

Section 6

Conservation and Open Space Element

**CONSERVATION AND OPEN SPACE ELEMENT
SECTION SIX CONTENTS**

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CONSERVATION AND OPEN SPACE ELEMENT

INTRODUCTION

The General Plan is based upon urban development of the City. Many existing open space areas will be built upon within the next twenty-year period. This element identifies current open space areas, and which of those are planned for retention as open space to serve Sacramento's urban environment of the future.

Sacramento is an urban area. The conversion and development of natural resources will occur within this urban framework. On the other hand, the Sacramento region has significant high quality open space areas devoted to agriculture and recreational uses. The City portion and its sphere of influence has two rivers, water with hydraulic force potential and minerals in the form of aggregate. Sacramento also has special urban open space qualities, which should be preserved.

Sacramento needs to look at both its urban qualities and at the nearby rural qualities. Development on open space areas is inevitable as the City continues to grow and attracts further development. The challenge is to provide for the development of the City and at the same time determine what conservation and preservation measures should be taken that will provide a well balanced environment for generations to come. Table 1 indicates existing and planned inventory of vacant lands, and planned open space areas within the City.

OVERALL GOAL

Achieve and maintain a balance among the conservation, development, and utilization of planned open space and natural resources.

The Sacramento region has become one of the fastest growing areas in the United States. A major reason for this fast growth is the City's livability. In order to maintain this livability, a balance will need to continue between development and environmental factors. These environmental factors include water quality and supply, flood control, recreational open space, agricultural lands in nearby unincorporated areas, mineral deposits and plant and wildlife preservation.

OPEN SPACE CATEGORIES

The following use definitions taken from Government Code Section 65560 are used in this Element to describe open space for the preservation of natural resources, for the managed production of resources, for outdoor recreation, and for public health and safety:

- Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of natural resources, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.
- Open space used for the managed production resources, including but not limited to, forest lands, rangelands, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

Table 1
Existing and Planned Open Space Acreage

<u>Community Plan Area</u>	<u>All Existing Open Space</u>				<u>Vacant Existing Open Space</u>				<u>Planned (Year 2016) Open Space</u>			
	<u>Park Recreation (1)</u>	<u>Water</u>	<u>Agriculture</u>	<u>Total</u>	<u>Park Recreation (2)</u>	<u>Water</u>	<u>Agriculture</u>	<u>Total</u>	<u>Park Recreation</u>	<u>Water</u>	<u>Agriculture</u>	<u>Total</u>
Airport-Meadowview	395	0	1,662	2,057	0	0	0	0	395	0	0	395
Arden-Arcade	1,226	58	72	1,356	0	0	0	0	1,226	58	0	1,284
Central City	376	33	143	552	0	0	0	0	376	33	0	409
East Broadway	300	0	1,002	1,302	0	0	0	0	309	0	0	309
East Sacramento	428	52	165	645	0	0	0	0	428	52	0	480
Land Park	358	95	95	548	56	0	0	56	414	95	0	509
North Natomas	518	0	8,777	9,295	659	426	121	1,206	1,177	426	121	1,724
North Sacramento	876	0	3,575	4,451	120	0	0	120	996	0	0	996
Pocket	282	58	1,212	1,552	20	0	0	20	302	58	0	360
South Natomas	524	0	2,012	2,536	424	0	0	424	948	0	0	948
South Sacramento	405	0	3,345	3,750	3	0	0	3	408	0	0	408
Total Gross Acres	5,686	296	22,060	28,042	1,291	426	121	1,383	5,979	722	121	7,822

Sources:

- 1985 City Land Use Inventory
- 1992 Draft Railyards Plan Amendments
- 1994 North Natomas Community Plan
- 2004 Parks and Recreation Master Plan (intended Time Horizon 2010)

Note:

Data for North and South Natomas include some County area.

- (1) – Includes all City owned /controlled park land (neighborhood, community, regional, parkways, open space), City golf courses, 40% of all public school sites, County and state lands in City limits
- (2) - Additional planned parks/open space acreage per City Community Plans/General Plan Land Use Map to help meet future demand.

- Open space for outdoor recreation, including but not limited to areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

OPEN SPACE FOR THE PRESERVATION AND CONSERVATION OF NATURAL RESOURCES

PLANT LIFE

Much of the urbanized area of Sacramento contains a variety of introduced flora common to an urban area. There are, however, several “untouched” areas which contain a variety of natural flora species.

The most dominant flora feature of the urbanized area is the large number of street trees throughout the City. There are approximately 200,000 street and park trees within the City limits. New plantings exceed removals by about 2,000 per year. Sacramento’s efforts in tree planting and preservation have put it on the honorable mention list eight consecutive years as “Tree City USA”.

The older trees, some having been planted at the turn of the century, are being plagued by arboreal insects, diseases and parasites which are threatening the health and aesthetics of these early planted species.

