9a

Develop a Master Water Quality Control Plan for the City, including measures to clean up existing contaminated water resources in various parcels, to identify and enforce the mitigation of existing sources of pollution, and to develop ways of preventing further pollution such as specific water treatment policies for industries and retention basins for surface runoff suspected of carrying roadway pollutants. (See policies and standards in the Growth Management Element)

Program 9a.1

The Master Water Quality Control Plan shall be prepared by the City to meet NPDES standards, be approved by the City Engineer, and reviewed by the Regional Water Quality Control Board and State Department of Water Resources for correctness and thoroughness, prior to implementation.

Program 9a.2

As part of the Master Water Quality Control Plan implementation, develop a set of best management practices (BMPs) for developers to follow. Such practices may include, but are not limited to:

- i) Use of stormwater retention or detention structures;
- ii) The use of oil and water separators; and
- iii) The use of sediment traps.

HYDROLOGY

OBJECTIVE 10

Reduce flooding potential within floodprone areas.

Policy 10a

Ensure that adequate drainage facilities and pollution prevention and control infrastructure are built accommodate the increase in runoff from newly developed areas.

Program 10a.1

The City shall review and refine, as necessary, its Master Drainage Plan, including specifics for drainage on individual parcels to be developed prior to approval of any development in the study area.

Program 10a.2

For each proposed development project, runoff increase calculations for the parcel at full build-out shall be measured against estimates of existing runoff to ensure that no flooding will result. (See also Growth Management Element standards for onsite retention and finished floor elevation requirements.

AIR QUALITY

OBJECTIVE 11

Improve air quality within the community

Policy 11a

Development within the City shall be conditioned to reduce air quality impacts during construction and subsequent operation.

Program 11a.1

Coordinate with the BAAQMD in planning future growth, implementing regional transportation plans and trip reduction measures, and controlling stationary source emissions. Incorporate the recommendations of the BAAQMD in General Plan policies and directing for regional growth and development.

Program 11b.1

Implement a dust abatement program for new development including the following dust control measures:

- i) Sprinkle all construction areas with water (recycled when possible) at least twice a day, during excavation and other ground-preparing operations, to reduce fugitive dust emissions. Wetting could reduce particulate (dust) emissions by up to 50 percent.
- ii) Cover stockpiles of sand, soil, and similar materials, or surround them with windbreaks. This measure will substantially reduce wind erosion of stockpiled materials during demolition, and construction, reducing the potential of the project to contribute to excessive suspended particulate (dust) concentrations when the wind exceeded 10 miles per hour.
- iii) Cover trucks hauling dirt and debris to reduce spillage onto paved surfaces.
- iv) Post signs that limit vehicle speeds on unpaved roads and over disturbed soils to 10 miles per hour during construction.
- v) Use canvas drapes to enclose building floors during the application of mineral-based fiber insulation to structural steel frames.
- vi) Sweep up dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter through vehicle movement over those surfaces.
- vii) Require the construction contractor to designate a person or persons to oversee the implementation of a comprehensive dust control program and to increase watering, as necessary.
- viii) Require construction contractors to maintain and operate construction equipment so as to minimize exhaust emissions. All internal combustion engines shall be kept well-tuned with regular and periodic inspection and maintenance checks to minimize exhaust emissions. During construction, trucks and equipment shall be running only when necessary.

Program 11b.1

Require that construction of large projects be timed to avoid significant periods of overlap.

HISTORIC AND PREHISTORIC RESOURCES

OBJECTIVE 12

Protect and preserve important historic and prehistoric resources

Policy 12a

Prehistoric resources shall be identified and preserved to the extent feasible. If previously unknown subsurface cultural resources are discovered during excavation activities on the identified parcels or elsewhere in the study area, excavation would be temporarily halted and an archaeologist consulted as to the importance of the resources. Should the archaeologist

determine that the resources are important, the project sponsor would follow the procedure described in Program 12a.2.

Program 12a.1

Prior to development on Parcels in archaeologically sensitive areas identified within the Land Use Plan EIR, an attempt shall be made through a combination of archival research and in-field testing to identify areas that may have been used by Native American populations. Areas containing prehistoric deposits will be mapped; evaluation of their significance will follow only in those areas where future development might affect the resources.

Program 12a.2

The City shall enact the following program prior to any development in the vicinity of prehistoric sites CA-CCO-370 and CA-CCO-248 as identified within the Land Use Plan EIR as Parcels 1 and I, respectively. The program will also apply to Parcels A, C, and 1-4, where the potential for Native American remains exists. The program shall be conducted under the guidance of Appendix K of the CEQA *Guidelines*.

