

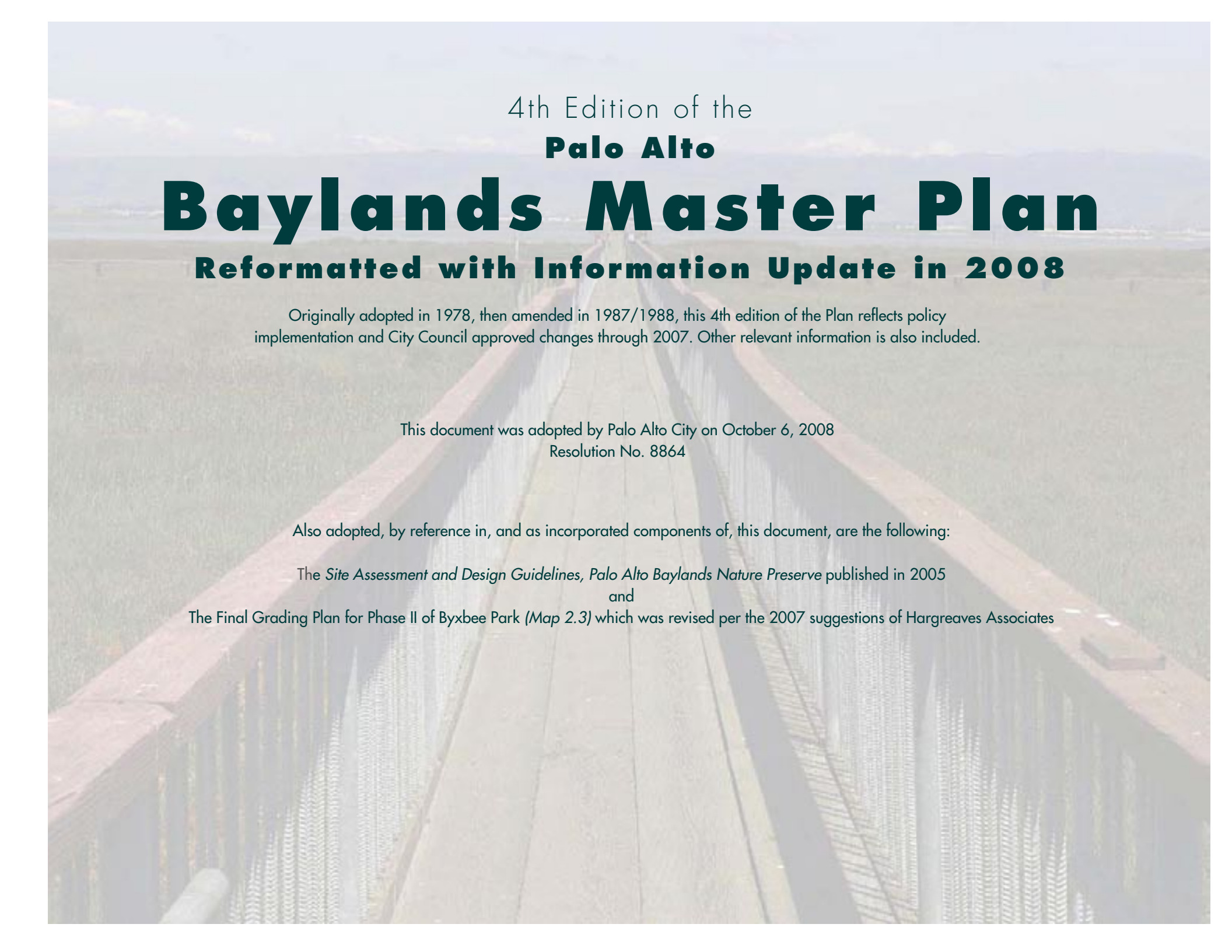
4th Edition of the

Palo Alto

# Baylands Master Plan

Reformatted with  
Information Up-  
date in 2008





4th Edition of the  
**Palo Alto**  
**Baylands Master Plan**  
**Reformatted with Information Update in 2008**

Originally adopted in 1978, then amended in 1987/1988, this 4th edition of the Plan reflects policy implementation and City Council approved changes through 2007. Other relevant information is also included.

This document was adopted by Palo Alto City on October 6, 2008  
Resolution No. 8864

Also adopted, by reference in, and as incorporated components of, this document, are the following:

The *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve* published in 2005  
and

The Final Grading Plan for Phase II of Byxbee Park (*Map 2.3*) which was revised per the 2007 suggestions of Hargreaves Associates

This document was prepared by the City of Palo Alto

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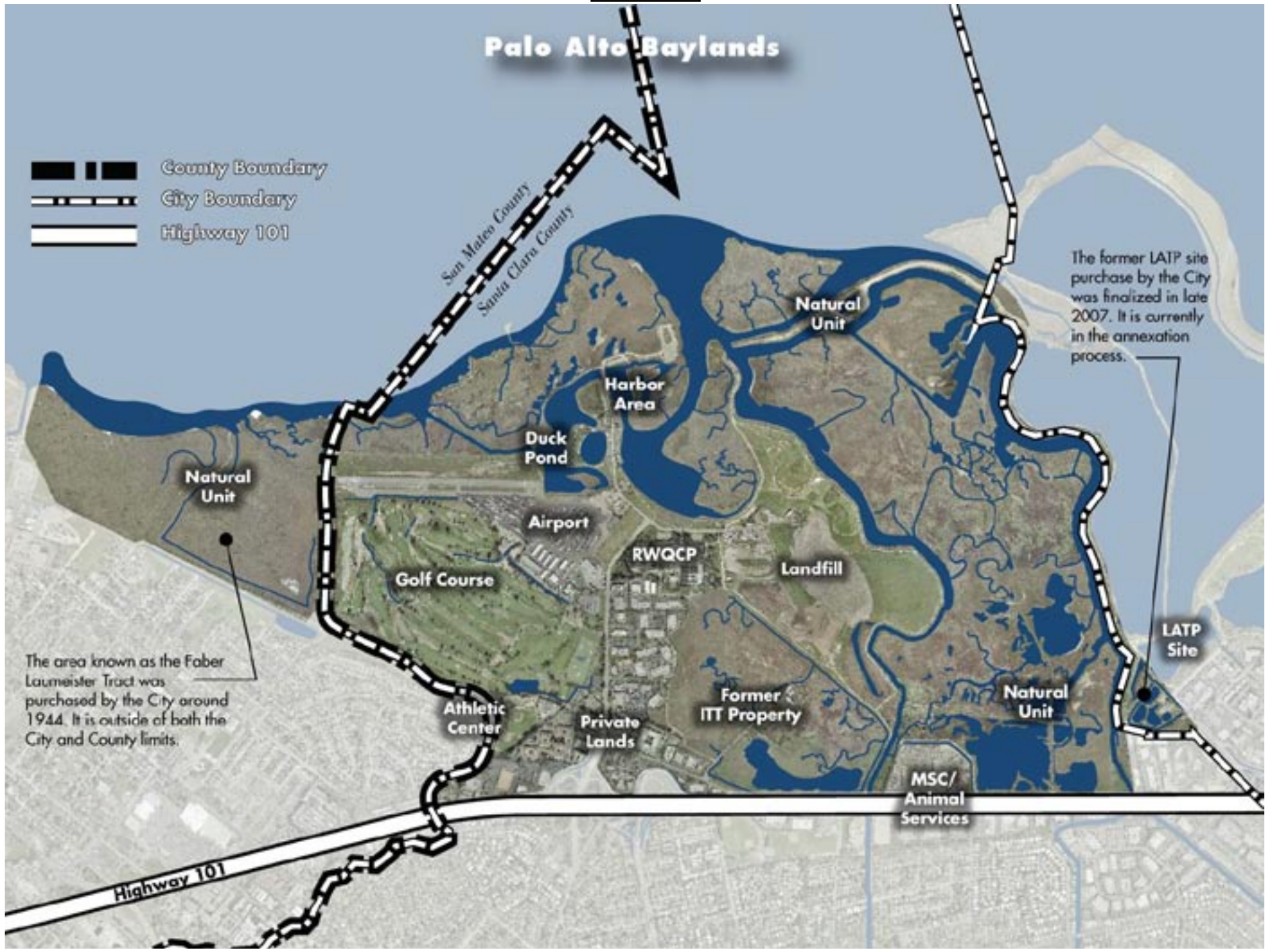
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# Palo Alto Baylands

-  County Boundary
-  City Boundary
-  Highway 101



The former LAMP site purchase by the City was finalized in late 2007. It is currently in the annexation process.

The area known as the Faber Laumeister Tract was purchased by the City around 1944. It is outside of both the City and County limits.

Highway 101

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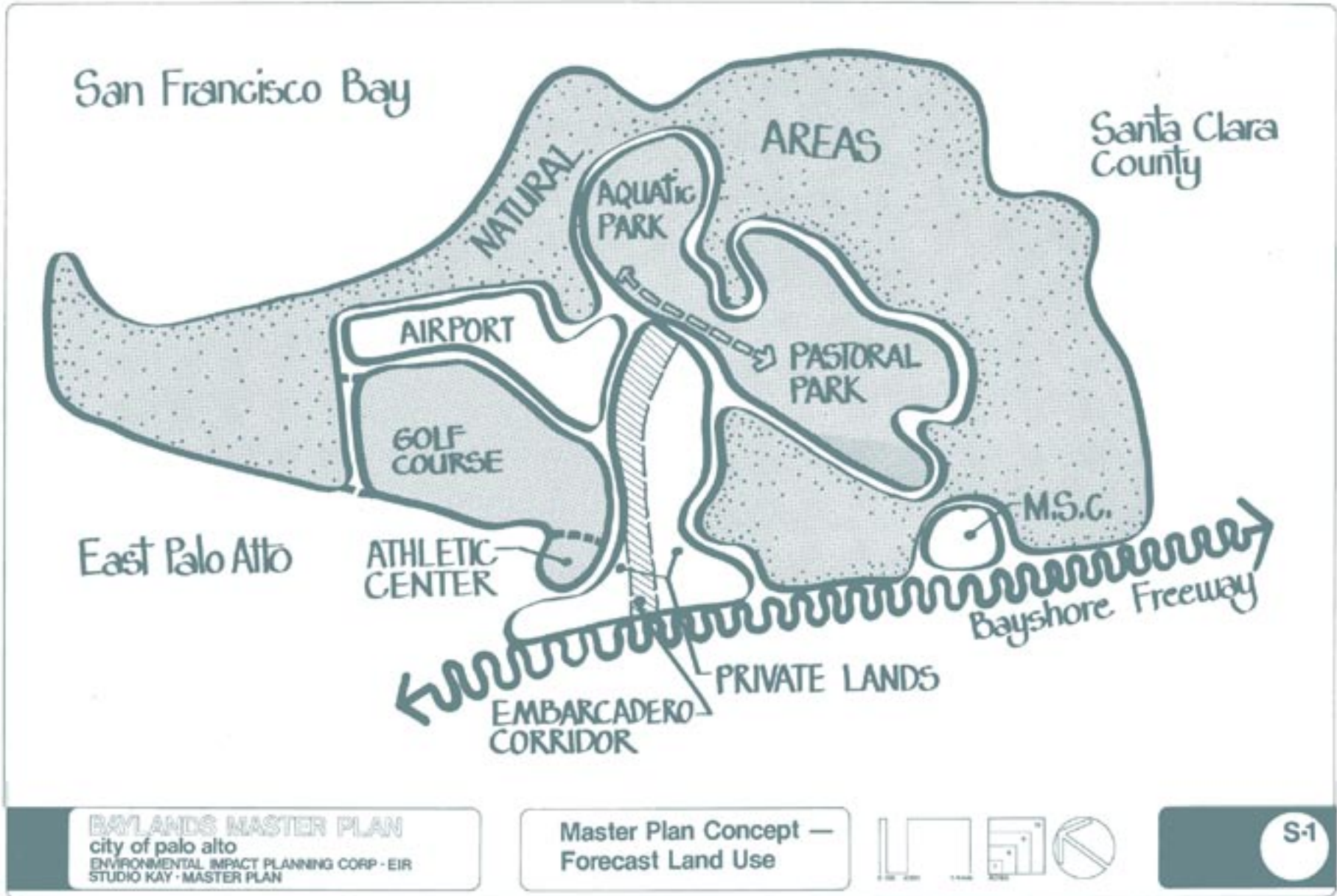


# Introduction

1. Provides historical background.
2. Describes the evolution of the document and explains the relationship between the documents.
3. Describes the organization of this document.

# Baylands Master Plan Concept

Forecast Land Use Diagram from the 1978 Baylands Master Plan and EIR prepared by Eckbo/Kay & Associates



**BAYLANDS MASTER PLAN**  
city of palo alto  
ENVIRONMENTAL IMPACT PLANNING CORP - EIR  
STUDIO KAY - MASTER PLAN

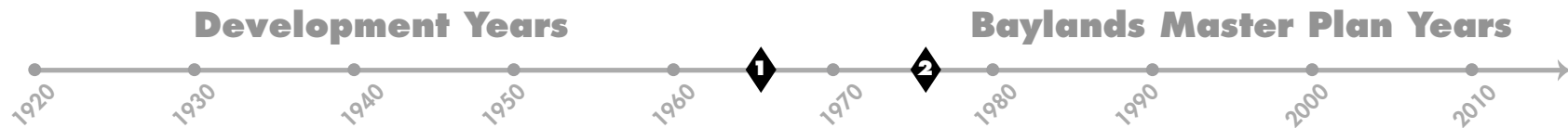
Master Plan Concept —  
Forecast Land Use



S-1



# About the Baylands Master Plan



In the 1960s, there was a dramatic change in the City’s vision for the Baylands. Two events mark that change:

- ❖ 1965: Park dedication of city-owned baylands
- ❖ 1978: Baylands Master Plan

## The Development Years

By the 1920s, Palo Alto’s expanding population was creating pressure for development in the Baylands and, encouraged by the California Lands Commission, the City began purchasing marshland for reclamation and development. By 1939, over 100 acres of marsh had been filled in with dredge spoils from the harbor. By 1960, the City owned approximately 1,880 acres of marshland and much of it had been diked, filled, or developed. In fact, at that time, there were plans to continue filling and developing.

## The Change Years

By the mid 1960s, there arose a new awareness of the ecological value of marshlands and in 1965, a Citizens’ Advisory Committee strongly urged establishing a marshland wildlife preserve. Also, in 1965, Palo Alto took the important step of dedicating its parks, including City-owned Baylands. By the early 1970s, the City had begun work on the *Baylands Master Plan*.

## The Baylands Master Plan Years

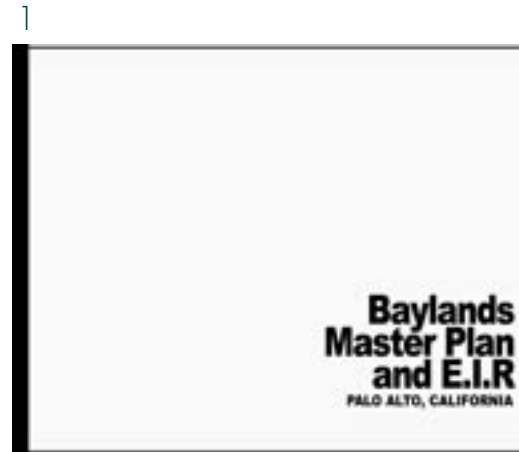
In 1978, the City adopted the *Baylands Master Plan* as a long-range plan for treating the Baylands as an integrated whole and balancing ecological preservation with continued commercial and recreational use. The overall goal was to preserve and enhance the unique irreplaceable resources while providing a framework and guide for future actions in the area. Since its adoption, the document has evolved and the following pages briefly describe that evolution.

# Evolution

## of the *Baylands* *Master Plan* Documents

This document is the 4th edition of the *Baylands Master Plan*. This page describes the sequence of the four editions.

Organization of the information in this edition is based on, and reflects, this sequence.



## 1978 Baylands Master Plan and EIR

### Eckbo/Kay Document

In May of 1978, the Eckbo/Kay & Associates presented the *Baylands Master Plan and EIR* to the City. It included recommendations that addressed:

- The San Francisco Bay Conservation and Development Commission (BCDC) requirements for 1) a recreational master plan and 2) a plan for disposing of harbor dredge spoils.
- The Army Corps of Engineers requirements for closing the sanitary landfill.
- The citizens' desire to develop the landfill into a pastoral park.
- The citizens' desire to protect and enhance the natural environment and create a pleasant opportunity for recreation and nature appreciation.
- The future of commercial and utilitarian uses in the Baylands.

### Planning Commission Recommendations

Because the *document* was a combination master plan and environmental impact report, it included site analysis and alternatives to the recommendations. It also included technical and scheduling details associated with the recommendations and even choices within the recommendations. The Planning Commission made choices and distilled the information into specific recommendations. They also initiated recommendations pertaining to the former Los Altos Treatment Plant site, overall environmental quality, and specific programs and tasks. Along with their specific recommendations, they recommended adoption of the Eckbo/Kay document. On October 11, 1978, the Council adopted the Planning Commission recommendations and the Eckbo/Kay *Baylands Master Plan*.



2



## 1979

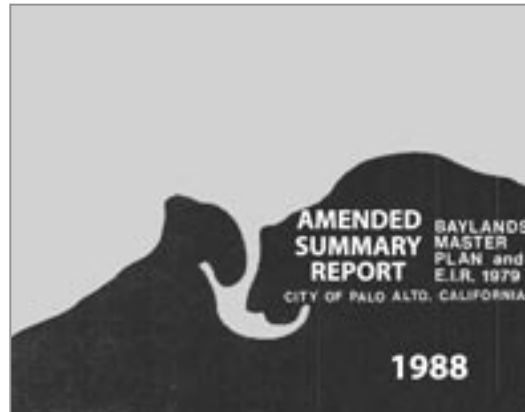
### Baylands Master Plan Summary Report

Once the Council adopted the recommendations of the Planning Commission, the non-adopted alternatives and choices in the 1978 document were made moot.

Therefore, shortly after the Council's action, staff published the *Baylands Master Plan Summary Report* to be used as the primary reference document. The *Summary* included adopted recommendations as well as text from the Eckbo/Kay document. The *Summary's* content was grouped into the Elements established in the Eckbo/Kay document.

*Note: Because the 1988 Amended Summary Report is the most recent edition of the Baylands Master Plan, the 1979 component of the Plan's evolution is not referenced in each chapter of this update.*

3



## 1988

### Baylands Master Plan Amended Summary Report

By 1987, major changes had occurred that affected the *Baylands Master Plan* policies. Chief among these was the decision to close the yacht harbor much sooner than anticipated. This had a cascading affect on policies associated with the other elements of the Baylands.

Therefore the City published the *Amended Summary Report*. This publication utilized strike-outs and italics to reflect Council approved actions and changes to the policies between 1979 and 1988.

4



## 2008

### Baylands Master Plan Information Update

In 2007, staff conducted an information update with the goal of producing an up-to-date record of Council-approved policies and actions in the Baylands. The task included a review of existing documents as well as activity between 1988 and 2007—to identify policy changes not reflected in the 1988 edition. This review identified information that warranted modifications to the existing policy text and that text has been revised in three ways:

1. Strike-outs from the 1988 update were removed. (*That information is now recorded in the "historical information"—see next page*)
2. Adopted & Significant Recommendations were merged and renamed Policies.
3. Policy text was updated to reflect policy implementations and Council-approved changes between 1988 and 2007.

# About This Edition

of the

*Baylands*

*Master Plan*

## Organization

Chapters are based on the “Elements”, defined in the original *Baylands Master Plan*. In this 2008 edition, each chapter has two parts:

### 1. Baylands Master Plan Evolution

Presents policy context in chronological order—under the following sub-sections:

**Before the Baylands Master Plan:** covers the development and change years.

**1978•Baylands Master Plan:** covers the *Plan* and policies as adopted in 1978.

**1988•Baylands Master Plan Amended Summary Report:** records and explains the amendments documented in 1988 (*those strike-outs and italics have now been removed*).

**2008•Baylands Master Plan Information Update:** records policy implementation and Council-approved changes from 1988 through 2007.

### 2. Policies

Presents existing policy statements updated in the following ways:

- Strike-outs from 1988 update were removed.
- Adopted & Significant Recommendations were merged and called Policies.
- Policy text was modified to reflect policy implementation and Council-approved changes from 1988—2007.

Policy text modifications were kept brief, and supporting contextual information was recorded in the historical information section. For example, in the “Airport” chapter, policy text was modified with a brief paragraph; whereas two pages in the historical information provide and record information about negotiations and reports that explain the policy change.

## Purpose

The purpose of the 2008 update was to consolidate the existing documents and to produce an up-to-date one that would reflect the original content, Council-approved activity between 1988 and 2007, and other relevant information to serve as a primary reference document.

## Comments

In developing this document, a lot of valuable information about the Baylands came to the forefront. Some of it does not directly affect the existing policies. In fact, some of it reflects studies and proposals that were not implemented. This information was included for its potential to provide valuable reference for future decision makers, staff members, and the public.

In addition to being up-to-date, the new document is digital and therefore accommodates online publishing and word searches.

## Future

This document may be updated again when the *Comprehensive Conservation Plan* is completed as that document may include specific programs to achieve the goals and policies of the *Baylands Master Plan*. It may also be updated when the landfill closes, when the airport lease terminates, when the PASCO lease terminates, etc.

It is anticipated that future updates will include changes to the policy text; however, it is intended that the historical information be modified with additions only—like a log or a scrapbook. It will serve as a permanent explanation and record of policy implementation and Council-approved changes over time.