In 1977, a program of gradual removal and replacement of elm trees began to curb the spread of Dutch Elm disease. Mistletoe is another problem common throughout the area. The City provides help and supplies tools to the private sector to cut the parasite out of the trees it affects.

The City also started a “Heritage Tree” program, the purpose of which is to protect the very old trees that have a minimum trunk circumference of 100 inches. When such a tree is found in a developing area, no construction is allowed within the drip line and one half again the distance between the drip and the trunk of the tree.

The major non-urban areas in the City where native flora species still thrive are in North Natomas and in South Sacramento within the Laguna stream floodplain area.

In North Natomas, several well-developed stands of cottonwood-willow riparian woodland vegetation are present. These sites generally border drainage canals and the Sacramento River. Non-wooded riparian plants found in the area are tule, cattails, sedges, bulrushes and blackberry stands.

A large portion of the remaining area is devoted to agriculture, mainly rice, wheat, corn, tomatoes, sugar beets, and safflower. Small groves of oaks, black walnut, and eucalyptus occur throughout the area.

Special study plants that could occur throughout the area are Bird's beak, Downingia, Hedge-Hyscop and California Hibiscus.

In South Sacramento, there is a larger variety of grassland flora. Some of these grassland species are Blow Wives, Meadow Barley, Narrow-Leaved Orthocarpus, and Butter-and -Eggs. The City portion of Laguna Creek has been heavily grazed and does not have any tall grasses or shrubs along its banks. A variety of vegetation exists in the vernal pools.

There are not many trees located in the open space areas of South Sacramento. Some of the native trees that are in the area are Cottonwood, Valley Oak, and Willow. Some may qualify as "Heritage Trees." There are some Blue Green (Eucalyptus) trees present, but they are not native to the area. There are no known endangered or special status flora species in the area.

WILDLIFE

As in the case of vegetation, the wildlife within the more urbanized areas of Sacramento are limited to domesticated animals, rodents, and song birds.

In the North Natomas and open areas in South Sacramento, there is a large variety of wildlife species in the riparian woodland area along the drainage ways. The area provides stop over for migratory songbirds and roosting and cover for other animals.

The Sacramento and American Rivers contain a number of different fish species including Salmon and Steelhead Trout and Shad.

The special status, or threatened, and endangered animals species in the natural settings around the City are: Peregrine Falcon, Swainson's Hawk, Giant Garter Snake, Black-Shouldered Kite, Ringtail, Burrowing Owl, Short-Eared Owl, Prairie Falcon, Western Yellow-Billed Cuckoo and the Valley Elderberry Longhorn (VEL) Beetle whose habitat is in the American River Parkway and along portions of the Sacramento River as well.

PHYSICAL FEATURES AND SETTINGS

Vernal pools are a unique natural resource and a phenomenon to California's Central Valley. A vernal pool exists when the ground water recharge is at a grade level thereby causing a natural pool. The pools fill to their various depths during the winter and dry up in the spring or early summer depending on their depth. Unique flora species, as well as more general flora species, exist in these pools.

Vernal pools are located in both North and South Sacramento. As agricultural and urban construction grading occurs in and around the pools, the pools are either left in a degraded condition or plowed and graded under. In order to retain a vernal pool in its undisturbed and natural state, it is important to protect its surrounding watershed which in turn protects the natural hydrology. The defensibility of pool watershed will determine the feasibility of any conservation effort. Map 1 indicates the location of the City's floodplains, waterways and vernal pools.

Sacramento has a number of creeks or streams running through it. In North Sacramento, there are Dry, Magpie and Arcade Creeks. In South Sacramento there are Morrison, Elder and Laguna Creeks. These creeks are in varying stages of neglect, misuse, and being polluted.

Dry Creek originates in Sutter County and flows in a southwesterly direction through North Sacramento where it is channelized and flows into the East Main Drainage Canal between Ascot and Main Avenue which is sparsely populated. This area is also in the 100 year floodplain.

Magpie Creek originates in McClellan Air Force Base and flows southwesterly direction to a point near I-80 and Norwood Avenue where it then flows parallel to the freeway and westerly to the East Main Drainage Canal. It too has a 100 year floodplain between the freeway and Main Avenue in the north.

Arcade Creek, the largest of the three in North Sacramento, originates in Orangevale and flows southeasterly through Del Paso Park, forms the northern boundary of Haggin Oaks Golf Course then flows through the heart of North Sacramento to the East Main Drainage Canal. It is channelized through the populated areas and has levees on either side. It has flooded Hagginwood and Strawberry Manor Parks in recent years causing concern and damage to properties in the community.

None of the three creeks are appropriate for any kind of passive and non-passive recreational uses. Arcade Creek does offer an aesthetic environment as it flows through the various parks and some neighborhoods.

Morrison Creek drains about 100 square miles above its confluence with Laguna Creek. Its waters do support fish, wildlife, and riparian vegetation. Morrison Creek is confined by levees within the City limits before it flows into Beach Lake.