- i) Prior to excavation and construction on the above parcels, the prime construction contractor and any subcontractor(s) will be cautioned on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, bottles, and other cultural materials from the project site.
- ii) The project sponsor will identify a qualified archaeologist prior to any demolition, excavation, or construction. The City will approve the project sponsor's selection for a qualified archaeologist. The archaeologist will have the authority to temporarily halt excavation and construction activities in the immediate vicinity (ten-meter radius) of a find if significant or potentially significant cultural resources are exposed and/or adversely affected by construction operations.
- iii) Reasonable time would be allowed for the qualified archaeologist to notify the proper authorities for a more detailed inspection and examination of the exposed cultural resources. During this time, excavation and construction would not be allowed in the immediate vicinity of the find; however, those activities could continue in other areas of the project site.
- iv) If any find were determined to be significant by the qualified archaeologist, representatives of the project sponsor or construction contractor and the City, the qualified archaeologist, and a representative of the Native American community (if the discover is an aboriginal burial) would meet to determine the appropriate course of action.
- v) All cultural materials recovered as part of the monitoring program would be subject to scientific analysis, professional museum curation, and a report prepared according to current professional standards.

SCENIC RESOURCES

OBJECTIVE 13

Preserve and enhance scenic views within the community.

Policy 13a

Development proposals shall be reviewed in terms of natural objects in the vicinity that have aesthetic significance. This may include open space, eucalyptus groves, or vegetation that serves as a view corridor or has important visual attributes. Development proposals shall be sited to ensure that these features are retained or replaced to the extent feasible, resulting in minimal view impairment.

Policy 13b

Plantings that serve to screen views of residential development, or that help to maintain a natural-appearing landscape, shall be retained to the extent feasible. Such plants could be thinned selectively if thinning would improve view corridors. If specific trees are to be removed, such as eucalyptus trees, replace with trees, preferably native species, that will provide suitable screening while retaining important view corridors, especially along San Pablo Avenue which is a designated scenic corridor.

Policy 13c

Preserve the wooded tree-lined character of the proposed hiking/biking trail along Refugio Creek west of I-80 through retention of existing vegetation and/or planting of replacement trees and other vegetation.

Policy 13d

Development shall preserve important view corridors, where feasible, by identifying and preserving the attributes of the view corridor that characterize its significance (e.g. framing elements, surface water reflections, presence or absence of impinging details) as seen from roadways, pedestrian paths or other public vantage points to avoid view obstruction. Buildings shall be sited so as to minimize view obstruction from sensitive viewpoints.

Program 13d.1

The following views, from publicly accessible viewpoints, shall be preserved to the maximum extent feasible as the City evaluates new development on a parcel-specific basis as identified within the Land Use Plan EIR:

- i) Upper drainage views from higher elevations of Parcel 13 easterly up the floor of Franklin Canyon.

- ii) Lower drainage views from Hercules Point north across open water to Lone Tree Point and beyond to Solano and Napa Counties.
- iii) Lower drainage ridge views from the promontory of San Pablo Bay, Lone Tree Point, Franklin Canyon and the Refugio Creek floodplain.
- iv) San Pablo Avenue views of specimen oak tree stands and, where feasible, Eucalyptus.
- v) Views of San Pablo Bay and the Hills of Marin, Sonoma and Napa Counties, and inland of the Briones Hills, that are available from various elevation points on Parcels 2, 3, 4, 5, 6, 7, and C and from the shoreline areas of Parcels 1, 2, and 6.
- vi) Views from the former Hercules Powder Company offices on the promontory to the west, north and east.
- vii) Views of the upper elevations of the hills surrounding Highway 4.

Policy 13e

New development shall be designed to minimize light and glare impacts.

Program 13e.1

The City of Hercules shall evaluate the light and glare potential of new development on a parcel specific basis and apply the following measures:

- i. Screening of parking areas by using vegetation or trees. This will reduce the amount of glare generated from painted and chrome automobile surfaces and prevent expanses of stationary and moving automobiles.
- ii) Hooded lights for nighttime illumination should be used for parking areas, shipping and receiving docks and industrial development. Hooded lights direct the light beam towards the ground, which if a dark pavement, will not reflect light and cause spillage into neighboring uses.
- iii) Regular windows should be used instead of the glass walls or massive reflective windows often used for research and development, and office park developments.

C. STANDARDS

The standards for provision of parks and open space in Hercules are:

- Neighborhood Parks: A minimum of 1.75 acres of neighborhood parks shall be provided for each 1,000 residents.
- Community Parks: A minimum of 3.25 acres of community park space shall be provided for each 1,000 residents.
- Open Space: A minimum of 34 acres of open space (public and private combined) shall be provided for each 1,000 residents.