# Elements

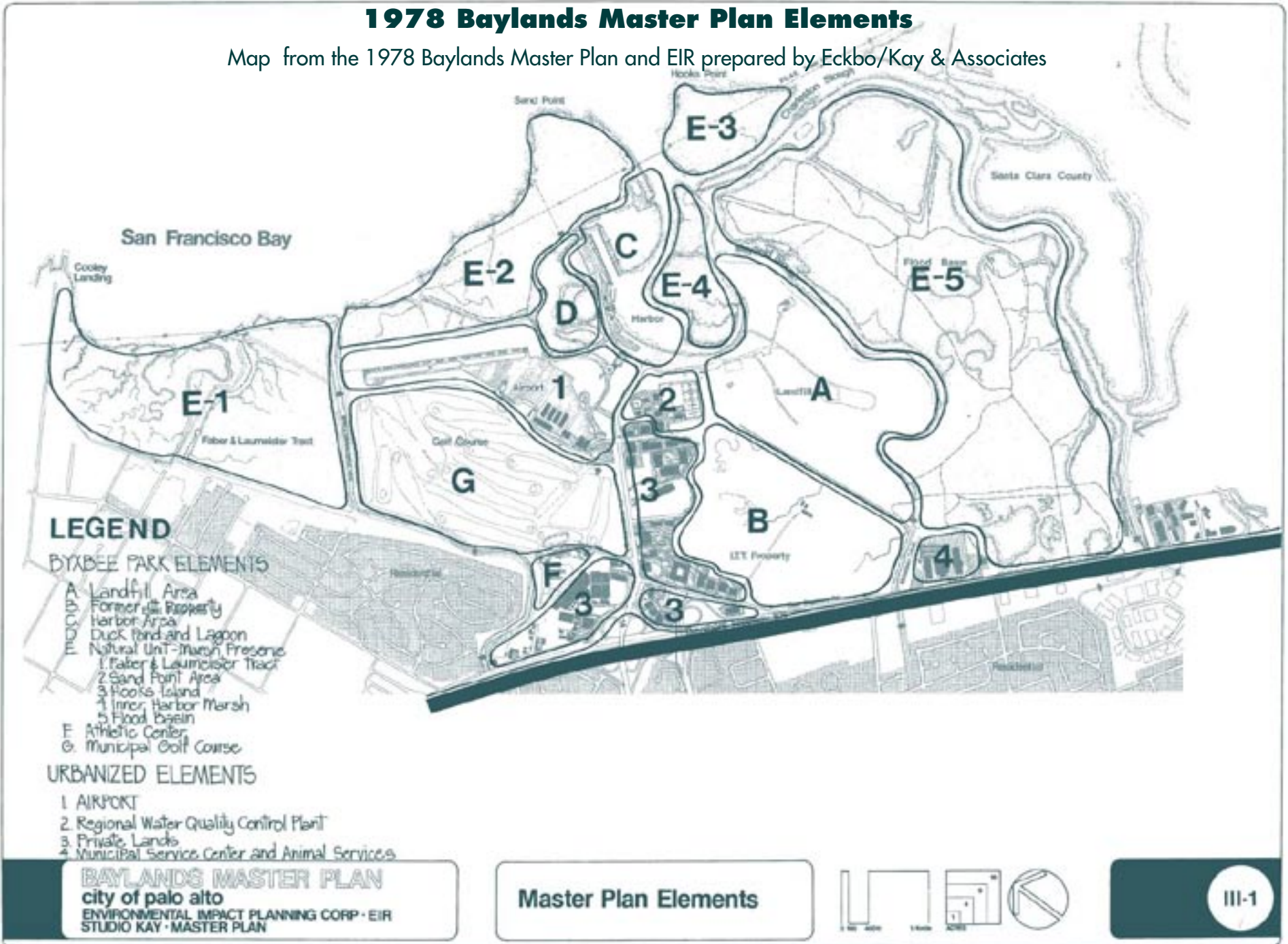
Elements are distinct physical areas established in the original *Baylands Master Plan* (Maps 0.1 & 0.2)—plus the “LATP Site”, “Overall Environmental Quality”, “Access and Circulation”, and “Flood Protection”.

In this document, each Element has:

1. A **Historical Information** section that provides a permanent record of changes over the years.
2. A **Policies** section that contains the policies—updated to reflect policy implementation and Council-approved changes from 1988 through 2007.

# 1978 Baylands Master Plan Elements

Map from the 1978 Baylands Master Plan and EIR prepared by Eckbo/Kay & Associates



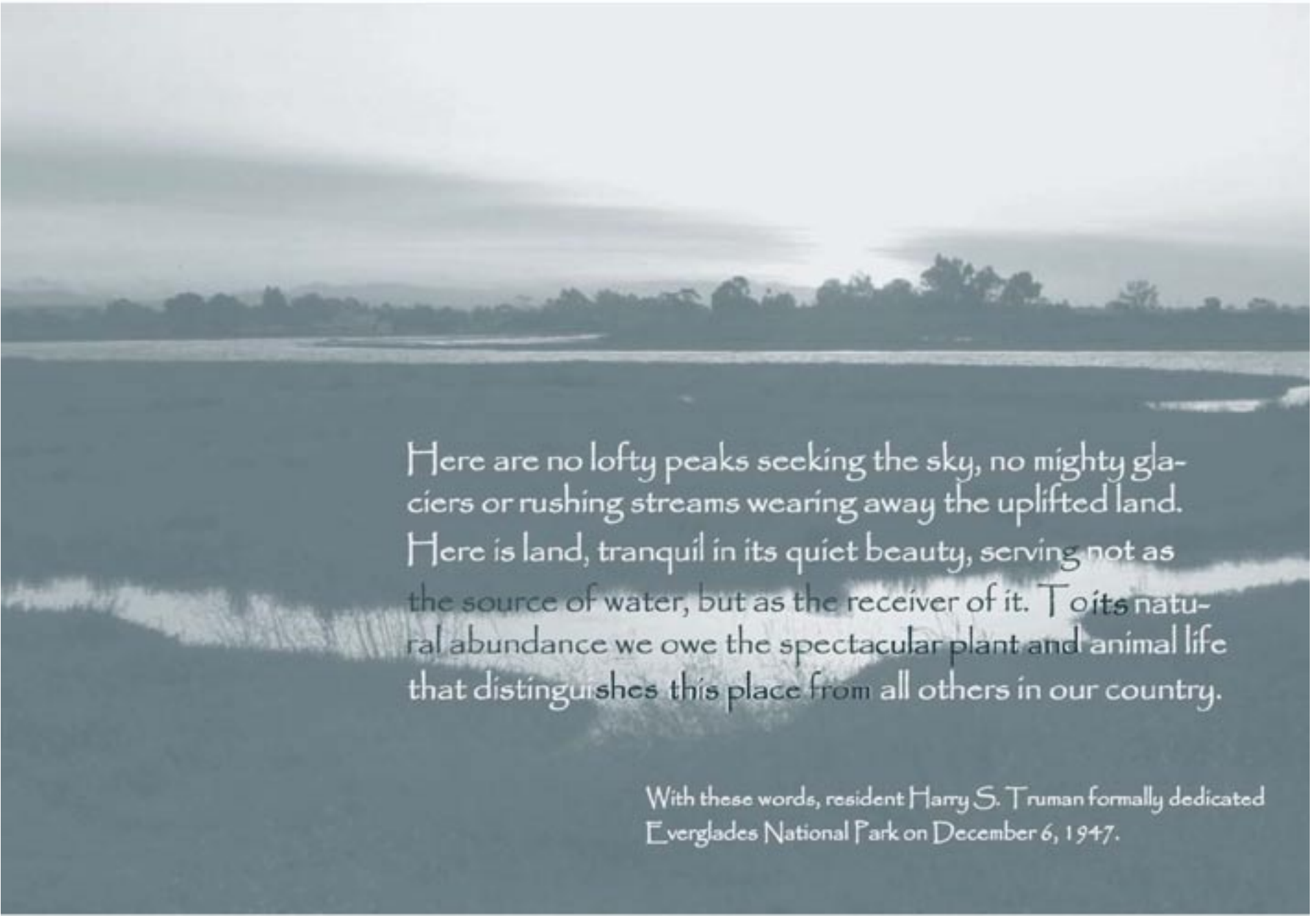
# 2008 Baylands Master Plan Elements

Map from the Reformatted-with-Information-Update-as-of-2008 Baylands Master Plan

- 1. Overall Environmental Quality
- 2. Landfill Area
- 3. Former ITT Property
- 4. Harbor Area
- 5. Duck Pond and Lagoon
- 6. Natural Unit
- 7. Athletic Center/PASCO Site
- 8. Municipal Golf Course
- 9. Municipal Airport
- 10. Regional Water Quality Control Plant/ATP Site
- 11. MSC/Animal Services
- 12. Los Altos Treatment Plant
- 13. Privately Owned Lands
- 14. Access and Circulation
- 15. Flood Protection



Elements



Here are no lofty peaks seeking the sky, no mighty glaciers or rushing streams wearing away the uplifted land. Here is land, tranquil in its quiet beauty, serving not as the source of water, but as the receiver of it. To its natural abundance we owe the spectacular plant and animal life that distinguishes this place from all others in our country.

With these words, resident Harry S. Truman formally dedicated Everglades National Park on December 6, 1947.



# 1.

# Overall Environmental Quality

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

#### Historic Attitude Towards Wetlands

Conservation efforts are not new. By 1864, Abraham Lincoln had signed the Yosemite Grant and it became a national park in 1872. However, well into the twentieth century, wetlands were still considered nature's failure. Americans sought to drain these lands to increase their usefulness—an undertaking needing government funds and resources.

In 1849, Congress passed the first of the Swamp Land Acts, which granted all swamp and overflow lands to the State governments for reclamation; by

1860, the law applied to 15 states. This legislation set a tone that promoted wetland drainage and reclamation for settlement and development. By the 1930s, the U.S. Government was, in essence, providing free engineering services to farmers for draining wetlands. This tone pervaded policy and land-use until the 1960s.

One notable exception to the prevailing attitude towards wetlands was the Florida Everglades. It was first proposed to be a national park in 1923; however, the passage of the Sugar Act of 1934 quashed the idea and even more Florida wetlands were drained and put into sugarcane production.

Finally, in 1947, President Harry S. Truman formally dedicated Everglades National Park with these words,

“Here are no lofty peaks seeking the sky, no mighty glaciers or rushing streams wearing away the uplifted land. Here is land, tranquil in its quiet beauty, serving not as the source of water, but as the receiver of it. To its natural abundance we owe the spectacular plant and animal life that distinguishes this place from all others in our country.”

However, in the same year as the dedication, a series of storms prompted the construction of an ad-

ditional 1,400 miles of canals and by 1960, the park's very existence was in danger due to the diversion of water to metropolitan areas. Only in 1972 was a bill introduced that would ensure that the park would have the water it needed and efforts made to repair the damage, and only in 1990 did the Army Corps of Engineers change its Everglades focus to "purely environmental projects".

Wetland conversion in the Central Valley of California began in the mid 1800s, when farmers began diking and draining the flood-plain areas of the valley for cultivation. Around the turn of the century, the California State Lands Commission was echoing the Federal attitude and promoted the filling-in of wetlands.

### A Change in Attitude, Nationally

The earliest effective resistance to wetland conversion came from hunters, sportsmen, and naturalist lobbies. Organizations such as the Izaak Walton League, the Audubon Society, and the American Game Protective Association deplored the draining and destruction of wildlife habitats and began to press for protection of wetlands. These early conservation efforts got chilly receptions both from the public and the courts. A growing number of Americans, however, were beginning to sympathize with conservationists. Furthermore, drainage projects were often disap-

pointing—soils often proved to be poorer than expected, and costs were often higher than expected.

By the early 1970s, conservationists had begun to challenge reclamation projects and soon the preservation movement found support in state laws and federal policies. In 1977, President Jimmy Carter issued an executive order instructing federal agencies to minimize damage to wetlands, and in 1989 the EPA adopted a goal of "no net loss" of wetlands, meaning that where a wetland is developed for other uses, the developer must create a wetland elsewhere to maintain an overall constant amount of wetland acreage.

Wetlands turned out not to be wastelands, but systems efficient in harnessing the sun's rays to feed the food chain, and important in the global cycle of water, nitrogen, carbon, and sulfur. A number of studies have shown that the value of wetlands for flood protection is far greater than their potential value for agriculture. If drainage once seemed to improve the look of the land, today it is more likely to be seen as degrading it.

### A Change in Attitude, San Francisco Bay Area

The San Francisco area was a little ahead of the curve regarding wetland preservation. In this area, people started reacting to the filling of San Francisco Bay as early as 1961 and established the

first modern grass roots environmental movement in the Bay Area, "Save San Francisco Bay Association" (now "Save the Bay").

It began with three East Bay women, (Kay Kerr, Sylvia McLaughlin and Esther Gulick), who were watching the Bay disappear before their eyes. Aware of a proposal to fill in the shallow area around the City of Berkeley (to double the city's land mass), they mobilized thousands of "Save the Bay" members and stopped the project. Their success was repeated around the region.

In 1965, the State of California acknowledged that the Bay belonged to the public and the McAteer-Petris Act moratorium was put in place to prevent further filling. Around the same time, the state established the Bay Conservation and Development Commission (BCDC) to plan for and regulate shoreline development, and ensure public access—which was non-existent at the time. It was the first coastal protection agency in the United States and became a model for others. In 1969 the BCDC was made a permanent regulatory agency, empowered to permit development on the Bay and in areas within 100 ft of the high-tide line, and to require public access to the shoreline. Since BCDC's inception, there has actually been a small net gain in the size of the Bay and an increase of public access from only four miles, to over 200 miles. By the First Earth Day (1970), Save The Bay had a reputation

as an international model and was cited as such by the Stockholm Conference on the Environment.

In 1972 Congress established the nation's first *urban* national wildlife refuge here in the south San Francisco Bay—the Don Edwards San Francisco Bay National Wildlife Refuge. It spans 30,000 acres of open bay, salt pond, salt marsh, mudflat, upland and vernal pool habitats and is part of a complex made up of seven wildlife refuges in the San Francisco Bay Area. In 1974 California passed the Suisun Marsh Preservation Act. It was the state's first wetlands protection law.

### A Change in Attitude, Palo Alto

By the 1950s, the higher marshes—easier to build on—were already gone and the remaining ones had no protection. Then one day, Harriet Mundy was at City Hall to complain about a broken sidewalk. While there, she learned of a \$30 million development proposal for the Baylands. It included condominiums, a hotel, and a marina—but no marsh. Harriet Mundy, along with Lucy Evans, Enid Pearson, and other locals rallied to stop this development proposal that would have eliminated most of the remaining marsh.

Over the next decade, these three women became close friends and effective advocates for the marshland. In 1960 they helped to circulate a petition which resulted in the City Council agreeing

to forestall any future development until a *Baylands Master Plan* was prepared.

Enid Pearson also formed PARCS (Palo Altans for Recreation and Conservation Sites), and with the help of John Willets and James Warnock, brought about the 1965 park dedication ordinance that in-

cluded most of the City-owned land in the Baylands. Other manifestations of Palo Alto's attitude toward protection of the Baylands included the construction of the Lucy Evans Nature Interpretive Center in 1967 and the League of Women Voters', *Palo Alto Baylands Handbook*, published in 1975. (See excerpt on following page.)



Lucy Evans, educator and preservationist, after whom the Baylands Nature Interpretive Center is named, is shown instructing school children in front of an exhibit called, "Our Bird Friends".

Photo courtesy of the Palo Alto Historical Association

## Ecology of the Baylands

From the *Palo Alto Baylands Handbook* Published by the League of Women Voters (1975)

Twice a day the high tide flows over the muddy shores and creeps into the marshes of San Francisco Bay. Quickly a busy exchange of food and organisms takes place amid the marsh plants, before the salt water recedes again. For a longer period, the water-covered mud flats are host to schools of fish feeding upon the rich foods washed from the shores or produced on the flats themselves. As the overflowing waters recede, the exposed marshes and the mud flats enter the next step in the vital cycle of producing food for fish and birds, and thus for man.

The bay is a complicated system of life and death, every part of the system a link in a chain of events. As a chain is no stronger than its weakest link, so also do changes in one part of the complicated bay life system affect other parts.

### Importance of Mud flats

Mud flats lie mainly between the half-tide water mark and the lowest water mark, generally where the shore slopes gently into the bay waters.

Although they may not appear attractive, mud flats are an important link in the bay's life cycle. They draw foods from marshes and open water and change it into forms upon which many wild birds, fish, and mammals depend.

Microscopic plants (algae) and animals (plankton) occupy the mud surface and float in the water above it; their food value is not known exactly, but it is estimated to be very high. The other major foods are decomposing plants and other organisms. called detritus, together with the bacteria and fungi working upon them. Much of this food material comes from decomposing salt marsh grasses. Clams, mussels, worms, and other mud-dwellers feed on these foods and themselves become food for fish or birds, or they produce larvae upon which the fish or birds may feed.

The importance of these food sources is indicated by the fact that shorebirds estimated at over 100,000 are supported on the Palo Alto mud flats alone during the winter season. In addition, an estimated 70% of the shorebirds of the Pacific flyway between Canada and Mexico depend directly upon the San Francisco Bay mud flats for their survival.

The mud flats also play an important role in providing sufficient oxygen in the waters of the bay for the maintenance of fish and the abatement of pollution. The mud algae, exposed to abundant light alternating with abundant water, produce and expel oxygen into the water and into the air.

### Importance of Marshes

Marshlands are of two main types, salt water and fresh water, but the line between them is often indistinct. Salt marshes, made salty by the rising and falling tides, today occupy about 75 square miles of bay shoreline, less than one quarter of the original area. Fresh water marshes extend for various distances up various tributaries above the high water mark.

Marsh plants tolerate only a limited depth of water. New marshes are created when sedimentation raises the level of the mud flats sufficiently, and marshes have been lost when nearby well-pumping cause the substratum to subside allowing too much water cover.

Salt marshes are extraordinarily fertile—one of the most productive natural areas in our environment. Situated in well-watered, fairly temperate and sunlit areas, marsh plants are highly productive. One type of marsh plant alone, cordgrass, has seven times the food value of an equivalent acreage of wheat.

The food value of the marsh plant is primarily passed to the flooding waters and thence to the mud flats and nearby shallows, thereby supporting a vast marine-life nursery. Also, large numbers of birds, including ducks and geese, come to the marshes, especially during the winter, to feed directly on the lush vegetation or the brackish-water animals that thrive in the marsh.

Marsh plants appear to help in preventing air and water pollution. Some marsh plants can change a common air pollutant, carbon monoxide, into relatively harmless carbon dioxide and thus reduce the potential hazard. Marsh plants can remove common water pollutants such as nitrates and phosphates as well as add oxygen to the water, thus improving living conditions for wildlife.



## Palo Alto Wetlands: A Brief History

Long before settlers arrived, salt marshes were abundant. USGS maps show that around 1900, the entire Baylands was salt marsh—extending a little beyond the current Bayshore Freeway (*Map 1.1*). These marshes provided fish, shellfish, small mammals and fowl sustenance to the native Californians.

During California's Spanish period huge areas of land were granted to Spanish immigrants. One such grant was Rancho Rinconada del Arroyo del San Francisquito—given to Don Rafael Soto. Soto's grant extended to the marsh where Soto constructed an embarcadero (wharf).

When the American period began, Soto's embarcadero became Wilson's Landing. During the 1870s farmers shipped their produce from Wilson's Landing to sell in San Francisco. It was also a popular spot for folks to take cooling swims. However, by the turn of the century, the railroad had replaced water transport and the landing fell into disrepair.

By the 1920s a growing Palo Alto population began to consider the potential of the salt marsh areas adjacent to the City for recreation, reclamation, and development. In 1921, the City purchased 40 acres of Baylands property along San Francisquito Creek with the intention of using the area for refuse dumping and a future sewage disposal site. City acquisition continued throughout



Photo courtesy of the Palo Alto Historical Association

Embarcadero Road to the Palo Alto Baylands around 1900. (A few years earlier, this road would have been well traveled by farmers taking their produce to Wilson's Landing for shipment to San Francisco. However, by the time of this photo, the railroad had supplanted water transport and the once busy Wilson's Landing was in disrepair.)

the years, and by 1960 approximately 1,880 acres of the Baylands had been acquired.

City planning for the marshland holdings began about 1923. Palo Alto's first City engineer, John

Fletcher Byxbee, developed an elaborate plan that envisioned a yacht harbor with navigable channels leading to open water, a yacht clubhouse, areas for commercially related business, a sewage treatment plant, incinerator, airport, playground, picnic

areas, salt-water lake and swimming pool, hydro plane basin, golf course and wildlife preserves.

Realization of Byxbee’s vision began with the dredging a yacht harbor. The clubhouse, swimming pool (duck pond), and salt water lagoon followed in the early 1930s. The harbor dredge spoils were strategically placed to fill and reclaim an area for the airport which opened in 1934. A sewage treatment plant was constructed that same year. Around this time, San Francisquito Creek—the official county boundary—was rerouted to its current channel.

Annexation of City-owned Baylands began in 1948 when the flood basin, yacht harbor, adjacent off-shore land, and refuse areas were brought into the City limits. Between 1956 and 1960, privately owned lands east of Bayshore Freeway were annexed and in 1964, an 865-acre parcel consisting entirely of tidelands and extending to the Alameda County line was annexed.

By 1963 the State had officially moved the County boundary to follow the new San Francisquito Creek channel. The boundary adjustment brought a large portion of the City-owned land into Santa Clara County and enabled the City to annex that as well—this included the airport, most of the golf course, sewage treatment plant, lagoon, and the marshlands from Sand Point to the San Francisquito Creek mouth. Over 200 acres of



Photo courtesy of the Palo Alto Historical Association

Palo Alto Sewage Treatment Plant around 1948 (*with no landscaping*). See “Regional Water Quality Control Plant” chapter for 1999 aerial photograph (*with landscaping*).

City-owned land just north of the creek, commonly referred to as the Faber-Laumeister Tracts, remains in San Mateo County.

In the early 1960s, a new awareness of the ecological value of the marshlands was sweeping the na-

tion and in 1965, a Citizens’ Advisory Committee urged the City to establish a marshland wildlife preserve and Nature Interpretive Center. Also in 1965, Palo Alto dedicated most of the City-owned Baylands as park. By 1969, the Lucy Evans Nature Interpretive Center was open.

In the 1970s, the City stated that its goal for the Baylands was to use the land for park, conservation, or other open space purposes. Staff began work on a *Baylands Master Plan*, to guide future decisions about harbor dredging, solid waste disposal, and the overall environmental quality of the Baylands.

## 1978 • Baylands Master Plan

The original *Baylands Master Plan and EIR* submitted by Eckbo/Kay did not include an element called, “Overall Environmental Quality”. When the Planning Commission developed their recom-

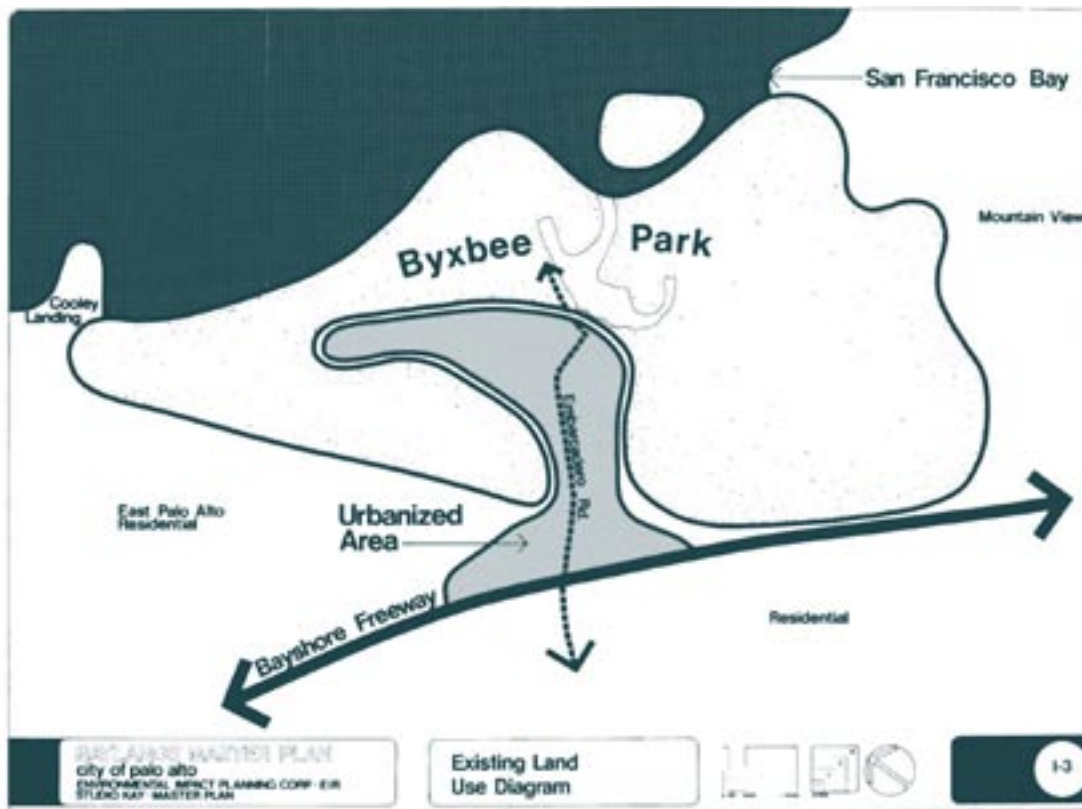
mendations, they included this element, and its accompanying policies.