Laguna Creek drains an area of 47 square miles above its confluence with Morrison Creek. The creek supports fish, wildlife, riparian vegetation, livestock watering, irrigation, and some fishing.

Elder Creek runs parallel to Morrison Creek and drains approximately the same amount of area. Its flow is channelized within the City limits. These three creeks plus smaller ones in the area (Unionhouse, Florin and Strawberry) make up the Morrison Creek Stream Group.

In 1963, Congress authorized the U.S. Corps of Engineers to prepare a flood control study of the Morrison Creek stream group. The study was completed in 1972 and submitted to Congress in 1975. In 1976, Congress authorized advanced engineering studies on a multi-purpose project involving an 11,000 acre-foot reservoir on Elder and Laguna Creeks, diversion of Morrison Creek flows to this reservoir, levee and channel work on streams east of I-5, and a 7,800 acre flood retardation basin in the Beach-Stone Lake area. Phase I studies for this project should be completed in 1986 or 1987. These studies will include reevaluation of the earlier flood control study in view of watershed urbanization since 1972 and the Corps of Engineers new rainfall runoff modeling of the Morrison Creek basin.

As South Sacramento becomes more developed, rainfall runoff will become more of a problem and nuisance flooding will increase as will the 100-year floodplain for the Creeks in the area. The increase of runoff from newly urbanized areas will pollute the Creeks and Beach Lake even more so. The Public Facilities Services Element will address the issue of storm drainage.

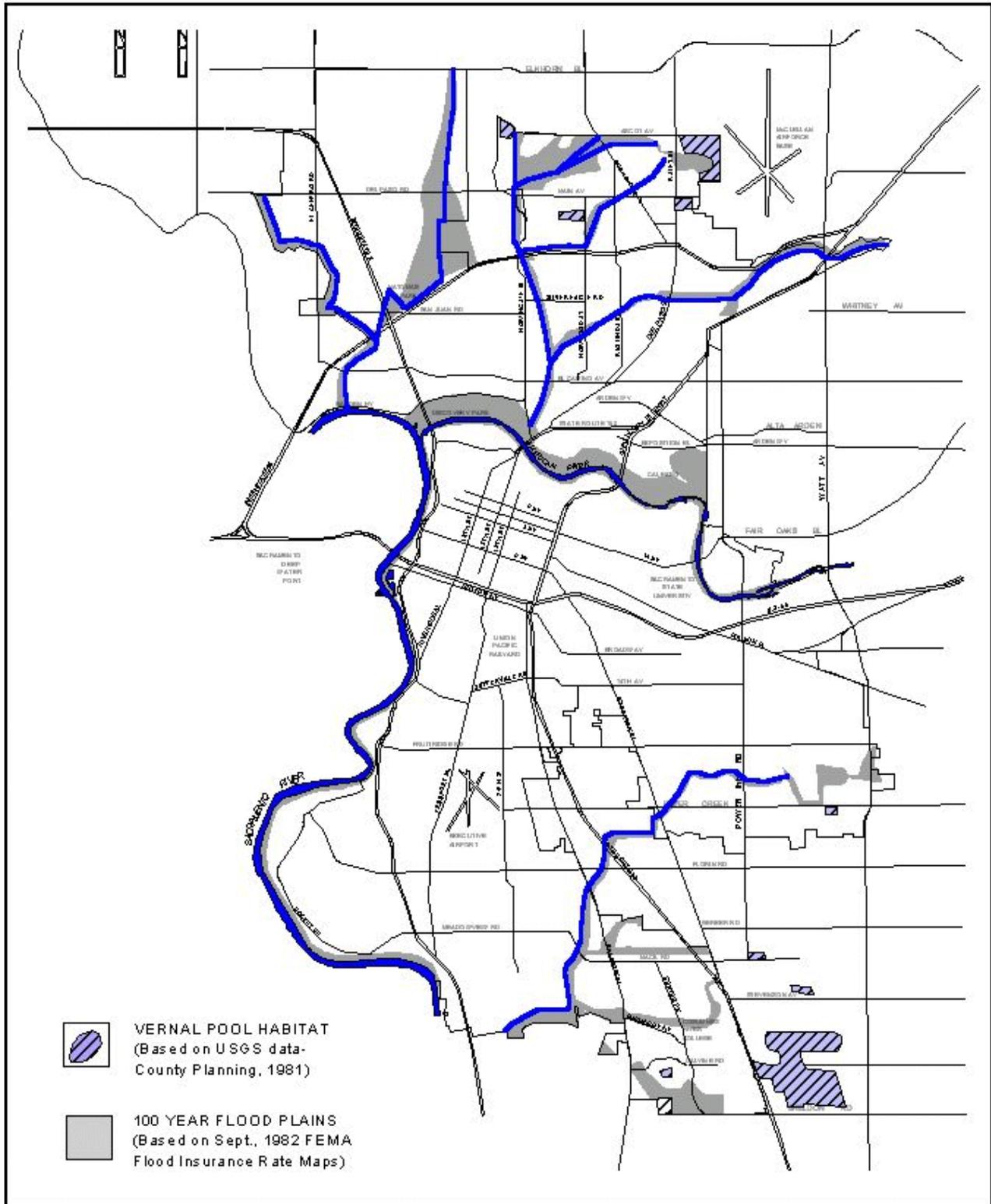
If the federal project is not implemented, the Creek beds and sidewalls would need to be paved with concrete, thereby eliminating the floodplain.