The existing and proposed open space resources identified in the General Plan include the following:

- Public open spaces (852 acres)
- Community parks (81 acres)

- Neighborhood and mini parks (44.5 acres)
- Schools (96.9 acres)
- Civic Center (15 acres)
- Arterial and Freeway rights-of-way (308 acres)
- Baylands (8,140 acres)

In addition, there will be private open space and recreation areas within residential neighborhoods. The most effective open space will be the public open space and developed city parks which will amount to a total of 852 acres. This is about 21% of the developable land in the City.

The proximity and availability of open space and conservation lands is of particular concern in neighborhood design. These lands help to define the shape and character of the landscape providing views and vistas and usable open space on a daily basis. A number of factors will be considered in the establishment of urban design standards in adopting the neighborhood plans for specific areas including:

- a. The relationship to city parks and public open space within the City.
- b. The proximity to the San Pablo Bay or permanent open spaces outside the City.
- c. The expected composition of the population (proportion of children or senior citizens).
- d. The type and configuration of housing units.
- e. Vehicular and pedestrian circulation.
- f. The amount, distribution and quality of proposed private open spaces and recreation areas.

The amount of lands designated in the General Plan for permanent open space and parks represent a high standard for California cities - about 34 acres per 1,000 population. The quality of the natural environment will depend to a large degree on the urban design standards built into Neighborhood Plans and the adequacy of City open space management programs.

D. IMPLEMENTATION

The implementation tools available for the open space/conservation element are in three major areas:

- Municipal programs requiring city funds,
- Community development requirements for private development, and
- Coordination with other agencies.

1. Municipal Programs

a. Open Space Management Program

The basis for a coordinated open space management program for plant materials and wildlife is contained in two reports prepared for the City. A comprehensive program should include the following:

- 1) Operation of an on-site nursery/tree farm,
- 2) Planting open space areas prior to development,
- 3) Developing a uniform street tree program, and
- 4) Encouraging the maintenance of wildlife populations by providing a diversity of habitats.

b. Resource Management Program

The following plans, related to water quality, hydrology and land resources, should be considered in conjunction with the open space/conservation element:

- 1) A wastewater management plan
- 2) A master drainage plan
- 3) A program for environmental evaluation of major public service facilities and rights-of-way

c. Capital Improvements Program

The capital improvements program is a five year program for municipal capital expenditures which enable the City to plan finances for more than one year at a time. The priorities of open space and conservation needs will be evaluated and ranked against other community needs in the Capital Improvements Program.

Each year the City must allocate funds required for the operation, maintenance and capital expenditures in connection with the open space/conservation element. It is essential that open space/conservation programs are realistically planned in terms of other priorities in the community and the City's financial resources.

2. Community Development Requirements

Consideration of open space and conservation goals will be an integral part of the community planning and design process.

a. General Plan and Zoning Proposals

All General Plan and zoning proposals will be reviewed in terms of the goals and proposals established in this element. Those areas where there is a potential effect on open space and conservation will receive special attention in subsequent planning and design reviews.

b. Neighborhood Plans

Proposed neighborhood plans will be reviewed in terms of opportunities for conserving and enhancing the natural environment and creating development that is compatible with the open space system.

c. Tentative Maps and Planned Developments

Tentative maps and Planned Development Plans will incorporate urban design techniques to take advantage of the existing environmental qualities of sites being developed within the City.

d. Subdivision and Grading Ordinances

The City's proposed subdivision and grading ordinances contain specific provisions establishing minimum standards for the development of land in the City. These regulations, effectively administered, can minimize temporary or permanent environmental damage due to land development to insure that development is compatible with the open space/conservation goals.

The grading ordinance will assist in implementing the goals of this element by specifically requiring:

- 1) Stockpiling and replacement of the soil mantle.
- 2) The re-establishment of vegetative cover.
- 3) Slopes to be blended, to the extent practical, into the existing terrain.
- 4) A thorough soils investigation of all grading and development proposals, and continuous supervision of all grading operations.
- 5) Installation of adequate temporary and permanent drainage provisions.

3. Coordination with Other Agencies

The City should work with the City of Pinole and Contra Costa County in coordinating plans for open space and conservation. The City should also explore opportunities for State and Federal funds which may be applied to open space purposes.

The City should work with the school district toward joint use of recreational facilities provided in municipal parks and on school property. To this end, the Hercules General Plan shows proposed elementary school sites adjoining city parks. The joint planning construction and operation of these facilities can increase the total amount of open space lands available to future residents for recreational purposes.

The City might also coordinate with the school district regarding landscaping and maintenance of their sites.

The City should consult with the several public and semi-public agencies who have rights-of-way within the City. With proper planning, these lands can be a resource for providing future landscaped open space. Conversely, poorly maintained rights-of-way can be an environmental negative in a community. Some of the trails shown on the open space/conservation plan are within various rights-of-way.