The original Eckbo/Kay *Baylands Master Plan* did include an overall analysis of existing land uses (see *Diagram 1 on this page and Diagrams 3, & 4 on pages 42 and 43*) and an overall recommendation for changes to some of those land uses. Therefore, in this fourth edition, the “Overall Environmental Quality” element includes the policies initiated by the Planning Commission as well as information gleaned from throughout the original Eckbo/Kay document that is related to overall land use—especially regarding recreation, wildlife, and vegetation.

The original Eckbo/Kay *Baylands Master Plan* also recommended a two-stage plan for implementing the land use changes:

- **Interim Stage:** This stage referred to all the time until the forecast plan would be realized. In 1978, when the Council chose the 15-20 year grading plan for the landfill conversion, this implied that the Interim Stage would be approximately 20 years. These time limits were abandoned in the 1988 update. (See “*Harbor Area*”, “*Landfill Area*”, and “*Former ITT Property*” chapters for more information.)
- **Forecast Stage:** This stage represented the end product.

Following is a summary of the proposed land use changes and phasing with accompanying diagrams.



**Diagram 1:** Original Eckbo/Kay diagram of existing land use (in 1978). (Note that the more detailed land use diagram on the following page distinguishes the MSC as an urbanized area, whereas this more schematic diagram does not.)



**Areas of Significant Change**

The original *Baylands Master Plan* identified three areas that were to change significantly:

- Harbor Area
- Landfill
- ITT Property

Areas for which there was to be little or no change included:

- Natural areas which were to be protected and maintained
- Urbanized area which was not to intrude further into the natural and recreation-oriented areas (see *Diagrams 1, 3, & 4*).

**Interim Stage**

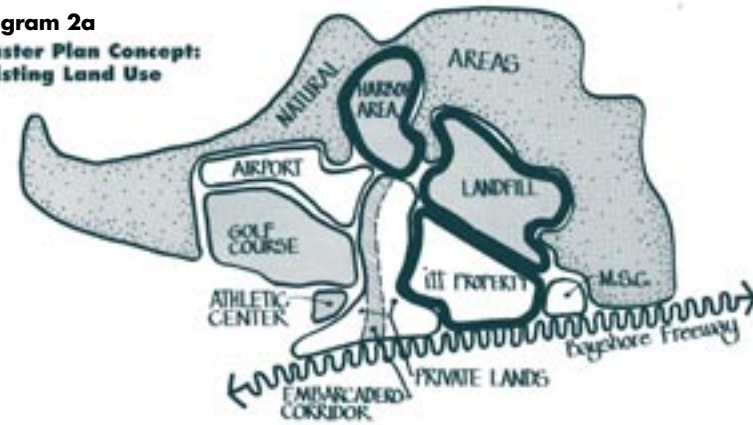
- The harbor was to remain open and the spoils from continued dredging were to be used for landfill cap material
- The landfill was to be gradually closed and converted to a pastoral park
- The former ITT Property was to be used for the dewatering ponds (for processing dredge spoils into cap material), a small antenna field was to remain temporarily, and marsh restoration was to commence in the southwest portion.

**Forecast Stage:**

- The harbor was to be converted into a passive aquatic park with limited boating activities and connected to the new pastoral park in the landfill by a promenade along the harbor shoreline
- The new pastoral park at the landfill was to become an integral part of the overall park.
- The ITT property was to be completely restored to marsh with trails and observation platforms and become an integral part of the overall park.

**Diagram 2a**

**Master Plan Concept:  
Existing Land Use**



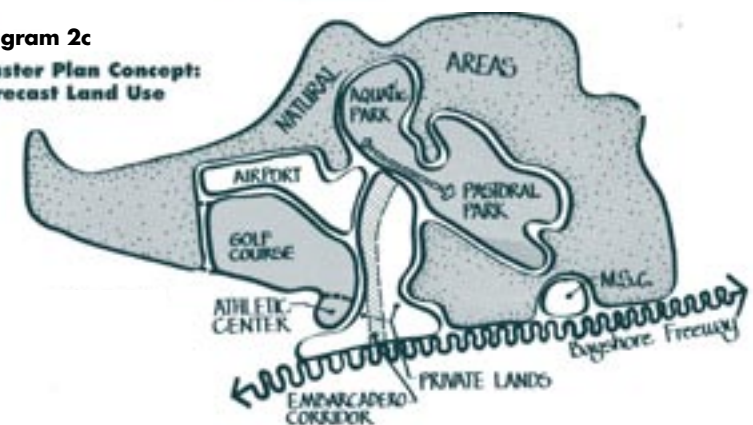
**Diagram 2b**

**Master Plan Concept:  
Interim Land Use**



**Diagram 2c**

**Master Plan Concept:  
Forecast Land Use**



## Land Use

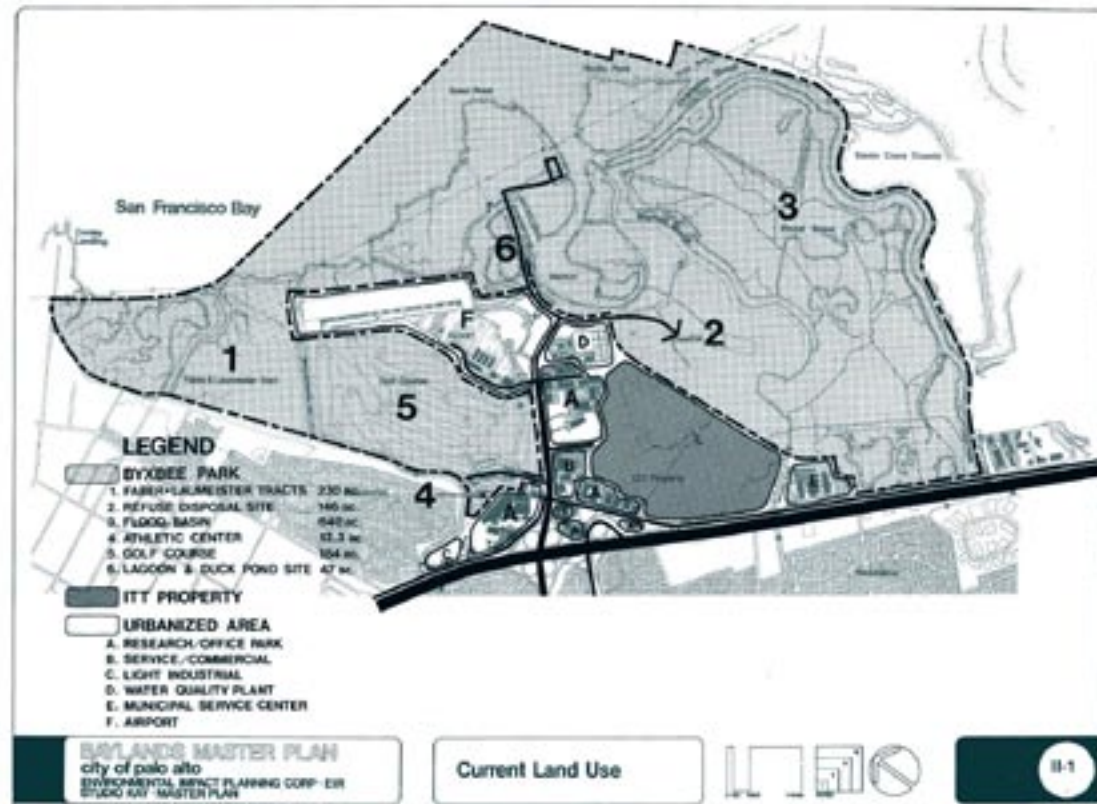
The Eckbo/Kay *Baylands Master Plan* observed that land use decisions had been done on a piecemeal basis, many of them conflicting with one another. It advocated unification and a comprehensive approach that considered the Baylands as an integrated whole. It also observed that:

- The essential character of the Baylands—open, spacious, horizontal, with little or nothing between the planes of ground and water and the sky—was established by the tideland marsh areas.
- Existing intensive recreation activities were confined to inland portions of the site, where the activity is least destructive of the wildlife habitats—making it possible to have as a goal recreation activities and facilities in harmony with resource preservation.
- Existing urban land uses with only an incidental relationship to the Bay were contained along the Embarcadero/Bayshore corridors—making it possible for these urban land uses to continue.
- The three restoration sites (Harbor Area, Former ITT Property, and Landfill Area) were located adjacent to the marshland—making it possible to create a contiguous wilderness area of sufficient scale to provide a place isolated from the urban scene where natural qualities and forces are dominant.

Finally, it posited that the ultimate use of the Baylands was a philosophical debate i.e., to what extent should man's disturbance of the natural habitat be halted or even reversed while still meeting the recreational and service demands of the community as

well as the requirements of the regulatory agencies? And, how should this be accomplished?

In concurrence with the City's goals, it stated that it was mandatory that the existing and proposed activities be compatible with the ecological and



**Diagram 3:** Original Eckbo/Kay diagram of existing land use (in 1978). (Note that more detailed land use diagram on the following page distinguishes the MSC as an urbanized area, whereas this more schematic diagram does not.)

physical constraints and opportunities of the natural Baylands systems.

The *Baylands Master Plan* further advocated that the Baylands be preserved and kept natural as much as possible —“The qualitative standards applied to

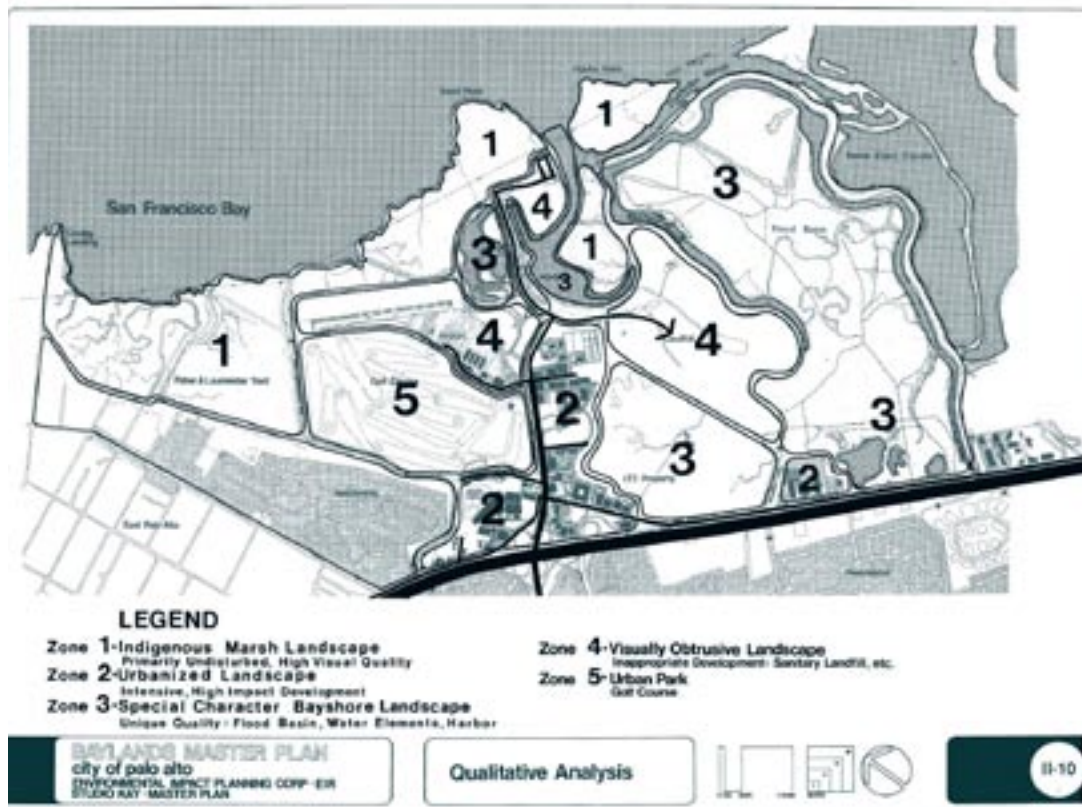
this Master Plan analysis are derived from the specific size and conditions of the site, the urban/suburban surroundings, and BCDC and the City’s programmatic request for a focus on public use of the Baylands shoreline. All of these combine to suggest

that the land, in contrast with the urban/suburban surroundings, should be evaluated as a tideland/pastoral area for use by the residents of Palo Alto and visitors from elsewhere in the region.”

### Recreation

The Eckbo/*Kay Baylands Master Plan* noted that recreational opportunities near the Bay were dominated by organized and special requirement activities, such as boating, aircraft, golfing and organized sports at the Athletic Center. It suggested that what was lacking was opportunities for people of all age groups to get near the water to observe and enjoy the unique natural environment and wildlife of the Bay and marshlands.

The *Baylands Master Plan* resolved this issue by retaining the recreational activities at the Athletic Center, Golf Course and Airport in their existing locations, since these were located mostly away from natural areas where they would be least detrimental to wildlife. Then, the Plan took advantage of the strategic central location of the two areas that were to undergo conversion, the landfill and harbor, to create a new passive pastoral park extending from the Nature Interpretive Center southward to the Municipal Service Center. The creation of this new pastoral park would address the need for family-oriented passive recreation, landscape observation and recreational open space in the Bayside environment.



**Diagram 3:** From the original Baylands Master Plan document: Eckbo/*Kay* Qualitative Analysis of land use as of 1978.

This new passive pastoral park was to comprise an aquatic park at the former harbor and an upland meadow park on the former landfill, joined by a promenade along the harbor shoreline, and surrounded on three sides by about a thousand acres of preserved or rehabilitated tidal marshland. The tidelands would provide a magnificent foreground for the upland pastoral park, and regulated access to the waters edge would offer opportunities for observing, experiencing, and learning from the interface between land and Bay. The large scale of this contiguous expanse of natural areas and low impact passive use areas would offer a unique recreational experience not otherwise attainable in the urban/suburban surroundings. The *Baylands Master Plan* provided this description of the purpose and intended use of the pastoral park:

“... A regional shoreline experience located on the Bay and its estuaries, that provides significant recreational, natural, and scenic values; and an expansive, wilderness area of natural environment preserved to provide a place for man to be isolated from the urban scene in a setting where natural qualities and forces are dominant.”

## Vegetation and Wildlife

The Eckbo/Kay *Baylands Master Plan* observed that the Baylands supported an extensive diversity of both resident and migratory wildlife populations, and was

one of the most significant areas of native marsh vegetation, endangered species habitat, and waterfowl/shorebird habitat in the South Bay. The Plan provided the following description of the ecology.

“The complexity of habitat types, the undisturbed character of much of the marshland, and the large size of the Baylands combine to provide all the elements necessary for the establishment of a complete food web involving all trophic levels. Figure 11-6 (*Map 1.3*) indicates critical wildlife areas in the Baylands. Described below are some of the more common and dominant types of flora and fauna.

The primary food producers in the Baylands are represented by extensive areas of cordgrass and pickleweed, seasonal grasses and herbs, cattails, extensive algal growths on the mudflats, alkali heath, bulrushes, many planted trees, weed-like shrubs (anise, curly dock, wild radish, mustard, thistle, etc.) freshwater algae, and other woody and seasonal shrubs (coyote bush, saltbush). In addition, numerous other, less dominant plants also occur and contribute to the overall diversity: brass buttons, fat hen, common reeds, dodder, filaree, marsh grindelia, prickly lettuce, dandelion, clover, ice plant, salt grasses, etc.

The decomposer plants in the food chain are not as visible, but are very active and of high importance to the food web. Bacteria and fun-

gi break down the salt marsh grass, converting it to a form that can be used by invertebrates. These processes occur to a lesser extent in the freshwater areas and moist soils.

The secondary producers, herbivores and granivores (plant and seed-eating animals), are represented by many different forms. In the terrestrial habitats, the mammals include ground squirrels, norway rats, jack rabbits, mice, and gophers. The variety of plant-eating birds includes sparrows, finches and other songbirds, pheasants, and coots. Just a few of the more common insects are flies and moths. In the aquatic environment, shrimp, clams, tube worms, amphipods, crabs, mussels, and barnacles are the dominant animals in the second level of the food chain. They occur in the yacht harbor lagoon, sloughs, on the mudflats, and in the marshes.

Feeding on the secondary producers are numerous types of carnivores and omnivores (those that eat animals or plants and animals). Red-tailed and marsh hawks, vultures and owls are common over the terrestrial and marsh portions of the Baylands. Over water can be found terns, egrets, herons, grebes, rails, willets, mallard, teal, pintail and numerous other ducks, cormorants and tens of thousands of sea gulls (largely attracted by the refuse disposal area). Seasonally abundant are pelicans and large numbers and many types of migratory waterfowl and shore-

birds. In the water, seals, skates, sharks, flounder, perch, and other fishes find food. On land, raccoons, shrews, lizards, snakes, and toads feed on the insects, birds, clams, mice, etc.

These life forms are distributed among the following habitats which exist in the Baylands complex: open water, mudflats, tidal sloughs, salt marsh, freshwater marsh, grasslands, disturbed areas, and urban/exotic habitats (the golf course, the airport, industrial area, sewage plant, etc.). Of these, the salt marshes, followed by the mudflats, are considered to be most critical for wildlife. Also of great importance are the tidal sloughs and open water. In this latter category the duck pond, harbor, and lagoon are not considered as important as the offshore areas or channels. The grasslands and freshwater marsh areas are neither extensive nor well developed, but are still very valuable.”

On October 11, 1978, the Council adopted the *Baylands Master Plan and EIR* as recommended by the Planning Commission, including the “Overall Environmental Quality” policies.

### 1988 • Baylands Master Plan Amended Summary Report

Between 1979 and 1988 the overall goals for the Baylands did not change and there were no amendments to the policies of this chapter. However, dur-

ing that period major changes did occur. The biggest changes were the decision to close the harbor earlier than anticipated, to use the landfill longer than anticipated, and the discovery that the antenna field in the Former ITT Property would remain longer than anticipated. Also, during this period, the County’s *Airport Master Plan* was revised to disallow previously proposed expansion and some bike trails and regional-trail connections were completed. These changes resulted in amendments to the policies for several other elements.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

Today, stewardship of the Baylands is a high priority for Palo Alto’s policy makers and decisions that affect the Baylands are given much attention. Also, the citizens are very engaged and show their support through volunteer efforts such as removing invasive plants and replacing them with native plants.

#### Baylands Master Plan Concept: Anticipated Changes

Although the changes did not progress exactly as described, the Baylands today closely resembles

the Forecast vision illustrated in the concept diagram from the original document (*Map Intro.1*). The “significant-change areas” have been or are in the process of being, completed:

- The restoration of the Harbor Area (*mostly completed—see “Harbor Area” chapter*)
- The restoration of the Former ITT Property (*partially completed—see “Former ITT Property” chapter*)
- The conversion of the landfill to a pastoral park (*partially completed—See “Landfill” chapter.*)

#### Comprehensive Plan

The current *Comprehensive Plan*, adopted in 1998, represents the most significant policy review since the *Baylands Master Plan* was last updated in 1988. In a community survey conducted during the *Comprehensive Plan* process, the community overwhelmingly reaffirmed its commitment to the protection of the Baylands and foothills.

The *Comprehensive Plan*’s glossary defines the *Baylands Master Plan* as the, “City Council adopted Palo Alto planning policy document for areas east of Highway 101” and the following *Comprehensive Plan* policies are applicable to the *Baylands Master Plan*:

- It recognizes and reiterates the *Baylands Master Plan* land use concept by stating, “With

adoption of the *Baylands Master Plan* in 1978, urban uses were limited to approximately 200 acres of existing development along Embarcadero Road and East Bayshore Road. The remaining 1700 acres were dedicated for recreation and restoration of marshland wildlife habitat.”

- This limitation is further defined by the Urban Service Area boundary shown in *Comprehensive Plan* Map L-2 (*Map 1.5 in this document*). The *Comprehensive Plan* states that “The City’s Urban Service Area boundary identifies areas that may be developed during the term of this Plan.”
- Policies C-25 and N-3 state that public-service and infrastructure improvements must be “consistent with the goals of protecting and conserving the natural environment.

## Bicycle Transportation Plan

On November 24, 2003 the Council adopted the *Palo Alto Bicycle Transportation Plan*. The plan includes recommendations for improvements to bicycle access and circulation in the Baylands including improved access across Highway 101. (*Also see “Recreation” section, this chapter and “Access and Circulation” chapter.*)

## Land Use

The Baylands comprises an extraordinary array of land uses; it may be the most diversely used area in Palo Alto. The existing urban land uses and intensive recreation activities along the Embarcadero Corridor are thriving but have made no additional intrusion into the natural area.

The most notable land use changes are:

- Increase to the natural area (by at least 50 acres) as a result of three successfully completed restoration projects (*Map 6.2; also see “Natural Unit”*).
- Completion of Phase I of the landfill closure/park conversion (*see “Landfill Area”*)

*Comprehensive Plan* policies that are specific to land use in the Baylands include:

- Map L-4 defines Embarcadero Road east of Highway 101 as a scenic corridor and identifies the intersection of Embarcadero Road and East Bayshore Road as a “gateway”.
- Program T-57 calls for a planting strip and bicycle/pedestrian path [adjacent to Embarcadero Road]

that is consistent with the open space character of the Baylands.

- Map L-5 (*reproduced in this document as Map 1.6*) defines two employment districts that include Elements of the Baylands:
  1. The “East Bayshore District” includes three Elements: Privately Owned Lands, RWQCP, and Municipal Airport.
  2. The San Antonio Road/Bayshore Corridor District includes the MSC site.

Policies for these two districts (L-46 and B-33) stress both the value of the relatively low-cost spaces to service industries and start-up businesses and the importance that development of these properties reflect the area’s location in the Baylands.

- Policy T-57 calls for supporting the “continued vitality and effectiveness of the airport without significantly increasing its intensity or intruding into open space areas.”

*See “Comprehensive Plan Relationship” in the appendix or individual Element chapters for more Comprehensive Plan policy text.*

Left to right: 1st Row: • Recycling Center, courtesy of Matt Raschke • Embarcadero Corridor Employees at Lunch, courtesy of the Abundant Air Cafe 2nd Row: • Stanford Medevac helicopter at Palo Alto Municipal Airport, photo by and courtesy of Ihab A. B. Awad • Honda Anderson Dealership, photo courtesy of Planning staff 3rd Row: • 1999 Aerial photo of the RWQCP, photo courtesy of PW staff • Office building in the Embarcadero Corridor, photo courtesy of Planning staff • Baylands slough (Byxbee Park in the near background), photo by and courtesy of Michael Kern • Transformers stored at the MSC yard, photo by Planning Staff



## Recreation

Today, the Baylands' unique environment is extremely well used and appreciated by folks enjoying a myriad of recreational pastimes. Organized and special requirement activities, such as recreational flying, golfing, and team sports played at the Athletic Center are thriving. These facilities have not expanded to intrude into the open space areas or passive recreation areas.