A Laguna Creek Floodplain Alternatives Study was prepared in 1984, which analyzed three alternative channelization proposals: channelization, modified 500 foot wide floodplain channel and channelization. The first two alternatives would have conservation and open space impacts.

Sacramento has an extensive system of floodways, which protect most of the City from flooding. Levees constructed by the U.S. Army Corps of Engineers along the American and Sacramento Rivers, the East Main and Sacramento Drainage Canals and along Arcade Creek have provided flood control. As development occurs in the North Natomas, North Sacramento, and South Sacramento areas, and impervious surfaces increase; floodways will need to be engineered and built. The February 1986 storm exceeded the 100-year storm criteria and as a result taxed the floodway systems for Arcade, Magpie, and Dry Creeks. In South Sacramento, engineering recommendations have been made for the Morrison Creek and Laguna Creek floodplains to accommodate a 100-year flood event.

Although the floodways are utilized for what they are designed for - to relieve the river and stream channels during the winter storm period - they are virtually underutilized the rest of the year, with the exception of the American River Parkway. Many of the floodways become a dumping area for old tires and other debris. The City has no development guidelines for the floodways which could provide both active and passive recreational open spaces when they are not used for the diversion of storm runoff.

Watersheds within the City of Sacramento have, for the most part been covered with impervious surfaces. Those watersheds, which remain, are in North Natomas area, north of Main Avenue in North Sacramento, in the Meadowview area and in the Laguna Creek area of South Sacramento. The Meadowview area is becoming rapidly urbanized and the North Natomas area will become urbanized, making it necessary to construct floodways and storm sewers. Urban infill in the remaining relatively small-undeveloped areas would not cause an appreciable adverse impact.



EXISTING FLOOD PLAINS, WATERWAYS, VERNAL POOLS
1986



WATERWAYS (Includes:
rivers, creeks, drainage
canals)

Planning and Building Department
City of Sacramento

GP

GENERAL PLAN
update 1985-2005

CONSERVATION OF, OPEN SPACE FOR THE MANAGED PRODUCTION OF RESOURCES

AGRICULTURAL LANDS

The City of Sacramento was built on some of the most fertile soil found anywhere. Although much of the City's agricultural lands have been consumed by urbanization, there is some fertile land still under cultivation in the North Natomas Community and adjacent County lands. Likewise, the area south of Sacramento and extending into the Delta; and the area west of Sacramento and extending towards Davis and beyond are high producing agricultural lands. The land to the east of Sacramento becomes less and less fertile, but is well suited for grazing livestock.

The North Natomas Community had approximately 6,730 acres of agriculturally zoned land under cultivation at the time the Community Plan was adopted in May 1986. A determination has been made to retain 121 acres of agriculturally zoned land under built out conditions as identified in the North Natomas Community Plan. In addition, a 500-foot wide strip is provided to buffer urban uses and active agricultural uses. This buffer will be in public ownership and may not be converted to urban uses. The adjacent County land contains several thousand acres of agriculturally zoned land that is prohibited from being urbanized.

Crops grown in North Natomas are rice, tomatoes, wheat, corn, sugar beets, safflower, oat hay, alfalfa, and specialty crops such as kiwis. The yields from these crops exceed the California averages.

RANGE LANDS

In the Sphere of Influence area to the east and southeast of Sacramento the soil is not as fertile and will not support such intense agricultural production as the alluvial fan soils found near the American and Sacramento Rivers. The soil does support grassland species and is good rangeland for raising livestock.

WOODLANDS

Sacramento has what is known as riparian woodland along the riverbanks of the American and Sacramento Rivers and to some extent along the creeks and floodways. As mentioned, these areas are the nesting habitat for several wildlife species, some of which are on the species of special concern and endangered species lists. The American River Parkway Plan and the Sacramento River Parkway Plan encourage the preservation and enhancement of their respective riparian woodlands.

AGGREGATE DEPOSITS

Existing minerals in and around Sacramento County consist of fine (sand) and coarse (gravel) construction aggregates. Construction aggregates come from two different sources, hard bed rock sources and river channel (alluvial) sources. The eastern part of the County must rely on hard rock sources which is mined by blasting and crushing bedrock. In the western United States alluvial deposits are in abundance, but the distance to usable markets determine cost effectiveness as well as adjacent land uses.

Most aggregate that is used by contractors in the area comes from the present and former drainage sources of the American River and its floodplain. The area contains construction aggregate ranges in width from one to five miles wide and 20 miles long. The majority of this area, known as the American River Resource Area, is located one to four miles south of the present American River channel. In the past, this area has met the construction demands of the Sacramento area, but is now reaching a point of depletion. The resource itself still exists - billions of tons - but development on or adjacent to these lands has resulted in the preemption of the available resources to the point where Sacramento will be importing its construction aggregate within the next five to 15 years depending on land use decisions within the County. The County has recently adopted a series of policies on land use decisions where aggregate resources are present. The City of Sacramento has only one viable aggregate site remaining. This is the City owned Granite Quarry located just south of Highway 50 at Florin-Perkins Road. Aggregate extraction is currently taking place and reclamation plans have been approved by the City, (see Map 2). The remaining identified deposits are within the protected American River Parkway and northwest of Elder Creek Road and Elk Grove-Florin Road where development exists, infrastructure improvements are in place, or construction is imminent.

OPEN SPACE FOR OUTDOOR RECREATION

Regional, community and neighborhood parks are an important aspect of open space. Since they are public facilities and are maintained as such, public parks are addressed in the Public Facilities and Services Element.

People living in the Sacramento area are very fortunate to have beautiful rivers. The American and Sacramento Rivers are unique regional resources and should be managed to provide for a combination of preserving the natural open space, protecting the quality of the environment and contributing to the recreational opportunities. The American River Parkway Plan and the Sacramento River Parkway Plan were developed and adopted by their respective government bodies. Other City landmarks that provide outdoor recreation but are City owned or managed also contribute significantly to the overall open space inventory. Major ones in this category are referenced below.