The vision of the original plan—to provide opportunities for all age groups to access, observe and enjoy the unique natural environment and wildlife of the Bay and marshlands—has not yet been fully realized; although it has been enhanced. The most notable changes in recreation are:

- Improvements to the trail system—especially regional trail connections (see “*Access and Circulation*”)
- Improvements to the parking lots at the trail heads—especially handicap accessible upgrades (see “*Access and Circulation*”)
- The completion of Phase I of the landfill park which provides a unique environment for passive recreation, landscape observation (see “*Landfill Area*”).

**See “*Comprehensive Plan Relationship*” in the appendix or individual Element chapters for more *Comprehensive Plan* policy text.**

- The new sailing station, which is used by windsurfers, kayakers, and canoers, as well as new picnic facilities at the Duck Pond, have enhanced the opportunities for people of all age groups and abilities to get near the water to observe and enjoy the unique natural environment and wildlife of the Bay and marshlands.

*Comprehensive Plan* policies that are applicable to recreation include:

- Policy N-1 echoes the *Baylands Master Plan* policies regarding both the need for a management plan and the appropriateness of “low-impact” recreation activities in open space areas.
- Policies T-3, 5, 6, 14, 19, 20, 25, & 26 all support the *Baylands Master Plan* policies regarding reducing auto use and improving bicycle/pedestrian trails and amenities e.g., secure parking facilities.
- Policies C-4 & C-26 speak to the need to maintain and enhance existing park facilities.

The *Palo Alto Bicycle Transportation Plan* also includes recommendations for improvements to the trails in the Baylands.



Left to right: 1st Row: •Windsurfer, photo by and courtesy of Ian Clements •Golfer, photo courtesy of the Palo Alto Golf Club •Painter, photo courtesy PW staff •Airplane, photo by and courtesy of Ingrid Taylor 2nd Row: •Baseball players, photo by Tony Avelar/courtesy of Tony Avelar and the Palo Alto Daily News •Dog walker photo by and courtesy of Michael Kern •Bicyclists, photo courtesy of Daren Anderson 3rd Row: Canoes, photo courtesy of Daren Anderson •Picnicker, photo courtesy of Daren Anderson



## Vegetation and Wildlife *(Maps 1.2 & 1.3)*

Today the natural area is approximately 50 acres larger than it was when the *Baylands Master Plan* was adopted *(Maps 6.2 and 6.3)*.

The most notable changes to vegetation and wildlife are:

- Additional habitat (both marsh and upland grasslands) created by the Harbor Point Restoration project. *(See “Harbor Area” for details)*.
- Additional freshwater and saltwater marsh habitat on the Former ITT Property. This project was, in part, designed to increase the amount of pickleweed which is the favorite habitat of the harvest mouse. *(See “Former ITT Property”)*.
- Additional upland grassland habitat in Byxbee Park Phase I.
- Identification and prioritization of future potential restoration sites in the 1987 Santana Study done for the Harbor Restoration project. *(Maps 6.2 and 6.3)*
- A new shade house built near the lagoon to propagate native plants.
- New signage to control access to environmentally sensitive areas with well defined trails and signage including restrictions for dogs.

- Cessation of incompatible activities that existed in the Flood Basin when the *Baylands Master Plan* was adopted, such as Police Department target practice.

Unfortunately, in spite of these significant accomplishments, non-native plants such as *Spartina Alterniflora*, *Phragmites*, *Arrundo donax*, and *Lepidium* have become major threats to the marsh environment and natural habitat. These plants will have to be controlled through active management in order to preserve fragile habitat for wildlife and native plants. To that end, the Parks and Open Space Division is working with an environmental firm to develop the *Baylands Comprehensive Conservation Plan*—a management plan. Programs developed in this plan will provide implementation measures for “Overall Environmental Quality” policies nos. 6—10.

Comprehensive Plan policies that are applicable to vegetation and wildlife include:

- The “Natural Environment Element” of the *Comprehensive Plan* which states that “Palo Alto’s foothills and Baylands will continue to be conserved as open space over the term of this plan. The City will seek out

new opportunities for permanent open space in both areas”, and “Elements of the natural environment will be conserved where they remain intact and restored where they have been degraded by past development.”

- Policy N-1 echoes the *Baylands Master Plan* policies regarding both the need for a management plan and the appropriateness of “low-impact” recreation activities in open space areas.
- Programs N-2 and N-3 are to “Examine and improve management practices for natural habitat and open space areas, . . .” and, “Review the need for access controls in environmentally sensitive areas, including the Baylands, foothills, and riparian corridors.”
- Policy N-8 specifically calls for the protection of wetlands.
- Policy T-52 calls for active participation in seeking a “connection between Highway 101

and the Dumbarton Bridge without construction of a southern connection across environmentally sensitive Baylands.”

*See “Comprehensive Plan Relationship” in the appendix or individual Element chapters for more Comprehensive Plan policy text.*

Left to right: 1st Row: • Baylands panorama, photo by and courtesy of Michael Kern • Birdwatchers, photo courtesy of Daren Anderson 2nd Row: • Pickleweed Close Up, photo courtesy PW staff • Class at the Interpretive Center, photo courtesy of Daren Anderson • California Horned snail, photo courtesy of Daren Anderson • Egret, Photo Copyright Allen Edwards Photography, www.PaloAltoPhoto.com 3rd Row: • Pickleweed, photo courtesy of PW staff • Shoreline grasses, photo courtesy of PW staff



Photo courtesy of staff



Many people volunteer their time to help remove non-native plants and replenish the supply of native habitat plants. Shown above are the JLS Middle School volunteers on such an occasion.

## Site and Design Guidelines

In 2005, Catalyst Landscape Architecture Urban Design worked with City staff as well as stakeholders to develop the *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve*.

The document was prepared to help implement the *Baylands Master Plan* and the Baylands-related policies and programs in the *Comprehensive Plan*. The guidelines are intended to be used when designing or reviewing projects located in any part of the Baylands. While the more specific guidelines are primarily applicable to the dedicated parkland, the design principles and concepts should also be applied in the service and commercial areas when designing or reviewing projects for compatibility with the special aesthetic qualities and environmental conditions unique to the Baylands.

## Santa Clara County Airport Land Use Commission (ALUC)

### CLUP

In 1971, Santa Clara County established their Airport Land Use Commission (ALUC). In 1973, per California State law, the ALUC adopted a Comprehensive Land Use Plan (CLUP). The current Santa Clara County CLUP is for all for the airports within the County except Moffett Field and was last amended in 1992.

The purpose of the CLUP is to provide limits on land use allowed in the vicinity of airports in order to protect public and passenger safety. A further function of the CLUP is to control noise exposure by limiting types of development within the airport influence area. It contains guidelines for land use and development in the airport's environs. For example:

- Airport Safety Zones radiate from the runway and guidelines for land use and development in these zones is based on proximity to the runway (*Map 1.9*).
- Airport Influence Area (AIA) guidelines apply to the broader vicinity—for Palo Alto, the AIA includes the entire Baylands except for the LAMP site (*Map 1.7*).

### **ALUC Project Review**

All projects within the AIA must be reviewed for consistency with the CLUP guidelines. City Staff may review some projects or voluntarily refer them to the ALUC; however, some projects must be referred to the ALUC for review. Projects that are referred to the Santa Clara County ALUC Staff Coordinator may be reviewed at staff level or may be scheduled for an ALUC meeting

Types of projects that must be referred are:

- Airport Master Plan or amendments

- General Plan or amendments
- Specific Plan for area within the AIA or amendments
- Zoning/Building Code or amendments
- Non-airport development projects that require a change to Zoning Code i.e., a zone change or a change to the Comprehensive Plan i.e., a Land Use Designation change

Types of projects that are encouraged for voluntary referral are:

- Non-airport development projects that do not require a zone change or a land use designation change but do increase the square footage of the development by 50% or more.

Reviews are advisory and result in a determination of consistency with the CLUP and possible recommendations for conditions of approval.

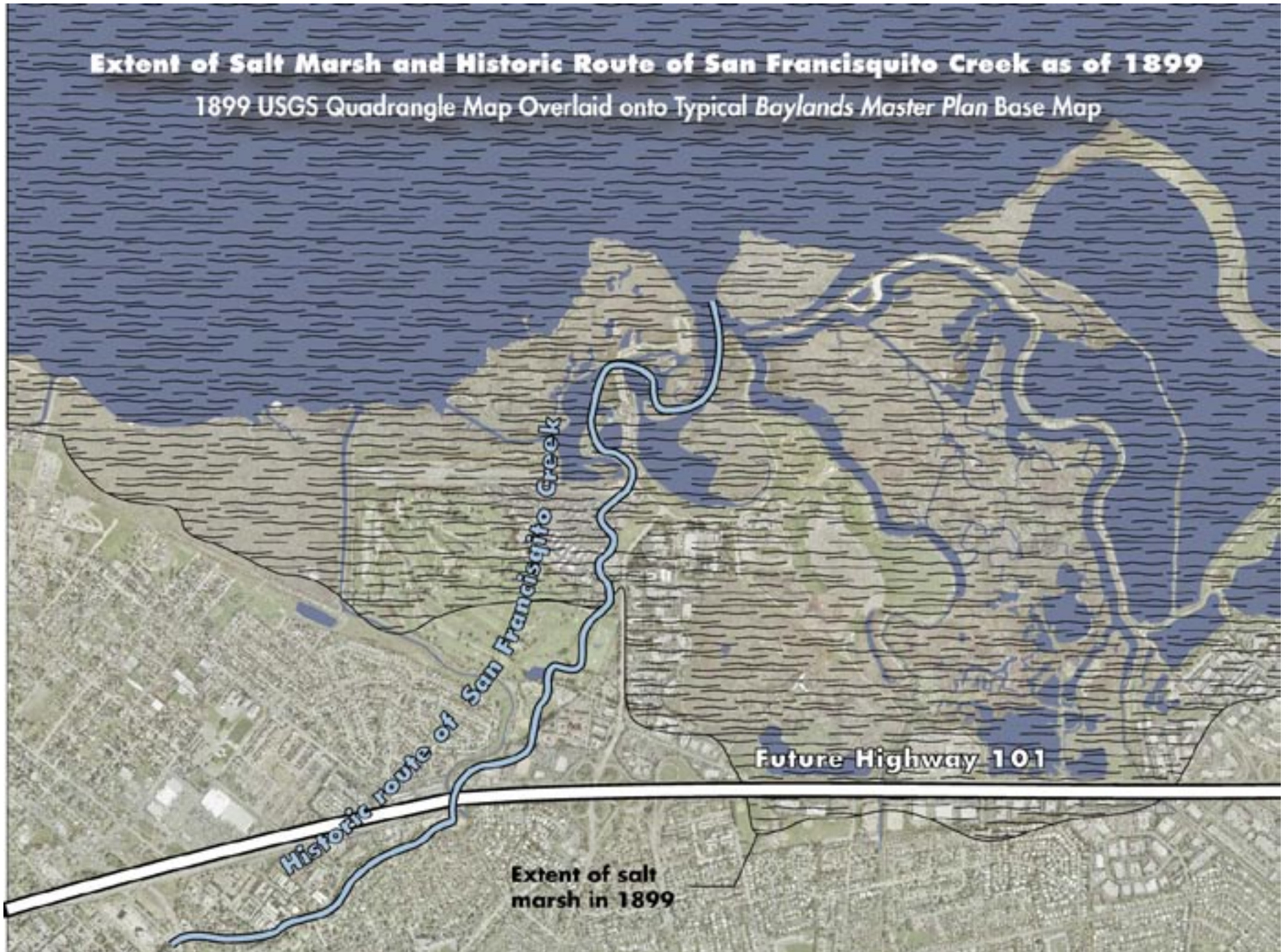
In November 2008, the Santa Clara County Airport Land Use Commission adopted a new CLUP specifically for the Palo Alto Airport.

### ***Future Baylands Comprehensive Conservation Plan***

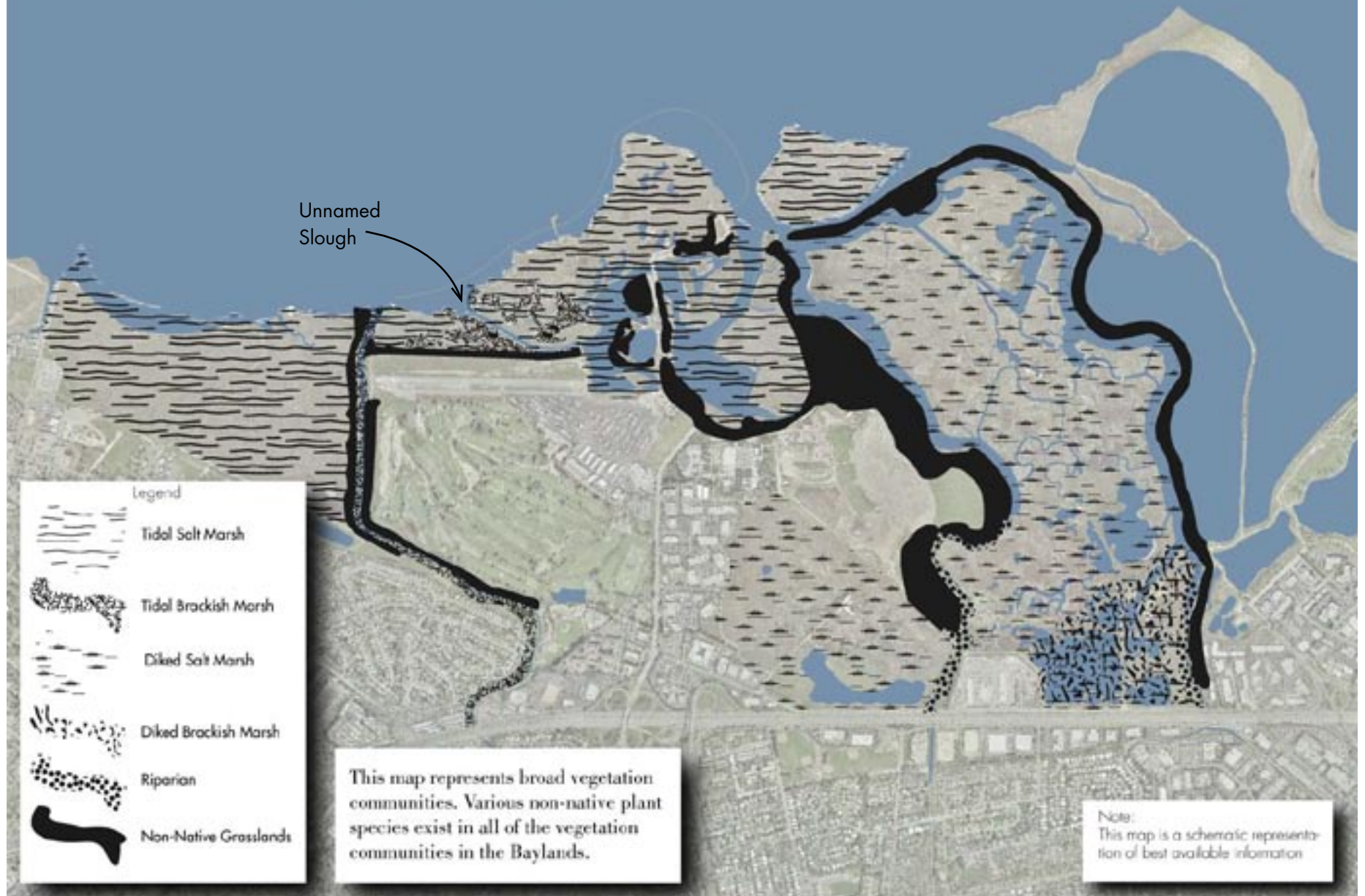
The Open Space and Parks Division, is working with ESA consultants to develop a *Comprehensive*

*Conservation Plan* for the natural unit of the Baylands. ESA is studying the current vegetation and natural resources in order to provide guidance to staff about which areas are biologically healthy and unaffected by invasive plants, and which areas are threatened with degradation by non-native invasive plants. The plan will include strategies for protecting unspoiled areas, restoring damaged areas, and controlling targeted weeds. ESA will also evaluate the wildlife resources of the Baylands and will provide recommendations on preserving prime nesting, foraging and breeding areas for wildlife. The plan will provide guidance on how best to manage the duck pond, bird sanctuary and marsh areas for birds and wildlife. Finally, ESA will provide recommendations for appropriate public access to open space areas of the Baylands and will establish guidelines for wildlife-compatible passive recreation.

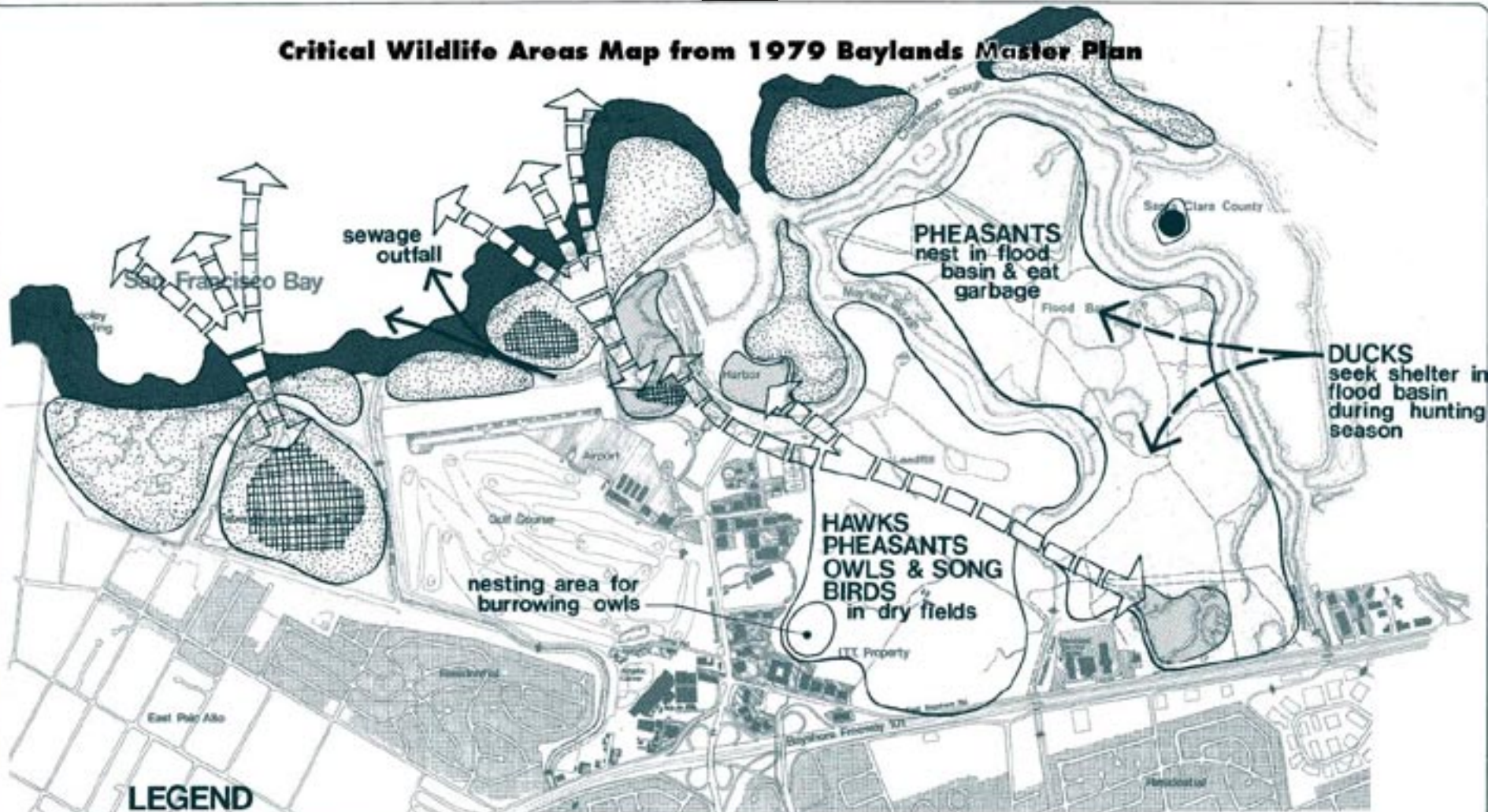
The development of this plan constitutes implementation of the “Natural Unit” Policy No. 2 and programs developed in this plan for enhancing wildlife habitat will provide implementation measures for “Overall Environmental Quality” Policy Nos. 6—10.