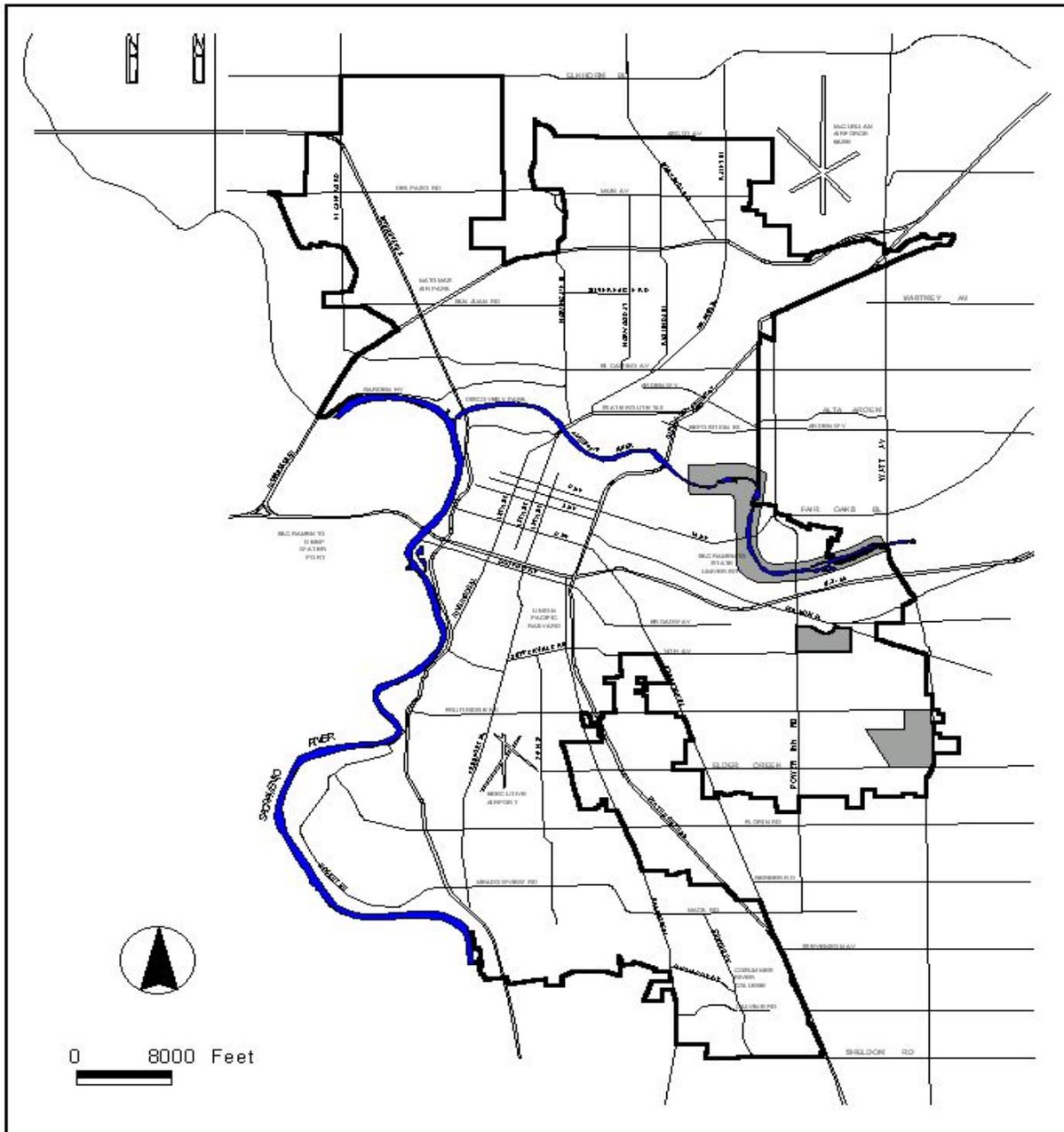
AMERICAN RIVER PARKWAY PLAN

The American River Parkway Plan (Amended in 1986) addresses the “lower river” from its confluence with the Sacramento River at Discovery Park to Folsom Dam, which is 29 miles upstream. This segment of the river is classified as a “recreation” river within the State and Federal Wild and Scenic River System. The Parkway itself is of varying widths on both sides of the river.

SACRAMENTO RIVER PARKWAY PLAN

The Sacramento River Parkway Plan (adopted in 1997) address the area within the City limits of Sacramento. The boundaries of the area are the confluence of the American and Sacramento Rivers at Discovery Park to the north, I-5 to the east, City limits of Freeport to the south and mid-channel (City limits) of the Sacramento River to the west.

Map 2



IDENTIFIED AGGREGATE RESOURCE AREAS

-  GRANITE QUARRY SITE
-  OTHER SMARA IDENTIFIED MINERAL DEPOSIT AREAS

Planning and Building Department
 City of Sacramento
GP
 GENERAL PLAN
 update 1995-2005

The components of the Sacramento River Parkway Plan are different from the American River Parkway Plan. The Sacramento River is classified as an “urban” river. There are a number of constraints to the Parkway, which do not occur to the American River Parkway. Access to the parkway is difficult by both auto and foot. The parkway levee and berm are easily eroded by rain, flooding, and wave actions from boating. Because the area is zoned “flood plain” the area is limited to simple facilities, which can withstand inundation. Natural habitat is limited to a few areas. The area is narrow and in some areas this presents a problem where conflicting uses such as railroad tracks occur. Several areas along the levee and berm are privately owned. Residents who own property along the levee are opposed to any public development and use with the levee. A number of agencies would be involved in the parkway development, which would create coordination problems. Several agencies are presently involved with maintenance of the levee. Problems with vandalism and trespass throughout private property along the levee have occurred. Funding development of the parkway by the City could be difficult.

Both the American River Parkway Plan and the Sacramento River Parkway Plan offer specific strategies, goals, and policies for the conservation, preservation, enhancement, and utilization of their respective areas.

There are twenty-one marinas on the Sacramento River adjacent to the metropolitan area, and only one sanitary pump out station. In 1986 the City began to expand its Miller Park marina. Boats are often restricted to no more than five miles per hour. The riparian vegetation along the Sacramento River has been reduced to five percent of its predevelopment abundance. What vegetation is left is very important to human enjoyment of the river corridor and to the wildlife along the levee embankments.

UTILITY EASEMENTS

There are a number of utility easements throughout the Sacramento area that offer long uninterrupted open space. Some of these are being utilized for other activities such as bicycling and horse back riding. The South Natomas, North Natomas, and North Sacramento Community Plan contains policies to provide recreational uses within the utility easements whenever possible.

CAL EXPO

Cal Expo, the State fairgrounds facility, contains a large amount of underutilized open space. This open space is used as overflow parking during the State Fair, occasional concerts, and a Saturday flea market. The site has potential for other uses behind the levee, not within the American River flood plain.

OTHER RECREATIONAL FEATURES

Sacramento is also fortunate in having other major land use features containing large open space areas. These include the State Capitol Park, Sutter’s Fort, California State University, various sports complexes and golf courses.

CONSERVATION AND OPEN SPACE NEEDS FOR PUBLIC HEALTH AND SAFETY

GROUND AND SURFACE WATER

Ground and surface water quality, distribution, and conservation issues are contained in the Public Facilities and Services element. The open space issues as they relate to ground and surface water are addressed throughout this element.

RIVER LEVEES

The many miles of river levees along the American and Sacramento Rivers offer a unique open space experience while providing for the public's health and safety. The levee system is varied and complex, particularly along the Sacramento River. The levee system along the Sacramento River extends from Nimbus Dam to its confluence with the Sacramento River. The crown of the levee system is used for bicycling, horse back riding, running, walking and for authorized vehicle access. Vistas of both an urban and rural character are enjoyed from the levee.

SPECIFIC GOALS, POLICIES, ACTIONS

PRESERVATION OF NATURAL RESOURCES

Goal A

Implement the Master Plan for Parks and Recreation

The Parks and Recreation Department has developed a comprehensive plan to guide the acquisition, development, and maintenance of parks, open spaces, and parkways. The Service Level Goals in the Parks and Recreation Master Plan are desired goals and non-minimum requirements. The Master Plan is part of the General Plan and is updated from time to time.

Policy 1

Continue programs for the planting and maintenance of trees, grass, floral displays, and other public landscapes both in the parks and on other City land such as street medians, public buildings, and grounds.

The City has an extensive street tree program. Efforts to maintain and enhance this program should be encouraged.

Policy 2

Continue to implement the Heritage Tree program.

The City's Heritage Tree program assures that heritage trees appearing on any new development proposals will be retained according to the City Ordinance affecting such trees. It is important that this program continue.

Policy 3

Continue to assist the efforts of the County and the Sacramento Tree Foundation in identifying, acquiring, and creating appropriate locations for urban forests and greenbelt.

Such appropriate locations may include, if development of the buffer lands surrounding the SRCSD waste water treatment plant prove infeasible, open space lands subject to flood hazards, lands delineating urban and rural uses, and sites containing significant native plant communities.

Policy 4

Establish a system of open space, buffers and view sheds that act as neighborhood gateways, and as visual and physical community separators and greenbelts to define the limits of urban growth.

Open space areas in the parks and recreation system are developed and managed to enhance or protect their scenic, historic, environmental, cultural and passive recreation value. Many such areas are intended to be part of an interconnected regional system of open space within and between urban growth areas.

Goal B

Retain the riparian woodlands and grassland vegetation along the waterways and floodways in North Natomas and South Sacramento insofar as possible.

Policy 1

Protect the wooded areas along the waterways and drainage canals insofar as possible.

There are several well-developed stretches of Cottonwood-Willow riparian woodlands along the drainage canals, which offer habitat to wildlife species of which many are endangered.

Policy 2

Explore ways to conserve a modified floodplain environment along Laguna Creek in South Sacramento to the extent feasible.

The City should protect the modified floodplain along Laguna Creek and conserve some of the natural ecosystem along the creek when the surrounding area is built out.

Goal C

Conserve and protect the planned open space areas along the American and Sacramento Rivers, floodways and un-developable floodplains to the extent feasible.

Policy 1

Retain the habitat areas where known endangered wildlife exists to the extent feasible.

The elderberry bushes along the Sacramento River Parkway are the home and food for the threatened Valley Elderberry Longhorn (VEL) Beetle. The riparian woodland along the American River and agricultural drainage areas are breeding, roosting and cover areas for the following endangered species: Peregrine Falcon, Swainson's Hawk, Giant Garter Snake, Black Shouldered Kite, Ringtail, Burrowing Owl, Prairie Falcon, and the Western Yellow-Billed Cuckoo. Eliminating the natural flora in these areas would lower the chances for these species to exist; and in the case of the VEL Beetle, it would become extinct without the elderberry bush.

Policy 2

Encourage the State Department of Fish and Game to retain and enhance the fish communities in the area's waterways.

The American and Sacramento Rivers and the various waterways provide a large number of fish species including anadromous species, which return each year from the sea. Care must be taken to protect these species from being over fished and programs must be supported that will enhance their populations for generations to come.

Goal D

Work with the County of Sacramento to identify, protect, and enhance physical features and settings that are unique to the area to the maximum extent feasible.

There are areas such as vernal pools and ancient Indian burial grounds that are within the City's Sphere of Influence, which should be managed by a coordinated effort between the City and the County.

Policy 1

Conserve vernal pools with rare and endangered species to whatever extent feasible.

Vernal pools offer unique vegetation not found anywhere else and provide wildlife habitat for various species. Their destruction due to urbanization is inevitable. Those vernal pools that have been identified to contain endangered plant species should be retained to whatever extent feasible.

Policy 2

Work with all interested parties to protect ancient burial grounds threatened by development activity and preserve their artifacts, either on-site or at a suitable relocation, to the extent feasible.

Ancient Indian tribes used various locations within the City limits and influence area for burial grounds. These burial grounds are a unique heritage. When threatened by development, these sites should evaluate for their content and uniqueness. The sites should either be preserved or their contents removed and preserved at a new location depending upon an analysis of the site and the development factors involved.

Goal E

Establish development standards for water related open space lands throughout the City to enhance the visual amenities of these uses.

Policy 1

Explore ways to reverse degradation and pollution and enhance the beauty and wildlife habitats of creeks and drainage canals.

Many of the creeks have been degraded and polluted within the open space and channelized areas as urbanization occurred. Steps are being taken to reverse the degradation and to enhance the stress beds and adjacent floodplain areas.