### Vegetation Communities in the Baylands as of 2007



### Critical Wildlife Areas Map from 1979 Baylands Master Plan



**LEGEND**

-  critical high tide resting area
-  low tide mudflats/ feeding ground for shorebirds, herons, egrets & ducks
-  endangered species habitats
-  white pelicans between aug. & jan.
-  feeding movement
-  ducks/ eating & nesting

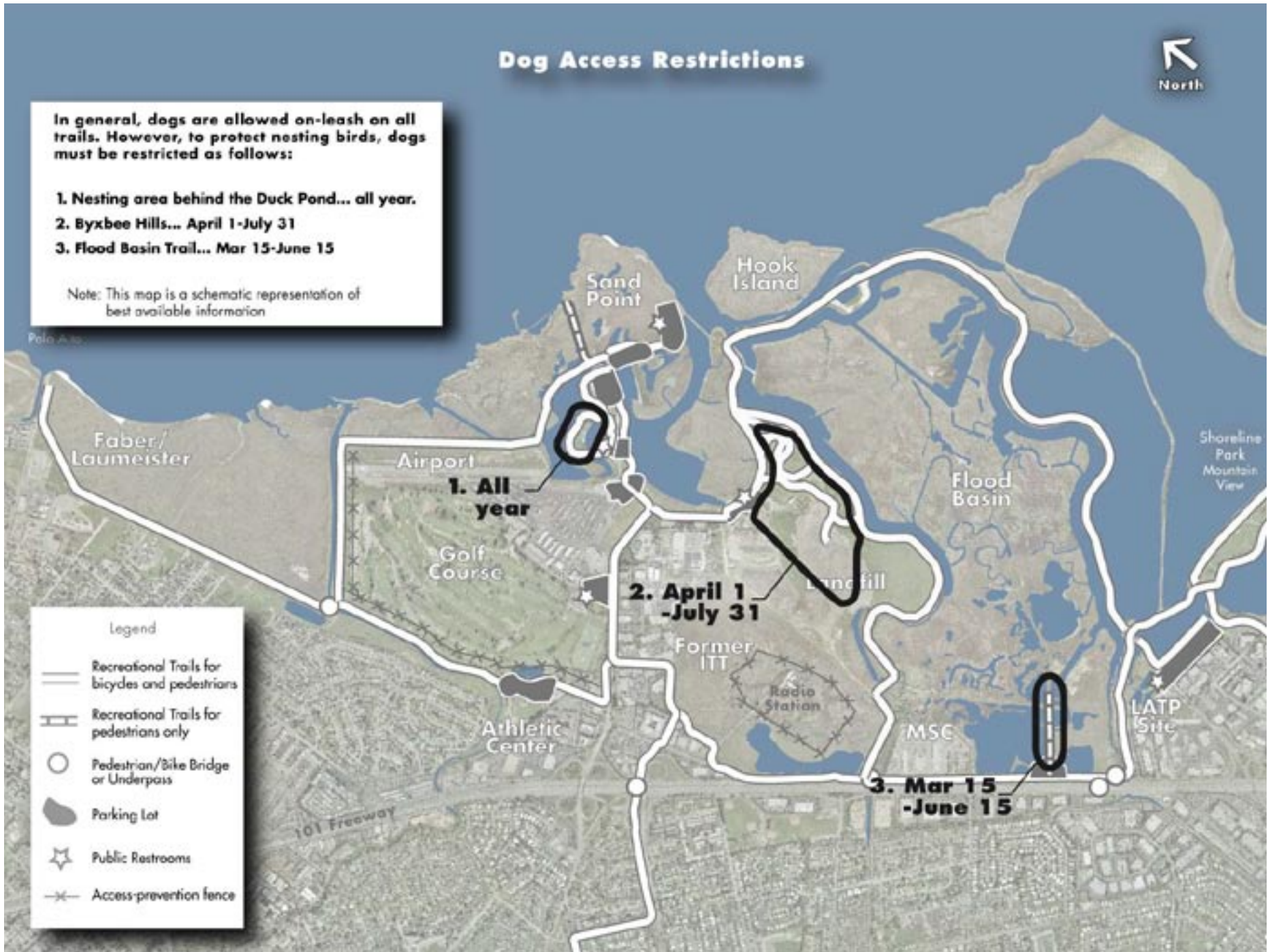
**BAYLANDS MASTER PLAN**  
 city of palo alto  
 ENVIRONMENTAL IMPACT PLANNING CORP - EIR  
 STUDIO KAY - MASTER PLAN

**Critical Wildlife Areas**

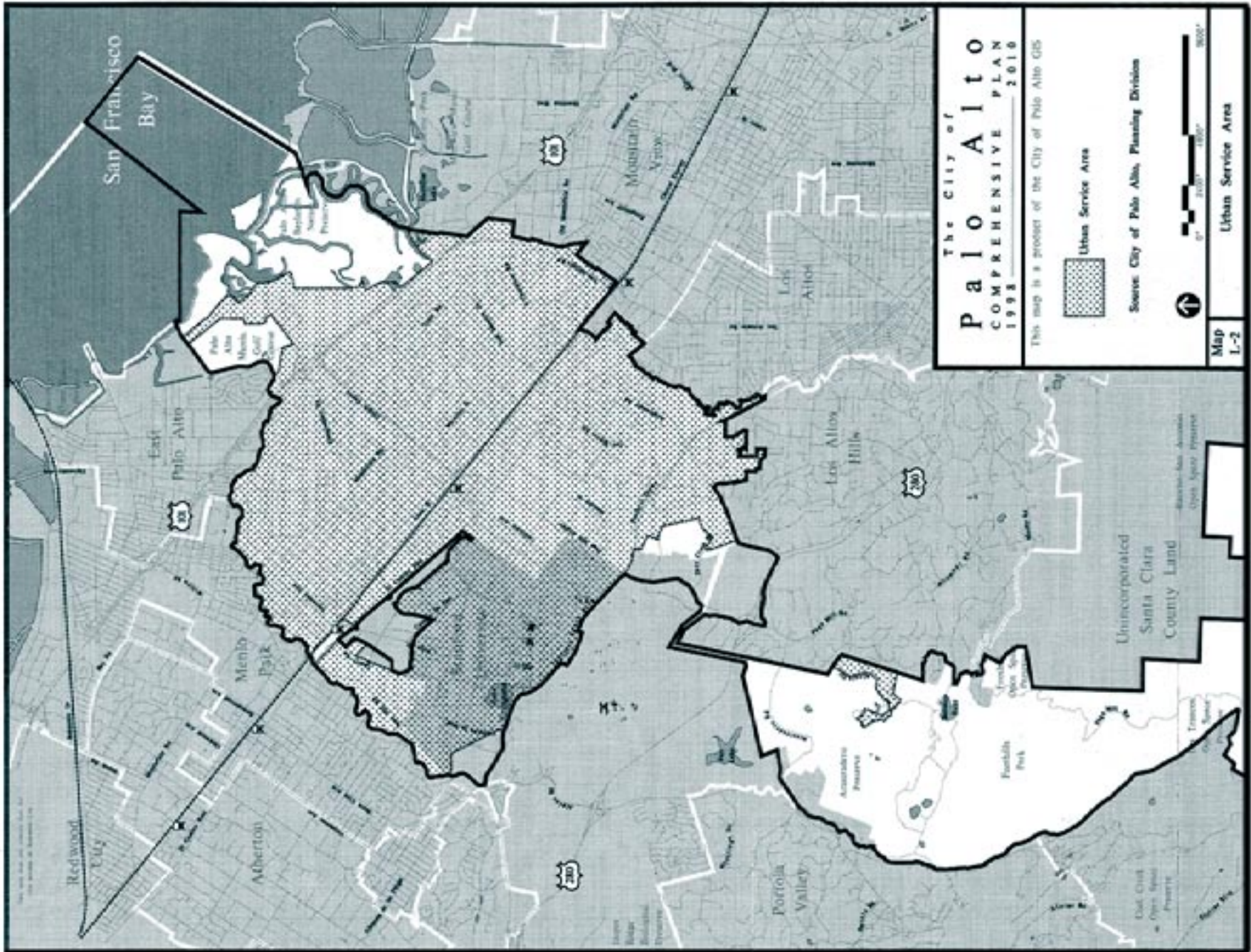




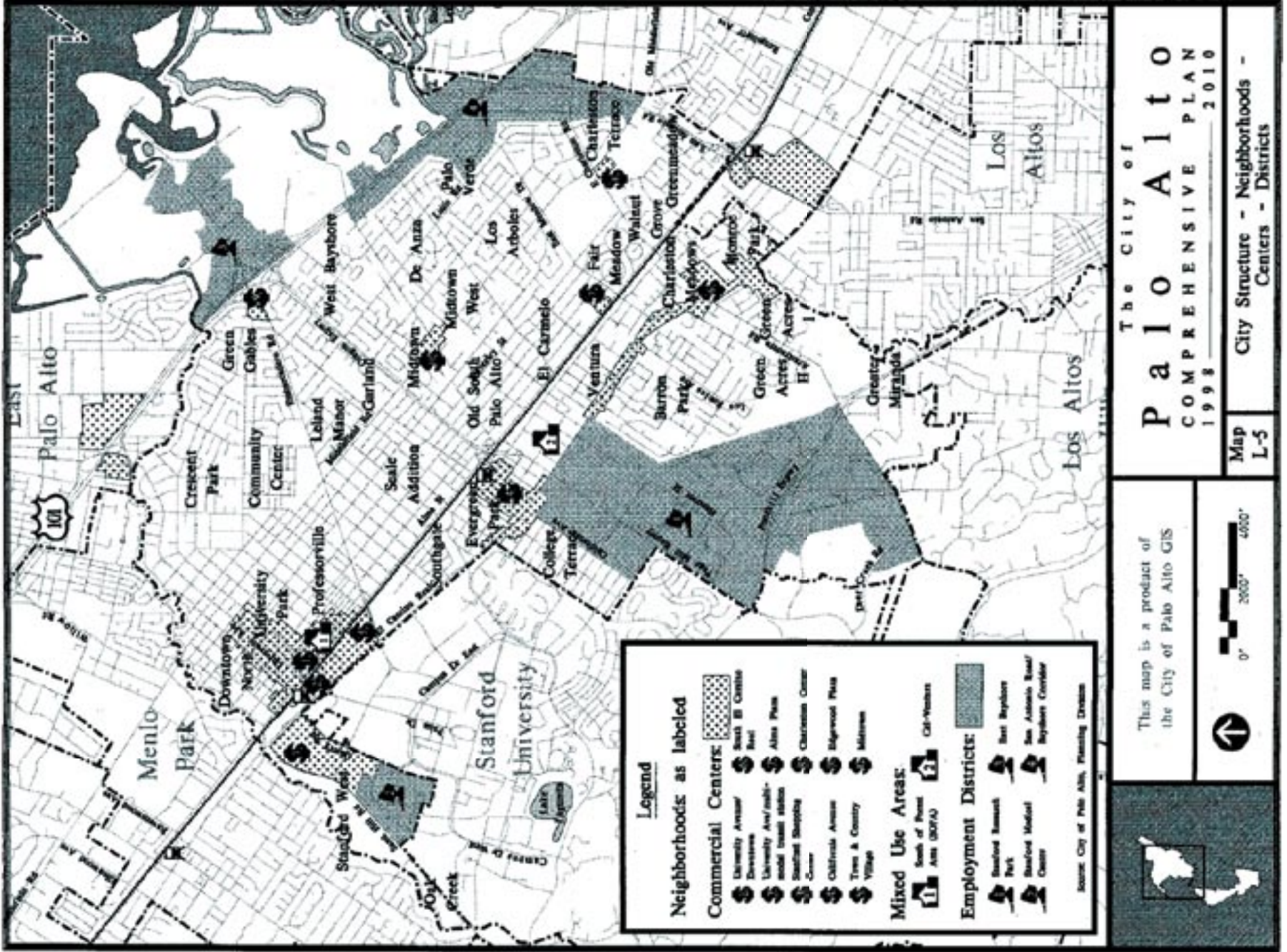
Map 1.4



### Urban Service Area Map from the Comprehensive Plan



### City Structure Map from the Comprehensive Plan



Overall Environmental Quality

Map 1.7



0 1,000 2,000 4,000 Feet

This map was prepared by Santa Clara County Planning Office. The data was compiled from various sources. While every effort was made to ensure the accuracy of the data, the County does not warrant the accuracy of the data.

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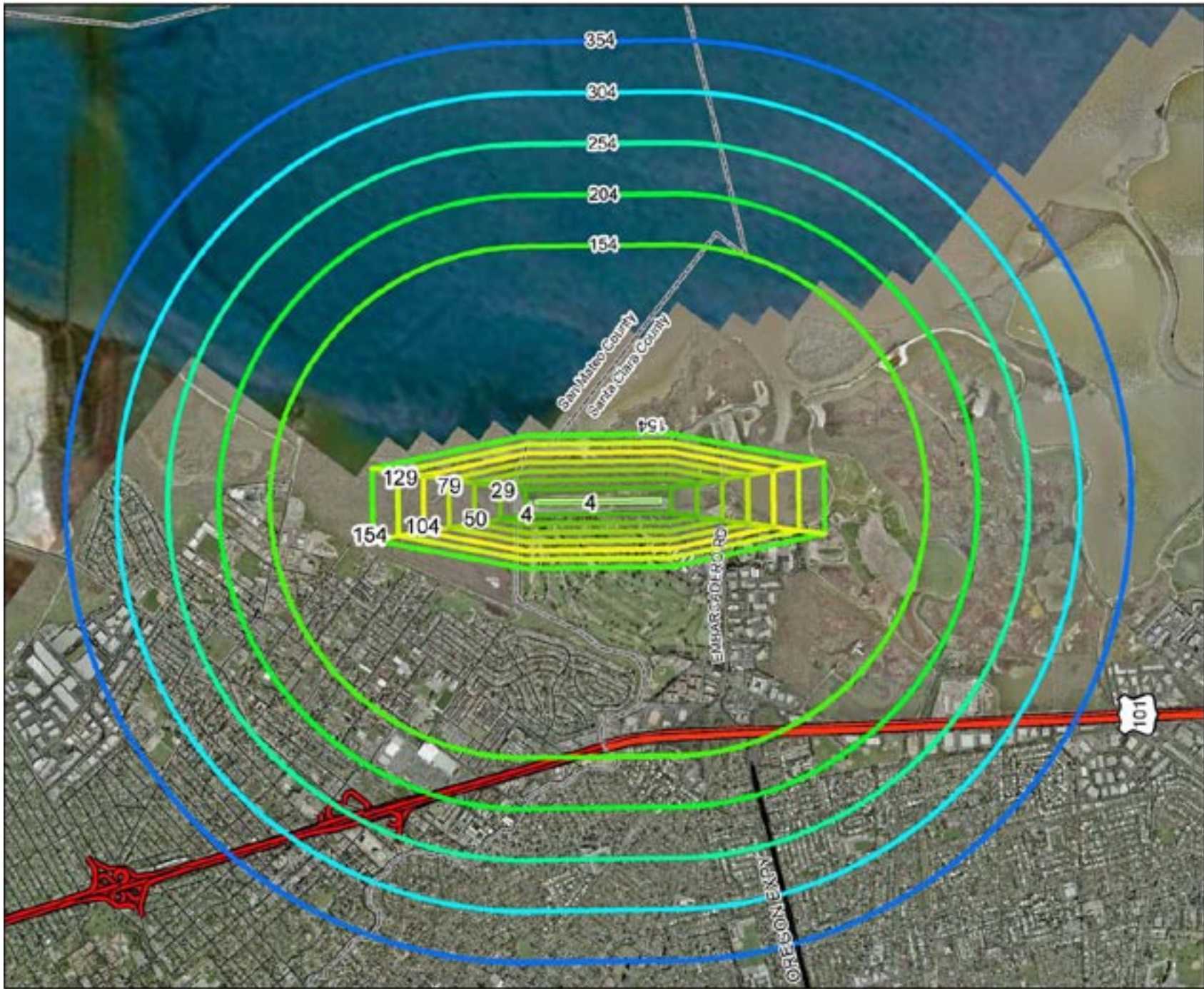
**AIA With Zoning**


Figure 8

Map 1.8







FAR Part 77 Surfaces  
Figure 6





A view of the Palo Alto and the Baylands from the foothills.



## Overall Environmental Quality Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies, activities in any area must also comply with policies stated for that area, the surrounding areas, and policies in the “Flood Control” and “Access & Circulation” chapters.

The Baylands is one of the most significant areas of native marsh vegetation, endangered species habitat, and habitat for waterfowl and shorebirds in the South Bay. Undisturbed, this area can provide a complete food web. The salt marsh harvest mouse and the California clapper rail, both on the federal endangered species list, are permanent Baylands residents. Policies concerning the overall environmental quality of the Baylands fall into four categories—the future of the landfill and the marshes, wildlife, access and traffic, and the future of the urbanized area.

1. Ensure that the landfill area ultimately becomes an environmental asset and a continuation of the natural green space.
2. Recognize and maintain the relationship between the urbanized Embarcadero Road corridor in the northwest and the remaining recreation-oriented three-quarters of the Baylands. Allow no more urban intrusion.
3. Expand bicycle and pedestrian activities while reducing vehicle traffic in the Baylands as far as possible.
4. Restrict storage and parking of vehicles in the Baylands.
5. Keep marshes open to the Bay along the entire shoreline.
6. Control access to environmentally sensitive marshland and upland meadow habitat.
7. Restore the diversity of plants and animals to disturbed upland sites.
8. Ensure there is sufficient native food and cover for wildlife.
9. Protect the duck-breeding area with a vegetation buffer and control the high-tide bird refuge in the flood basin.
10. Allow access to the Flood Basin only in certain seasons to protect the waterfowl and shorebird refuge area.
11. Eliminate telephone and electric wires and poles from the Baylands by using radio communications or running utilities underground. *(Utility and light poles were removed from the harbor area in 2005; however poles remain between Embarcadero Road and the landfill.)*
12. Continue to allow intensive, structured, and special use recreation only where it is the least destructive to wildlife habitat. In the “Natural Unit” and “Areas of Significant Change” (*Harbor Area, Landfill Area, and Former ITT Property*), create opportunities for people of all age groups to get near the water to observe and enjoy the unique natural environment and wildlife of the Bay and marshlands, isolated from the urban scene in a setting where natural qualities and forces are dominant. Recreational activities in these areas shall be compatible with the ecological and physical constraints and opportunities of the natural Baylands systems.

### Improvements and Development

13. Follow guidelines established in the *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve* published in 2005
14. Comply with *Airport Comprehensive Land Use Plan (CLUP)* adopted by the Santa Clara County Airport Land Use Commission (ALUC) *(Mandated by State)*.

Photo by and courtesy of Michael Kern



The conversion of the landfill into a rolling pastoral park (Byxbee Park), is one of the major changes for the Baylands. Seeing that the landfill ultimately becomes an environmental asset and a continuation of the natural open space is one of the most important land-sculptur located in Phase I of Byxbee Park which opened in 1991. (See contents of this chapter for Phase II timing.)

## 2.

# Landfill Area

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

Around the turn of the century refuse was burned in an incinerator located on Newell Road near Embarcadero Road; and as early as 1896, the *Palo Alto Live Oak* published that Palo Alto should consider,

“buying an acre of more of the slough near the bay, to be used as a dumping ground for the refuse from the town. There is a constant collection of garbage of all kinds and there is no place where a scavenger can deposit it without being guilty of a misdemeanor. The land is practically worthless and could be purchased for a trifle.”

Indeed by 1921, Palo Alto’s expanding population was creating pressure to utilize the Baylands and the City began purchasing marshland. So, in the 1930s, when the Newell Road incinerator burned down, the notion published in the *Palo Alto Live Oak* became a reality—refuse disposal operations were moved to the Baylands near the newly constructed primary sewage treatment plant. The *Palo Alto Baylands Handbook* published by the League of Women Voters in the 1970s describes the early years of the Landfill as follows, “For many years, dumping was relatively uncontrolled, and burning was a frequent practice. Gradually most of the area now covered by the Water Quality Control Plan and extending southwest to Matadero Creek and Mayfield Slough and the edge of the [Former] ITT property was filled with municipal refuse.” By

the late 1960s, the Landfill was receiving 100,000 tons of garbage annually.

By 1965, the City was deeply concerned with the future of the Baylands and dedicated all city-owned Baylands as parkland with five exceptions: the airport, sewage treatment plant, MSC, Geng Road Substation, and an acre of land leased to PASCO (*Map A.1*). The Landfill was not excluded from the dedication; in fact, it was expected to close and be converted to park within three years i.e., 1968. The Landfill did not close in 1968 and in 1976, the Army Corps of Engineers (ACOE) granted permission to continue operations and even expand the footprint of the landfill. That permission included mitigation measures that are described in the *Environmental Impact Report, Palo*

*Alto Refuse Disposal Area* as well as Resolution No. 5187. The required mitigation measures included:

- Upgrading the water quality and circulation in the lagoon near the Duck Pond (*Maps 5.1 & 5.2*).
- A study for improving the marsh conditions in the Flood Basin in the Natural Unit (*Map 6.4; Also see Natural Unit Chapter*).

By this time, the landfill was an area of particular concern and priority to the City. In fact, a plan for closing the landfill was one of the core reasons for embarking on an integrated master plan for the Baylands. The ultimate goal was to transform the landfill into a rolling pastoral park that would be an environmental asset and a continuation of the natural open space.

The first task was to cover, or “cap” the area to meet state regulations pursuant to the requirements of the Regional Water Quality Control Board (RWQCB). The purpose of the cap was to protect and prevent water infiltration into the landfill—minimizing the accumulation of leachate that could migrate off-site and contaminate ground water.

Cooper Clark and Associates were hired to do an in depth study of the conditions and needs. Their report, *Comparison of Alternate Closure Plans for the City of Palo Alto’s Sanitary Landfill*, yielded several possible solutions. All the solutions met the RWQCB requirements and all facilitated the eventual transformation of the area into a park.

## 1978 • Baylands Master Plan

In concurrence with the City’s existing plans for this area, the *Baylands Master Plan* recommended that the landfill be closed and the area integrated into the surrounding landscape. It reiterated the need to comply with the RWQCB requirement and carried forward the solution choices developed by Cooper Clark. The difference between the solutions was two-fold:

First, there were two choices for the make-up of the cap material—dependent upon whether or not the City continued to dredge the harbor:

- All imported material (if harbor closed).
- A combination of imported material and dredge spoils from the harbor (if dredging continued).

The latter choice addressed another major issue then facing the City—the San Francisco Bay Conservation and Development Commission (BCDC) had stipulated that the City show that harbor dredge spoils were being disposed of in a way that did not contribute to the “filling in” of the bay. Since the City intended to keep the yacht harbor open for at least another 15-20 years, they needed to address this issue. (*Also see Harbor chapter.*)

The capping solution that used the dredge spoils was complex and involved dewatering ponds to process the dredge spoils—but it solved two problems at once, and the City chose this solution.

Second, there were three grading plan choices. They were dependent upon how soon the landfill was to be closed—the longer it stayed open, the higher the mounds would be:

- 8-10 year plan with a maximum height of 32 ft.
- 15-20 year plan with a maximum height of 44 ft.
- 20-25 year plan with a maximum height of 48 ft.

The Council chose the 15-20 year plan with a maximum height of 44 ft.

Thus, on October 11, 1978, the Council adopted the *Baylands Master Plan* with a two-phase plan for transforming the landfill into a rolling pastoral park within 20 years i.e., by 1998. Highlights of the adopted policies are as follows:

### Closure of Landfill Operations & Park Development

**The Interim Plan** defined a detailed 15-20 year plan for closing and capping the landfill using both imported material as well as harbor dredge spoils—meeting requirements of the RWQCB. During this phase, the yacht harbor would be dredged and kept open. The dewatering ponds for processing the spoils were to be constructed on the Former ITT Property.

**The Forecast Plan** defined the general look of the future pastoral park as the main high ground landmark in the flatness of the Baylands. The ad-

opted “hill and valley” grading plan resembled a “butterfly” in layout and included two upland meadow valleys (*Map 2.1*).

### Mayfield Slough Remnant Marsh

The *Baylands Master Plan* also identified this 11 acres of yet unfilled area of the Landfill as an opportunity for restoration. The plan excluded this area from receiving garbage and reserved it for possible future restoration (*Maps 2.1 & 2.4*).

### RWQCB Requirements

Compliance was included in the policy statements as a fundamental goal.

### 1988 • Baylands Master Plan Amended Summary Report

Between 1978 and 1988, changes occurred that affected the *Baylands Master Plan* policies for the landfill closure/park conversion and in 1988, the City published the *Amended Summary* to document the following.

### Closure of Landfill Operations

In 1980, the Council determined that continued dredging of the harbor was not feasible—they restricted the harbor to one final dredging and

amended the harbor lease to terminate early. This meant that landfill cap would not be a combination of imported material and dredge spoils but rather only imported material. Consequently, in 1981, the Council dropped the dewatering plan.

By 1986, the City recognized that it would need to use the landfill even longer and increased the maximum allowable height for refuse mounds to 60 ft.

### Byxbee Park Development

#### 1980 Eckbo/Kay Byxbee Park Plan

In 1980, the goal of transforming the landfill into a pastoral park was advanced to the next step when the City engaged Eckbo/Kay to develop a design for the park. The design objectives were:

- preserve and expand the marshes.
- protect the wildlife and restore upland diversity of plant and animal life.
- control access to environmentally sensitive areas.
- expand pedestrian and bicycle activities.
- allow pedestrian and bicycle activities.
- allow no more urban intrusion.
- see that the disposal area ultimately becomes an environmental asset and a continuation of the natural green space.
- fully integrate art with the park landscape and its surrounding environment. In fact, closure

operations were begun in the northeast quadrant of the landfill.

By 1986, to be consistent with the increased height of the Landfill, the Council modified the park’s hill and valley grading plan to increase the height of the highest hill from 44’ to 60’. They also abandoned the upland meadow valleys, allowing them to be filled in order to provide more capacity and prolong the use of the landfill.

Finally, a new policy was added requiring future Site and Design review for the park plan.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Closure of Landfill Operations (*Map 2.5*)

The effort to find an alternative to the landfill for waste disposal and resource recovery resulted in collaboration between Palo Alto, Sunnyvale, and Mountain View. In 1991 the three cities entered into a 30-year agreement to use the Sunnyvale Materials Recovery and Transfer station (SMaRT Station). Since 1993, PASCO has been taking most of the garbage they collect directly to the SMaRT Station where it is screened for recyclable materials. The non-recyclable garbage is compact-

ed and trucked to the Kirby Canyon Landfill, 27 miles away in south San Jose.

Since the City started using the SMaRT Station, the garbage coming to the landfill has been reduced to mostly self-hauled loads from contractors and residents. In 2006, Palo Alto delivered

approximately 47,000 tons of solid waste to the SMaRT Station, and only 22,000 tons were added to the Palo Alto landfill—less than 25% of the 100,000 tons reported in the 1988 *Summary Report*. Both the SMaRT station and Kirby Canyon Landfill agreements will expire in 2021.

Since 2005, the Public Works Department has been generating annual reports on the remaining landfill capacity. The reports are based on a photogrammetric survey performed each May.

As of February, 2008, projections indicate that the landfill will reach capacity sometime in late 2010. When the landfill reaches capacity and the operations are closed, a series of intermediate tasks will begin. For example, closure material will be stockpiled and the site will be trimmed per the final grading plan. These intermediate tasks are anticipated to take approximately 18 months, or until mid 2012. When they are done, the capping process can begin. It is anticipated the landfill will be capped and ready for State inspection in 2013. However, it is important to note that the landfill site life estimate is based on assumptions and current conditions and that a change in any of these would likely change the closure date.

Photo courtesy of Public Works Staff



Landfill operations at the Palo Alto Landfill in the Baylands are scheduled to close in late 2010 or 2011.

### Byxbee Park Design and Development

The implementation of the vision for a pastoral park at the landfill area has been guided and continues to be guided by the concepts from a series of Byxbee Park documents. Because of their importance, a supplement describing these documents has been added to the appendix. Additionally, an even briefer description of the Byxbee Park chronology follows here.

### 1991 Hargreaves Byxbee Park Master Plan

By 1986, it was recognized that 1980 Eckbo/Kay Byxbee Park Plan (*Map 2.1*) would need to be extensively revised to address issues related to Council priorities, community input about the park design, and even new landfill closure requirements. A new design team of Hargreaves Associates and artists Peter Richards and Michael Oppenheimer began work on a revised plan for the future pastoral park. The Hargreave's *Byxbee Park Plan* met the same City objectives as the Eckbo/Kay plan but was simpler and eliminated some components such as trees that required irrigation (*Map 2.2*).

The Hargreave's *Byxbee Park Plan* included a general landscape design for the entire landfill area (*adopted On March 27, 1989*), and a detailed design for Phase I (*adopted separately on November 13, 1989*). (*Note: Although adopted in 1989, the Hargreave's Byxbee Park Master Plan was published in 1991 and is referenced by that date*).

### Closure and Park Conversion of Phase I

In 1989, the park development of Phase I commenced with \$1.6 million in funds from waste disposal fees. In 1991, it was completed and the park was opened to the public. In 1993, the Phase I design was recognized with an Honor Award for excellence from the American Society of Landscape Architects, and in 1994 it garnered an Outstand-

ing Achievement, City Livability Award, from the US Conference of Mayors.

### Closure of Phases IIA & IIB

In 1988 a grading plan was developed for Phase II. By 1992, Phase IIA was closed, graded, and capped per Hargreave's approved 1991 *Byxbee Park Plan* and by 2000, Phase IIB was closed, graded, and capped per Hargreave's approved 1991 *Byxbee Park Plan* (*Map 2.5*).

### Phase IIC/Hargreave's Review of Grading

Before finalizing the closure of Phase IIC, the City asked Hargreaves Associates to review the Phase II grading plan for conformance to the concept Hargreaves had developed in the approved 1991 Byxbee Park plan.

In 2007, Hargreaves submitted their recommendations in the *Byxbee Park, Palo Alto Landfill Closure Grading Landscape Design Consultation*. It included four recommended changes to the Phase II grading plan (*Map 2.6*).

A revised final grading plan was submitted to Hargreaves Associates for review and Hargreaves Associates responded with a letter, dated April 23, 2008, stating,

“We now find the revised Final Grading Plan has applied these recommendations...which further

brought the grading into conformance with the design intent of the [Byxbee Park] Master Plan. These additional comments were incorporated into the current issuance of the Revised Final Grading Plan presented April 22, 2008 (*Map 2.3*). We feel this plan is an acceptable base upon which the Phase 2 Park can be designed.”

The next step will be to further refine the park design for Phase II.

### Mayfield Slough Remnant Marsh

Per the *Baylands Master Plan* policy mandate, there has been no refuse filling in this area, and the City has not developed refuse grading plans for this area—therefore it is excluded from all remaining landfill capacity estimates. There have been no steps taken to rehabilitate the marsh.

As of February 2008, the Mayfield Slough Remnant Marsh is a future potential restoration site (*Map 6.3*).

### RWQCB Requirements

Compliance with the RWQCB requirements was a specific policy mandate. Following are the major aspects of that compliance and highlights of how this has been carried out.



Left: One environmental constant at the park site is the Northwest wind that arrives in the afternoon. The wind wave piece emphasizes the wave nature of the wind and allows people to see that the wind, like the surrounding water, is composed of ripples and waves.



Right: Clustered hillocks or mounds provide habitat for small animals and birds as well as places for people to sit out of the wind. The mounds make direct reference to the shellmounds left by the Ohlone Indians 4,000 - 2,000 years ago. The Ohlone mounds, which varied in size, were the Ohlones' garbage "landfills."



The Chevrons, made from highway barriers, reference the nearby Bayshore Freeway. They also align with the airport runway and from the air, create an aeronautical symbol meaning "don't land here."



The poles accent the landform's point and speak to the dichotomy of what is on either side of the point. On the east side, the poles are evenly spaced and lined up in rows—referencing the controlled flood basin. As the poles move around the tip of the land form to the west, where the harbor is now reverting back to a natural state, the evenness of the spacing seems to gradually disintegrate into randomness as some of the poles disappear into the grade.

Photos courtesy of Ron Horii rhorii@prodigy.net





Young bicyclist in Byxbee Park Phase I—developing his own critical analysis of the internationally acclaimed landscaping and land sculpture?

### **Landfill Gas Collection System:**

In 1985, the Council approved a landfill gas lease and operating agreement with Cambrian Energy Systems for the development of the gas field at the landfill for the purpose of generating electricity. In 1986, the Council approved a lease and operating agreement with Palo Alto Landfill Gas Corporation (PALGC) to install a gas collection system

at the landfill and to convert the gas to electricity. Later that same year, the Council approved a supplementary agreement with PALGC to install a gas collection system separately so the work could be completed by October 31, 1987, the date for compliance set by the Bay Area Air Quality Management District (BAAQMD).

For almost twenty years, the landfill's gas collection and control system operated under the BAAQMD Title V Permit and in conformance with Regulation 8, Rule 34 air quality requirements. However, in 2004, Palo Alto terminated the contract and electricity stopped being produced. In 2005, Palo Alto's Regional Water Quality Control Plant (RWQCP) staff oversaw the construction of a pipeline that has transmitted the landfill gas to the RWQCP incinerators in order to offset the cost of natural gas. Now, the landfill gas flare (located on the landfill footprint) is utilized as a backup gas control device when the incinerators are not using the landfill gas. In 2007, the Council approved the relocation the flare from Byxbee Park to the RWQCP—keeping Byxbee Park free of power poles, electric wires and an industrial flare.

### **Leachate**

In 1988, the Regional Water Quality Control Board (RWQCB) issued revised waste discharge requirements (Order 88-038) for the landfill and mandated that the control of liquids within the landfill (leachate) be evaluated to determine the best method of controlling leachate. The evaluation resulted in the installation of a retrofitted leachate collection and removal system in 1990. The collected leachate is discharged into the sewage pipeline and treated at the adjacent RWQCP.

The highground of Byxbe



The MSC/AS facilities. For more information see MSC/Animal Services chapter.



Photo courtesy of staff

The radio station (now on the City's Historic Inventory) and antenna field. For more information, see the Former ITT Property chapter.



Electrical sub-station.



The Phase I Pole Field, Sailing Station, Bay, and East Bay Hills.-

## Recycling Center

### Background and Function

The Recycling Center began in 1972—accepting white paper, newspaper, cardboard, glass, cans, motor oil, and scrap metal. In 1978, curbside collection began and in 1979, the center was expanded to its current size (Park Improvement Ord. No. 3165). Today, 46 different materials are collected and accepted for recycling including Styrofoam, blueprints, plastic bags, and aseptic containers (e.g. milk cartons and juice boxes). Additionally, it accepts residential drop-off of used motor oil, oil filters, automobile and household batteries, anti-freeze, computer monitors, televisions and other video display devices, fluorescent lights, large appliances, mattresses, electronics, books for reuse, videos for reuse, and Goodwill collection. Lastly, residents can self haul or drop-off excess recyclables that are not eligible to be collected curbside via the single-stream bins.

This Recycling Center has been recognized by several awards including:

- 1985: Best Comprehensive Recycling Program, California Resource Recovery Assoc.
- 1988: Best Multi Material Recycling Center, California Waste Management Board
- 1989 : Best Recycling Drop-off Center, NRC,
- 1990: Recycling Merit Award, California Dept. of Conservation
- 2006 & 2007: ICMA “Voice of the People Awards for Excellence” for collection services.



Photo courtesy of Public Works Staff

Residents bringing their recyclables to the Recycling Center by car and bicycle.

Photo courtesy of staff



Exis

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Landfill Area

**Relocation of the Recycling Center**

The Recycling Center is currently located in the Landfill Area (dedicated parkland) (Map 2.5). Although it must vacate its current location in order to accommodate the completion of the landfill’s final grading and conversion to pastoral park, the Municipal Code requires that a recycling center be maintained within the City limits.

The *Baylands Master Plan* and the 1980 Eckbo/Kay Byxbee Park Plan indicated that the Recycling Center would be temporarily relocated near the RWQCP to accommodate the final stages of the landfill closure and then removed from the park at completion.

The 1991 Hargreave’s Byxbee Park Master Plan stated that Phase II of the park may incorporate an area for the recycling center, and identified an area between one and two acres in size adjacent to the Electrical Generation Facility for that purpose.

## Composting

### Background and Function

The Palo Alto composting operation was established—at the landfill—in 1977 with a grant from the then California Solid Waste Management Board. In 1996, the first permit was issued for the composting facility from the County of Santa Clara.

The 7.5 acre facility is a conventional windrow operation that processes 21,000 tons of green material per year. This includes landscaping debris such as leaves, clippings, brush, etc. as well as “selected screened loads” accumulated through the City’s street sweeping operations and clean tree trunk/limb wood grindings. The processed material is sold as compost—at the site.

Nearly all of the green material delivered to the facility is generated within the City. Approximately 63% is from PASCO’s curbside collection and debris boxes, 14% from commercial landscapers, 13% from City tree trimming or street sweeping, 7% from City contractors, and 3% from residential self-haul.

### Future of the Composting Operation

Like the Recycling Center, the composting operation is currently located in the Landfill Area and must vacate its current site to accommodate the completion of the landfill’s final grading and con-

version to pastoral park. However, unlike the Recycling Center, the Municipal Code does not require that a composting operation be maintained within the city limits.



Residents loading free compost at one of the compost give-aways.

Photo courtesy of istatf



Photo courtesy of staff

Some of the components of the existing composting operations at the Landfill Area as of 2008

## Zero Waste Operational Plan

In 1989, Assembly Bill 939, known as the Integrated Waste Management Act, was passed to address the increases in waste and decreases in landfill capacity throughout the State. AB 939 mandated a reduction in the amount of waste being disposed and jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

In response, the City assembled a task force to develop a plan and in 2007, a consultant team comprising HDR, Inc., Brown Vence & Associates, Inc., Cascadia Consulting Group, Inc., and Gary Liss & Associates prepared the *Zero Waste Operational Plan*. The plan's "Overview" section notes that in 2005, the City reached beyond the requirements of AB 939 and established a goal of 73 percent diversion by 2011 and to strive for zero waste by eliminating materials sent to landfills by 2021.

This *Zero Waste Operational Plan* identifies the policies, programs and facilities that will be needed to reach those goals. One of the plan's recommendations is the addition of a permanent Household Hazardous Waste facility.

## California State Lands Commission, Land Lease Agreement

During the Site and Design review process (before 1989) for the Byxbee Park, the State Lands Commission (SLC) became aware of the project and claimed ownership of the land based on the fact that since the Landfill area was submerged at the time of California's incorporation into the union it would have been granted to the State under the Swamp Land Act which granted all swamp and overflow lands to the State government for reclamation (See "*Historic Attitude towards Wetlands*" in the "*Overall Environmental Quality*" chapter).

The City disagreed with the SLC's claim of ownership; however, the City needed SLC approval of the Byxbee Park proposal. The SLC reviewed and approved the plans conditioned upon the City entering into a lease agreement. In order to avoid protracted litigation and delaying the construction of Byxbee Park, the City did enter into the lease agreement with the SLC. The lease contains the following terms:

- The City is allowed to construct the improvements contained in the Byxbee Park master plan.

- The City and SLC reserve the right to assert their mutually adverse claims of ownership at some time in the future should either party decide to terminate the lease.
- There is no monetary compensation to the State as long as the lands do not change from a public recreational use.
- The term of the lease is for 49 years.

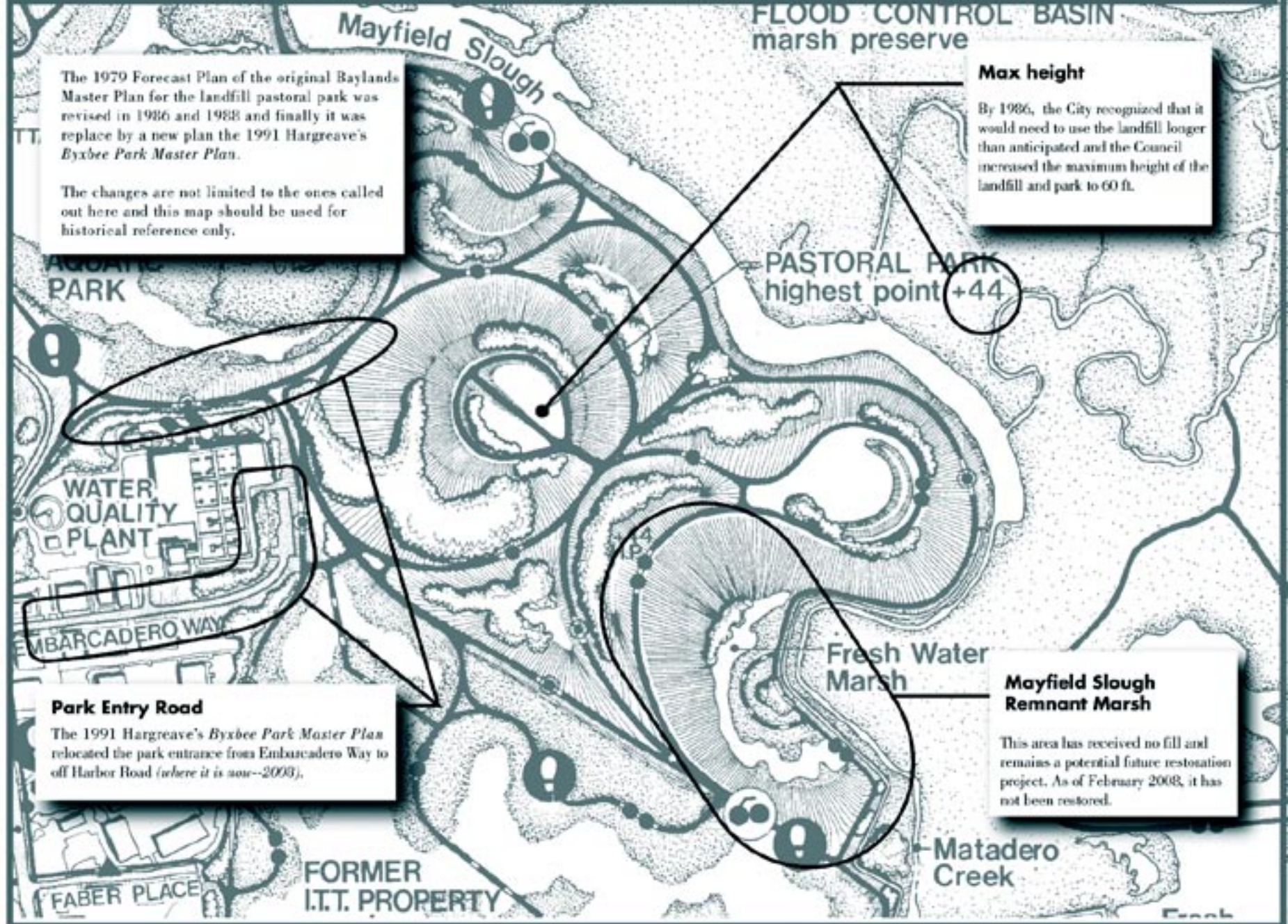
## Proposed Environmental Services Center (ESC)

In 1999, the City engaged a consultant to investigate the possibility of an Environmental Services Center (ESC) in the Baylands. The ESC was to be a refuse processing plant that would begin operations upon the anticipated closure of the landfill in 2011.

From 1999 through 2005, the City explored several options for an ESC; however, in 2005, the Council determined that none of the proposals would be pursued.

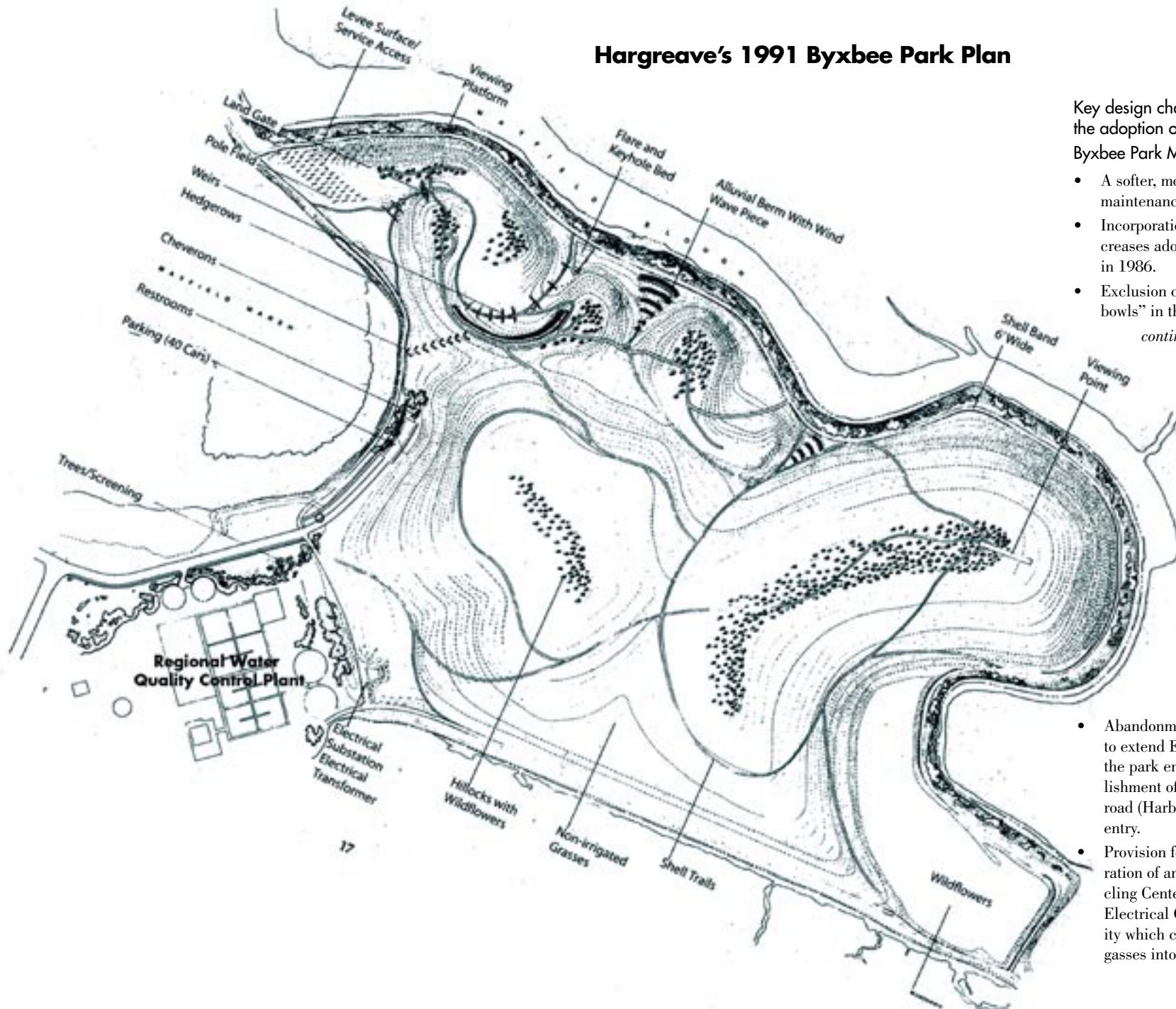


### 1979 BMP Forecast Plan for Landfill Area (Detail from original fold-out map)



Landfill Area

## Hargreave's 1991 Byxbee Park Plan



Key design changes resulting from the adoption of Hargreave's 1991 Byxbee Park Master Plan

- A softer, more natural, and lower maintenance landscaping.
- Incorporation of the elevation increases adopted by the Council in 1986.
- Exclusion of the “meadow bowls” in the contouring  
*continued below*

- Abandonment of the proposal to extend Embarcadero Way as the park entrance and establishment of the land-fill entry road (Harbor Road) as the park entry.
- Provision for possible incorporation of an area for the Recycling Center adjacent to the Electrical Generation Facility which converts the landfill gasses into electricity.

### Final Grading Plan

This grading plan was revised per the 2007 suggestions of Hargreaves Associates (see Map 2.5 for description of those suggestions)



Landfill Area



**NOTES**

1) TOPOGRAPHIC CONTOURS PREPARED USING PHOTOGRAMMETRIC METHODS BY HAN GEOSPACIAL, INC. DATE OF PHOTOGRAPHY: MAY 21, 2007.