Policy 2

Explore ways to preserve the undeveloped open space areas and wildlife habitats along Dry Creek, Arcade Creek, Magpie Creek, Fisherman's Lake, and the area south of Woodlake Park, Morrison Creek, Elder Creek, Laguna Creek, Beach Lake, and drainage canals.

The open space floodplain areas along the creeks and drainage canals offer habitat to migratory water fowl and other wildlife, some being endangered species, and offer limited opportunities for passive recreation. The only alternative is to channelize the creek beds and turn the floodplain areas into impervious surfaces, thereby creating drainage impacts.

Policy 3

Design new floodways to be built in North Natomas and South Sacramento, to be aesthetically pleasing and offer limited passive recreation as well as wildlife sanctuaries.

Instead of becoming unusable and debris-ridden when they are not being used to store floodwater, the floodways that will need to be built in North Natomas and South Sacramento should have design amenities so that they may be used for open space recreation and wildlife sanctuary places.

CONSERVATION OF, AND OPEN SPACE USED FOR, THE MANAGED PRODUCTION OF RESOURCES

Goal A

Retain land inside the City for agricultural use until the need arises for development, and support actions of Sacramento County to similarly conserve its land until needed for urban growth.

Almost all-agricultural land in the City is located in North Natomas. Accordingly, phasing the conversion to urban uses through implementation of the North Natomas Community Plan policies is the only policy applicable within the City's current boundaries.

Policy 1

Phase the conversion of agricultural lands to urban uses while implementing the policies of the North Natomas Community Plan.

The general development agreements and the PUD process will consider and provide for the orderly phasing of development, and implement the policies that have been set.

Policy 2

Work with Sacramento County to explore the feasibility of an agricultural preservation plan.

Preservation tools such as transferable development credits could be examined as well as other programs, which are being used effectively in other parts of the State and country.

Goal B

Comply with the State's Surface Mining and Reclamation Act requirements, and conserve newly discovered aggregate deposits for extraction and land reclamation wherever feasible.

Policy 1

Adopt the Surface Mining and Reclamation Act map and mineral land classification information.

The Surface Mining and Reclamation Act's Map and its mineral classification and designation information prepared by the State Geologist is hereby incorporated by reference and made a part of this Plan as if fully set forth. A copy of this map classification and designation information is on file at the Planning and Development Department.

Policy 2

Continue to have aggregate deposits extracted and the reclamation plan implemented for the Granite Quarry site at Florin-Perkins Road south of Highway 50 until the resource is depleted.

The Granite Construction Company leases the quarry from the City of Sacramento. Upon full extraction and reclamation there is a unique opportunity to develop the site with recreational uses.

Policy 3

Encourage research and data gathering efforts aimed at locating and identifying mineral resources within the City and County, and use this information in a long-range and continuous mineral conservation effort integrated into comprehensive planning programs.

Policy 4

Adopt implementing procedures to aid in the preservation and possible future extraction of any newly discovered mineral resource areas.

The City recognizes the importance of conserving and developing identified mineral resources and will use the information prepared by the State Geologist and the County in its ARMTAC Report when making land use decisions.

OUTDOOR RECREATION

Goal A

Conserve and protect the Sacramento and American Rivers, their shorelines and parkways.

The Sacramento and American Rivers are regional resources for open space, recreation and the enhancement of the natural ecosystems. The Sacramento area is fortunate to have two rivers that contain a high quality of water that support numerous fish and amphibian species. Further encroachment of either river should not occur.

Policy 2

Implement the goals and policies of the Sacramento River Parkway Plan, and amend the Plan to include updated information and recommendations from the Sacramento River Marina Carrying Capacity Study.

The Sacramento River Parkway Plan is a comprehensive plan for the Sacramento River Parkway. The plan has been adopted by the City and contains goals and policies of the City.

The plan, however, should be updated to reflect the present condition of the parkway and the needs of the City. Recommendations for the City from the Sacramento River Marina Carrying Capacity Study were prepared for the California State Lands Commission, May 1986, and should be reviewed and approved by the City Council.

Policy 3

Prepare and adopt plans for including more recreational activities within utility easements whenever possible.

Utility easements offer opportunities for a number of varied recreational uses. These opportunities should be taken advantage of and appropriate recreational uses should be provided along the easements.

Policy 4

Work with the State to develop additional use of its open space areas at Cal Expo in a manner consistent with the American River Parkway Plan.

Cal Expo, as a centrally located facility with a considerable amount of unused open space, should be considered for additional recreational activities. These new uses would be located in the open space area behind the levee, not within the American River flood plain.

PUBLIC HEALTH AND SAFETY

Goal A

Continue to work toward providing a levee system which protects the community from flood related hazards and makes use of its open space areas where appropriate.

Policy 1

Support levee reconstruction with appropriate crown widths for recreational use to the extent feasible.

Levee crowns offer potential for compatible and varied recreational uses. There are a number of levee crowns along the Sacramento River levee system that could offer more recreational benefits when they are improved.