Submitted by Golder Associates
April 15, 2008
Revised for Presentation
RTN - April 22, 2008

**FIGURE 1  
REVISED FINAL GRADING PLAN  
PALO ALTO LANDFILL**

# Byxbee Park Phase I

Pole Field

Chevrons

Wind Wave

Phase IIC

Phase IIB

Phase IIA

Mayfield Slough  
Remnant  
Marsh  
Area

The first part of the park to be constructed, the northeast quadrant of the landfill area is a 35 acre park that is a blend of man made art and natural grasslands set atop of the clay landfill cap. Paths wander through gently mounded hill bocks and land sculpture comprising a field of poles, land gate, chevron-shaped cement objects positioned along the flight pattern of planes coming into Palo Alto's Airport, keyhole alluvial berms, and wind wave sculptures.

The Phase I park design also included:

- a 20-car gravel parking lot with handicap spaces

- bike racks
- informational signage
- a rest room building at the parking lot (off the landfill entry road).

Phase I commenced in 1989 with \$1.6 million in funds from waste disposal fees. It was opened to the public in 1991. In 1993, the Phase I design was recognized with an Honor Award for excellence from the American Society of Landscape Architects and in 1994 it garnered an Outstanding Achievement, City Livability Award, from the US Conference of Mayors.

Map 2.5

# Landfill: Closure and Park Conversion Status as of 2007

In 1989 the Council adopted Hargreave's Bysbee Park Master Plan (referred to as the 1991 plan due to its published date).

This plan established four Phase Areas to accommodate continued operations and phased progress of the conversion-to-park tasks i.e., closure of operations, grading, capping, and park development. In the 1990s, those area boundaries were revised slightly to become the areas shown on this map.

**Entrance Road/Restrooms/ Parking Lot**  
Constructed per 1991 Hargreave's Plan for Phase I

### Phase I

Landfill operations closed in 1989. The area was graded, capped, and converted to a pastoral park per Hargreave's 1991 Bysbee Park Master Plan.

The pastoral park was opened to the public in 1992 as Bysbee Park and has won several national and international awards.

### Phase IIA

By 1992, all of this area had been closed, graded, and capped per Hargreave's 1991 Bysbee Park Plan (but not yet converted to park).

### Phase IIB

By 2000, all of this area had been closed, graded, and capped per Hargreave's 1991 Bysbee Park Plan (but not yet converted to park).

### Phase IIC

Landfill operations are still going on in this area. Closure of operations is anticipated to be late 2010 or 2011. After operations are closed, there will be a series of intermediate tasks (anticipated to take 18 months). When these tasks are completed, the landfill will be capped and ready for State inspection (approx. 2013).

Hargreaves Associates reviewed and accepted a revised landfill grading plan on April 22, 2008 for grading in the Phase II C area (See Maps 2.5 & 2.6).

### Mayfield Slough Remnant Marsh

This portion of the state-designated land-fill area is not being used as landfill. It is being reserved for future restoration per the Baylands Master Plan.

### Clouded Areas On Map

1. Approximate area of Current Recycling Center  
To be vacated
2. Approximate area of Current Composting Operation  
To be vacated after closure of landfill operations



Landfill Area

# Landfill: Recommended Changes to the Grading Plan 2007

In 2007, Hargreaves & Associates was asked to review the landfill closure grading plan for the Phase II areas (A, B, & C) to assess conformance to the conceptual plan of their approved 1991 Bysbee Park Plan.

Hargreave's 2007 analysis report established two sub areas called A & B as shown on this map. Area A generally correlates to the Phase IIC area and Area B generally correlates to Areas IIA and IIB).

Note: This map is a schematic representation of best available information

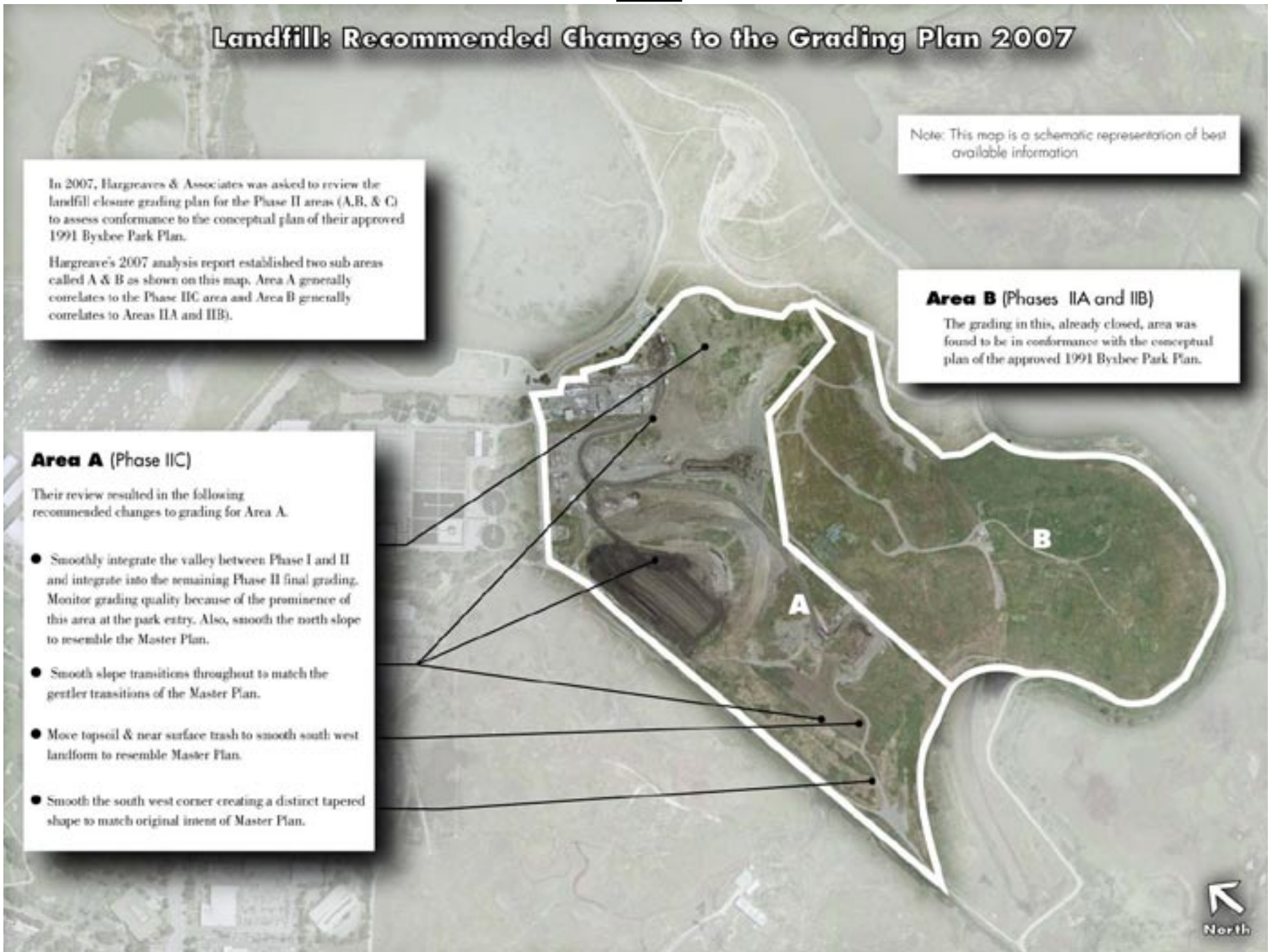
## Area B (Phases IIA and IIB)

The grading in this, already closed, area was found to be in conformance with the conceptual plan of the approved 1991 Bysbee Park Plan.

## Area A (Phase IIC)

Their review resulted in the following recommended changes to grading for Area A.

- Smoothly integrate the valley between Phase I and II and integrate into the remaining Phase II final grading. Monitor grading quality because of the prominence of this area at the park entry. Also, smooth the north slope to resemble the Master Plan.
- Smooth slope transitions throughout to match the gentler transitions of the Master Plan.
- Move topsoil & near surface trash to smooth south west landform to resemble Master Plan.
- Smooth the south west corner creating a distinct tapered shape to match original intent of Master Plan.



### Landfill Area in Context

**Site Profile as of 2007**

- Zoning: PF(D)
- Land Use Designation: Public Park
- Dedicated Parkland: Yes



Landfill Area

## Landfill Area Policies (page 1 of 2)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Landfill Area/Byxbee Park, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Overview

1. The conversion of the landfill into a rolling pastoral park is one of the major changes for the Baylands. Seeing that the landfill ultimately becomes an environmental asset and a continuation of the natural open space is one of the most important aspects of the *Baylands Master Plan*.

### Closure of Landfill Operations

2. The adopted grading plan is based on closing the landfill consistent with the development of alternative disposal and resource recovery methods at the most affordable costs. Since 1993, approximately 66-70% of the City's waste stream has been diverted to the SMaRT station. As a result only about 22,000 tons of solid waste are dumped at the City's modified sanitary landfill operation that ac-

cepts nontoxic decomposable rubbish and inert solids which will not decompose.

In 2007, the annual analysis of the landfill's remaining capacity indicated that the landfill would likely reach its capacity in late 2010.

Approximately 76 acres of the landfill (Phase I, IIA and IIB) has been closed per the requirements of the Regional Water Quality Control Board (RWQCB). Approximately 50 acres (Phase IIC) are still in operation.

3. Refuse will be placed in the landfill in the contoured forms that will create the hill-and-valley effect of the pastoral park. The closure plan calls for the use of imported materials to cap the landfill. The grading plan is intended to provide a passive upland meadow recreation area and meet Regional Water Quality Control

Board requirements. (*Upland meadow valleys were abandoned but not upland meadows and not the overall hill-and-valley concept.*)

### Byxbee Park Design and Development

4. When the landfill is completed, it will create a park with hills that will blend with the textures and colors of the surrounding marshland. The 137-acre Refuse Disposal Area landfill is bordered on three sides by flat, tidal marshland. The park will be the main high-ground landmark in the flatness of the Baylands.

The hills, the highest of which will be 60 feet (*Council action, October 6, 1986*), will allow visitors to enjoy panoramic views of the marsh, South Bay, and wildlife. The valleys will be filled to prolong the use of the landfill (*Council action, August 18, 1986*).



## Landfill Area Policies (page 2 of 2)

The hill-and-valley concept will present a sequence of unique spatial experiences for people passing through the area and for others looking at it from outside. The large land forms will be structured as natural topography, reflecting the surrounding hills and providing (*Adopted 1991 plan excludes bowls; it is a simpler more natural landscape*) panoramic views of the surrounding marshlands and the South Bay. The plan protects visitors from stiff Bay winds and screens undesirable views with sculptured earth forms and plantings. The textures and colors of the surrounding marsh area will carpet the park. The walkways in the park will double as drainage channels to reduce the vertical slope requirements.

5. The adopted design for Byxbee Park (Phase I and II) is from the 1991 Byxbee Park Mas-

ter Plan by the team of Hargreaves Associates and artists Peter Richards and Michael Oppenheimer (*Map 2.2*). Phase I was completed and open to the public in 1991. The grading plan for Phase II was modified per the recommendations of Hargreaves Associates in 2007 to include the four changes to grading recommended by Hargreaves Associates in January 2007 (*Map 2.3*). Park design for the remaining area will undergo Site and Design review at a future date. As portions of the pastoral park are finished, they will be opened as parkland.

### Mayfield Slough Remnant Marsh

6. All of the landfill site has been filled except for about 10 acres of marshland near the remnant of the Mayfield Slough. This is being saved for possible rehabilitation.

### RWQCB Requirements

7. At least one foot of impermeable material, that does not allow water to pass through it, must be placed on top of the landfill. At least two feet of topsoil must go on top of that. The land surface must maintain a three percent slope so that water will drain away and not stand in puddles. These requirements protect the surrounding water from contamination by gases from the landfill and by harmful landfill material that could be carried by rainwater from the land surface through the landfill underneath and then into the Bay water.

Drawing by Mary Sievert for one of the Baylands 'way-side' interpretive panels.



Most plants can't grow in a tidal marsh, because the soil is too salty. Pickleweed, however, has developed ways to keep salt out of its roots and has adapted to being submerged by tidal waters for short periods of time. Pickleweed is the primary habitat for the endangered salt marsh harvest mouse who uses it for both food and shelter. Also, because of its salty flavor, pickleweed was used by the Ohlones to spice and flavor their foods, and is still sold today in some farmer's markets. **The restoration project that resulted in the Emily Renzel Wetlands, was designed, in part, to expand and enhance the growth of pickleweed.**

# 3.

## Former ITT Property

### Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

#### Before the Baylands Master Plan

From the sinking of the Titanic in 1912 to the recent past, Morse Code was essential for ship-to-shore communication for both commerce and national security. In 1921 the Federal Telegraph Company leased 200 acres of marshland and built a radio-telegraph transmitting station to serve as the hub of a coastal network of stations. In 1928, it was sold to Mackay Cable & Wireless and in 1930, to ITT. The station transmitted a substantial volume of overseas cables, telephone calls, and other com-

munications until the advent of satellite transmission. Even now, it continues as a bounce station for communicating to ships that lack satellite equipment. The high water table and moist soil aid the transmission bounce and make this a good location for this function. Unfortunately, the dikes around this station (perhaps built to protect the station from flooding) disrupted the water environment and made it less accommodating to wildlife.

By the early 1970s, the property was recognized as an integral part of the plan to rehabilitate the Baylands. The City rezoned it as agriculture-conser-

vation to curb further development and began negotiations for its purchase. The ultimate goal was to open the area to the tides and allow it to revert to the salt marsh it was prior to diking. This 154 acres of diked marshland was sold to the City by the International Telephone and Telegraph Company (ITT) in 1977; however, during the purchase negotiations, it became evident that the terms would have to allow ITT to maintain a small antenna field and access easement (for 20-25 years) because this service was still deemed essential by the Federal Communications Commission (FCC).

Retention of the antenna field was compatible with the concurrent plans for capping the land-fill since a temporary location was needed for dewatering ponds to process the dredge spoils. It seemed that both the antenna field and the dewatering ponds could occupy this area for a period of about 20 years. The sale of this property to the City occurred in 1977. The terms included an easement agreement with ITT for continued use of a 36.5 acre portion as an antenna field. The lease has no expiration date.

### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* particularly noted the visibility of the site from the Bayshore Freeway. It recommended that the area be returned to salt marsh or possibly a combination of salt and fresh water marsh.

Thus, on October 11, 1978, the Council adopted the *Baylands Master Plan* with a two-phase plan for returning the Former ITT Property to salt marsh.

#### The Interim Plan

The Interim Plan included construction of the dewatering ponds with instructions that when they were not being used they were to be flooded to

create attractive reflecting pools. It accommodated the continued existence of the antenna field and access from East Bayshore Road but required that the area around the field be cleaned up. It also referenced a proposed angular flood wall along Matadero Creek and called for plantings and earth forms to mask and soften it.

#### The Forecast Plan

The Forecast Plan described what was to happen after the antenna field was abandoned—the area was to be opened to the tides and allowed to return to salt marsh. It would then be incorporated into what is now called the John Fletcher Byxbee Recreation Area (See Map 3.2).

### 1988 • Baylands Master Plan Amended Summary Report

The goal of returning the former ITT property to salt marsh did not change. In fact, the Council directed Staff to prepare a park dedication ordinance for this area. However, the decision about closing the harbor did affect the “Interim” plan for this area. In 1988, the City published the update to the *Baylands Master Plan Summary* that documented the following amendments to the Former ITT Property policies.

On December 14, 1981, the Council dropped the dewatering concept and those sections of the plan were deleted. Also, given how rapidly the satellite communications industry was growing, the Council identified the year 2000 for the abandonment of the antenna field. They amended the policy statements regarding control of the 37-acre antenna field to reflect this assumption.

The Former ITT Property—excluding the 36.5-acre easement for the antenna field—was dedicated as parkland in 1982. The ordinance refers to it as the “John Fletcher Byxbee Recreation Area Addition”.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

#### Marsh Restoration (Map 3.3)

Originally the *Baylands Master Plan* indicated that this restoration could be accomplished by installing a tide-gate and this text was included in the policy statements for the Former ITT Property element. The solution that was implemented used a valved pipeline instead.

The two-marsh restoration project commenced in 1989. Both marshes were designed to provide valuable habitat for shore birds and migrating waterfowl that use the Pacific Flyway.

**1. Freshwater Pond Restoration Project**

The freshwater part of the project created more freshwater habitat west of the salt marsh area. The project also exemplifies one of the beneficial uses of reclaimed water, which is pumped from the RWQCP into the diked freshwater pond (Map 3.3).

**2. Saltwater Marsh Restoration Project**

The salt marsh part of the restoration project was designed, in part, to expand and enhance the growth of pickleweed, which is the habitat for the endangered salt marsh harvest mouse. The project was accomplished by piping Bay water from the former harbor area into the slough system of the 25-acre saltwater marsh portion. As a condition of approval from the Army Corps of Engineers, the design included fish screening at the saltwater intake structure at the harbor to prevent fish from entry and entrapment in the slough system or the new marsh (Map 3.3).

In 1991, the City hired Munkdale Brothers, Inc. to begin construction of the restoration project—utilizing a \$1,000,000 grant from the California Coastal Conservancy.

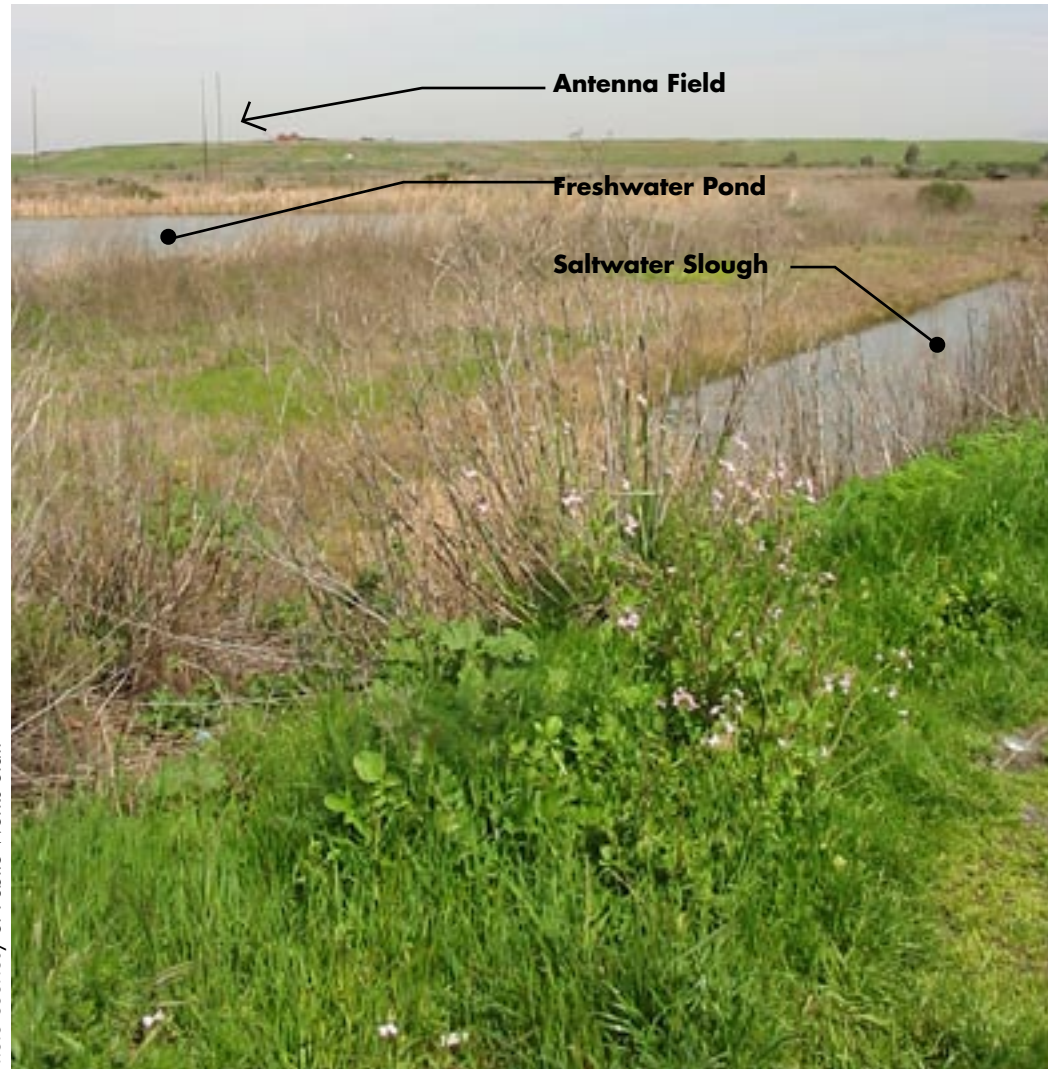


Photo courtesy of Public Works Staff

The Emily Renzel Wetlands restoration is one of three restoration projects implemented since the Baylands Master Plan was adopted. The three projects have increased the natural areas by about 50 acres (see Map 6.2 ). The antenna field is visible in background.

In 1992, the successful restoration and creation of a combination saltwater marsh and freshwater pond was a proud accomplishment for the City. These wetlands were named for former Council person, Emily Renzel, who spent decades working to protect sensitive habitats, particularly in the Baylands.

Upon completion of the restoration, a monitoring program was developed by the California Regional Water Quality Control Board and the City of Palo Alto to evaluate and maintain the health of the wetlands. For example, sediment sampling, water quality sampling, water table impact measurements, vegetation studies, and bird censuses are all conducted according to frequencies prescribed in the RWQCP permit.

As of February 2008, the Emily Renzel Wetlands are considered to be stable and only the surface water quality testing component of the monitoring program is still being done annually.



Emily Renzel with members of Committee for Green Foothills at the Emily Renzel Wetlands

Photo courtesy of

### Antenna Field (Map 3.2 & 3.3)

An aspect of the restoration that did not go as anticipated is the antenna field. The 36.5-acre site was not abandoned and remains a transmitter station for a Marine Mobile Service facility providing communication to ships at sea and the FCC still deems the facility to be necessary. It may not be shut down until there is a replacement facility.

In 1990, KFS World Communications acquired the ITT easement. And although the Council discussed buying back the easement in 1992, the two parties were unable to agree on a price. In 1993 the City and KFS entered into an agreement where-

in the City will buy the easement from KFS once a new site has been constructed and approved by the FCC. As of 2007, KFS World Communications (Global Wireless?) is continuing to use the site indefinitely.

Furthermore, in 1998, the transmission station buildings were determined to be eligible for the National Register of Historic Places. The buildings and antenna field are in the middle of the site, surrounded by and separated from the wetlands by levees and a fence and entrance is prohibited.

As of February 2008, the Antenna Field remains a future potential restoration site.

### Injection Wells

Although this program was discontinued, it was included in the original *Baylands Master Plan* and information about it may be of historical value. Therefore it is briefly mentioned here.

In the 1970s, the Santa Clara Valley Water District began a pilot project to inject highly treated wastewater into groundwater wells to keep high-salinity baywater from intruding beneath the Baylands any further. Several wells were built on the Former ITT Property; however, the project was discontinued and the wells have been capped.

### Former ITT Property in Context

**Site Profile as of 2007**

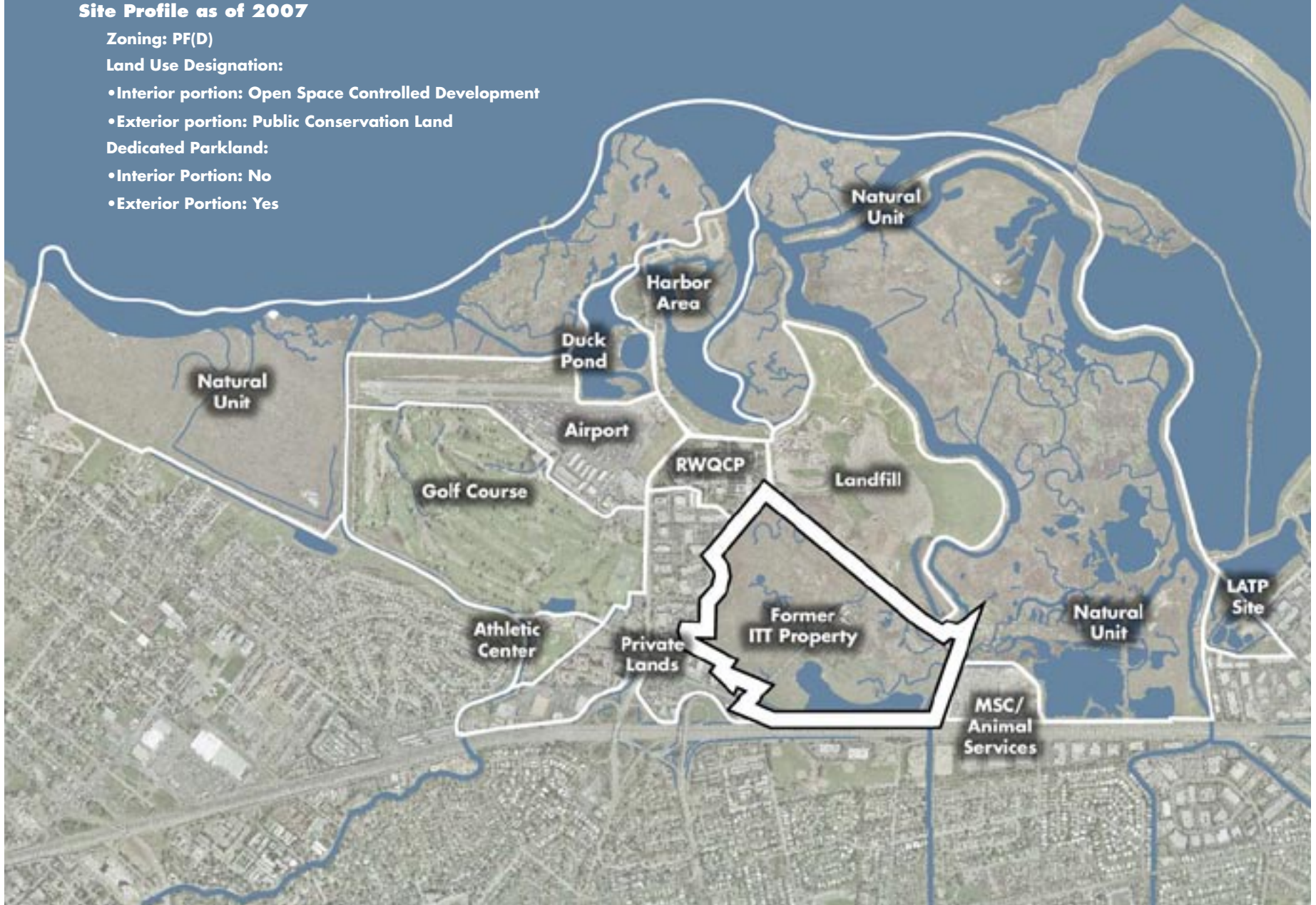
Zoning: PF(D)

Land Use Designation:

- Interior portion: Open Space Controlled Development
- Exterior portion: Public Conservation Land

Dedicated Parkland:

- Interior Portion: No
- Exterior Portion: Yes



Former ITT Property

# 1979 BMP Forecast Plan for Former ITT Property (from original BMP)

## Dewatering Ponds

The Interim Plan of the original *Baylands Master Plan* included temporary dewatering ponds to be used in processing the harbor dredge spoils into cap material for the landfill. Because the harbor was closed early, plans changed and the dewatering pond were never built.

## Service Roads as Trails

The Forecast Plan of the original *Baylands Master Plan* proposed using the service roads as recreational trails. As of 2008, no recreational trails have been developed within the Former ITT Property.

## Antenna Field

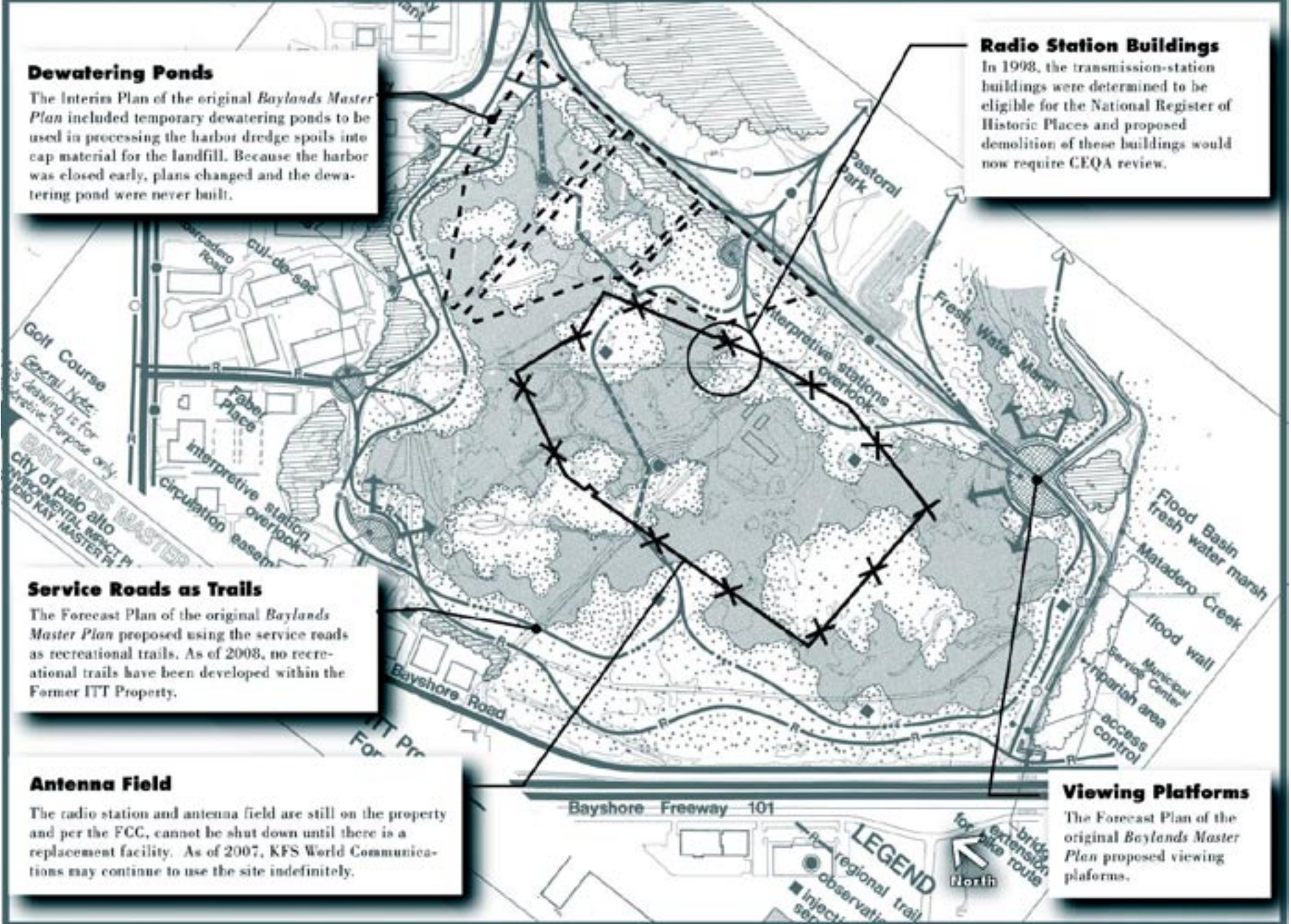
The radio station and antenna field are still on the property and per the FCC, cannot be shut down until there is a replacement facility. As of 2007, KFS World Communications may continue to use the site indefinitely.

## Radio Station Buildings

In 1998, the transmission-station buildings were determined to be eligible for the National Register of Historic Places and proposed demolition of these buildings would now require CEQA review.

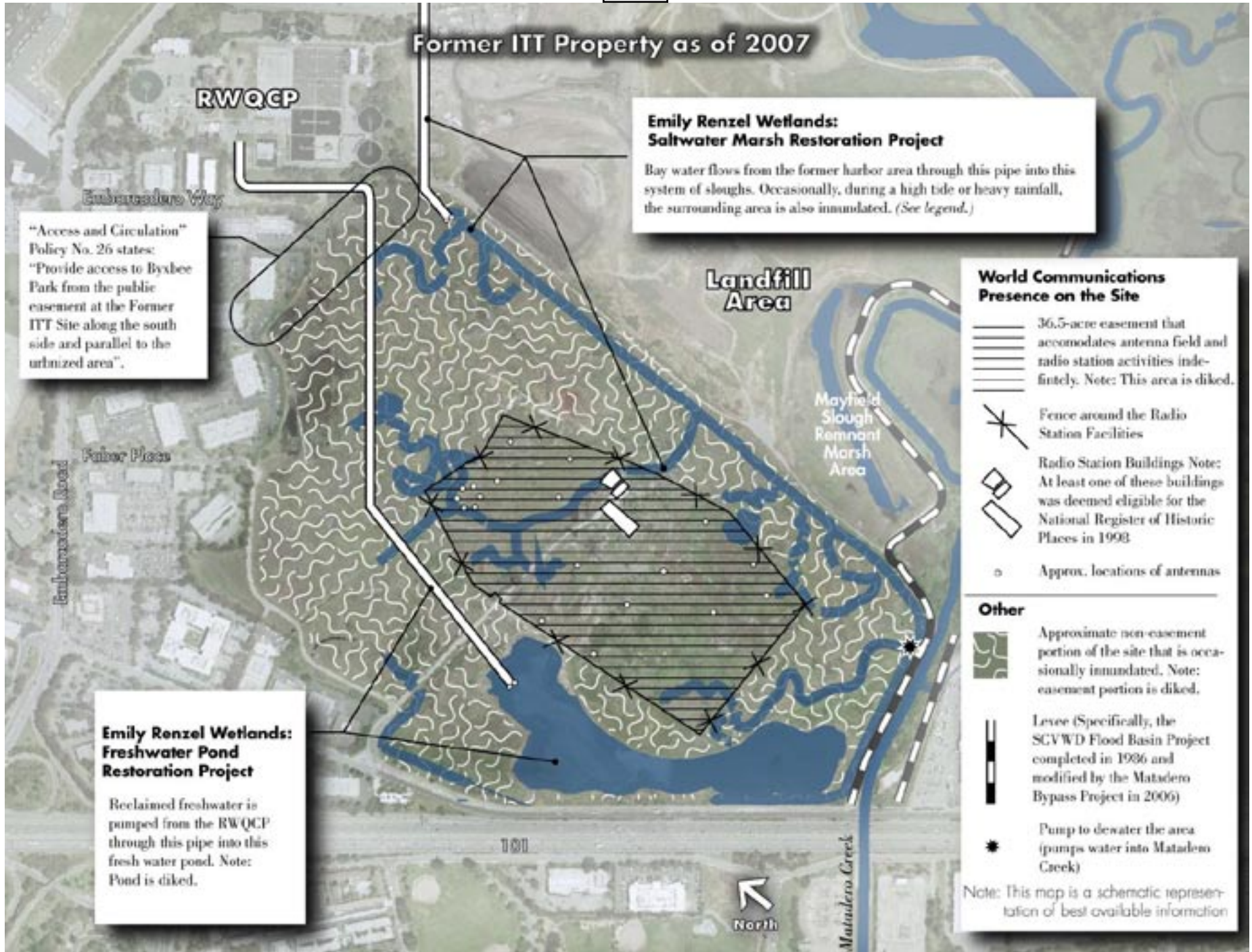
## Viewing Platforms

The Forecast Plan of the original *Baylands Master Plan* proposed viewing platforms.





Map 3.3



Former ITT Property

## Former ITT Property Policies (page 1 of 2)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Former ITT Property, activities in this area must also comply with policies stated in the “Overall”, “Flood Control”, and “Access & Circulation” chapters as well as policies stated for the surrounding areas.

The future of the former ITT property goes beyond conservation into rehabilitation, and fits perfectly with the overall goal of the *Baylands Master Plan*—to preserve and enhance unique and irreplaceable resources.

This seasonal wetland is flat and low, just about at sea level. Prior to restoration, it was not as productive as it could have been because the water environment had been disrupted by the diking. However, when the winter rains were heavy, ponds formed and these ponds provided feeding and nesting habitat for gulls, ducks, and shorebirds. Burrowing owls, rodents, jack rabbits, and ground squirrels nested there during the dry season and birds of prey, pheasants, and mourning doves also

visited the site then. Also, the rare “white tailed kites” nested in this area along the road into the building and may still use this site as their habitat.

In 1992, bay water was piped in from the former yacht harbor and the diked marshland was partially restored, allowing some of the original tidal flow to occur. As a result, it is biologically productive again. Also, in the western portion of the site, a freshwater pond was created by pumping reclaimed water from the RWQCP.

This area, except for the easement where antenna field exists, was dedicated as parkland on May 3, 1982. It was named the Emily Renzel Wetlands on September 29, 1992.

This section is a condensed antenna field and, per the Federal Communications Commission, may not be shut down unless it is replaced by another facility. It continues to provide an essential communication link to ships at sea which still don’t have satellite communications equipment. World Communications, who took over from ITT, controls 36.5 acres in the central part of the property through an easement agreement and may continue to do so indefinitely into the future.

## Former ITT Property Policies (page 2 of 2)

### Marsh Restoration

1. Maintain both the salt water and freshwater marshes that have been created.
2. Clean up all areas outside the antenna field.
3. Use earth forms and vegetation that can serve as food for wildlife to soften the geometric form of the flood wall on the south side along Matadero Creek.
4. Keep the rest of the site the way it is, except where otherwise recommended.

### Antenna Field

5. Remove the antenna field, replace with marshland and incorporate this area into Byxbee Park. *(In 1993 the City and KFS entered into an agreement wherein the City will buy the easement from KFS once a new site has been constructed and approved by the FCC. However, a proposal to demolish the radio station buildings may not be desirable as they have been determined eligible for the National Register of Historic Places.)*



The boat dock at the Palo Alto Sailing Station meets very strict criteria established by the BCDC. It is designed to avoid harming the benthic organisms that live in the muddy area along the shore. Also, even when the tide is low it does not rest too long on the bottom as that would be viewed as "filling in the Bay".

# 4.

# Harbor Area

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

Around 1830, Don Rafael Soto built an embarcadero (wharf) near what was the mouth of San Francisquito Creek before it was rerouted. (*For more information about the rerouting of San Francisquito Creek, see “Flood Protection ”.*)

By the 1870s the wharf became known as Wilson’s landing after Captain Charles Gordon Wilson who ran a cargo sailing operation in the bay. In those years agricultural produce from Palo Alto was shipped to San Francisco from this wharf. However, the railroad soon offered a more profitable al-

ternative and by the turn of the century, Wilson’s Landing had fallen into disrepair.

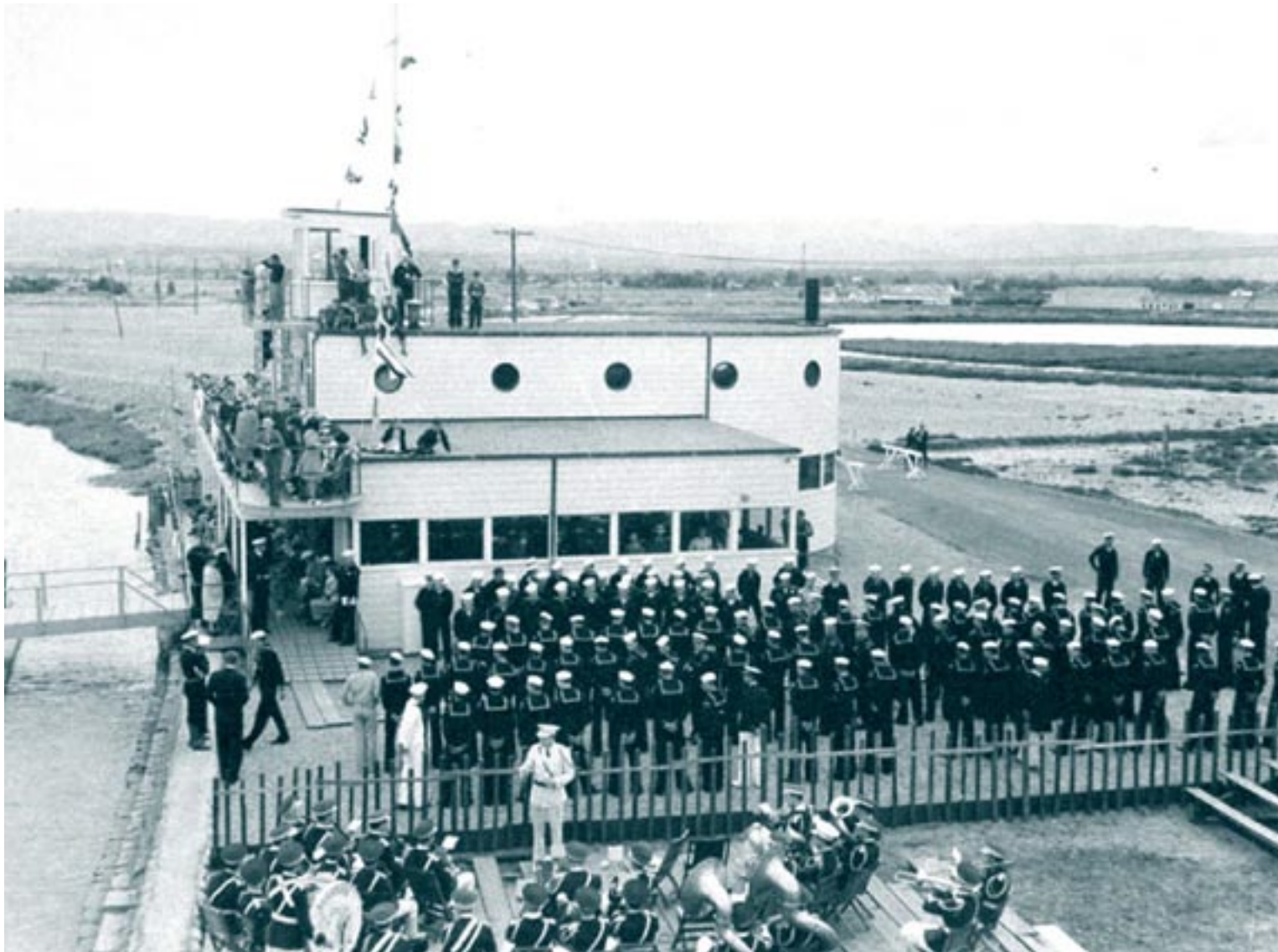
In 1921, the City purchased the land (from multiple owners including Laumeister, Alviso Salt Company, and the Palo Alto Yacht Club) and dredged an 24,000 square foot harbor which opened in 1928. In the early 1930s the City adopted John Fletcher Byxbee’s plan for the Baylands and the first step was to increase the dredged area—creating a 6,000 foot channel out to deep water. Spoils were strategically placed on the surrounding marsh to create solid ground for future development. In 1936, with the assistance of the WPA, the harbor was again

dredged and 180,000 cubic yards of spoils removed. By 1939, over 100 acres of marsh had been filled. (*San Francisquito Creek had probably been rerouted to its current location by this time.*)

The yacht harbor was enjoyed by many and in 1941, educator Lucie Stern funded the Sea Scout facility which provided nautical activities and recreation to Santa Clara County youths.

During the ensuing years, the boating facilities were improved but the City faced a continual struggle against siltation as it tried to maintain access to deep water. In 1953, the City proposed that the state create a state park but the proposal was

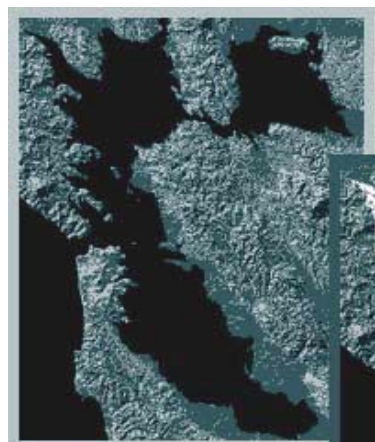
Photo courtesy of the Palo Alto Historical Association



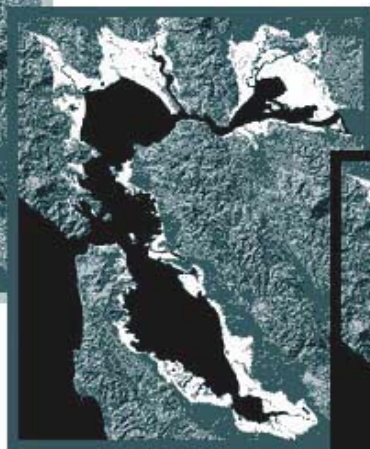
Historic Sea Scout Building in the Baylands of Palo Alto— built in the 1940s. In July of 2007, the Council approved a tentative lease agreement submitted by the Environmental Volunteers. As of February, 2008, the Environmental Volunteers— have raised \$1.95 million towards the renovation project.

rejected on the grounds of inadequate beach facilities and a high degree of pollution in the harbor water. Around this time the County recognized the regional nature of the facilities and began to share the cost of maintenance and development. In 1963, Palo Alto signed a 25-year lease placing the harbor under the planning and supervision of the Santa Clara Parks and Recreation Department. In 1964, the County dredged the harbor again creating a five-acre turning basin and the spoils were placed on the “point” next to the berthing area. In 1967, the lease was extended to 50 years and in 1968-1969, the County again dredged the harbor placing 200,000 cubic yards of spoil in the Faber Tract. (County lease required the City to provide spoils deposit area.)

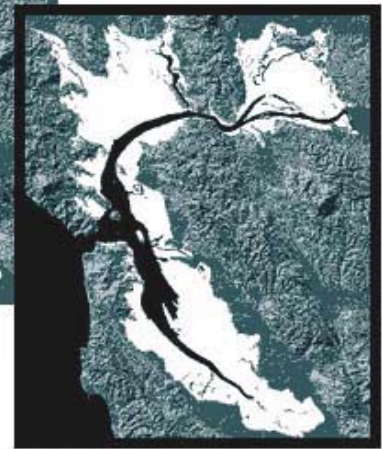
Meanwhile, many Bay Area citizens, including Palo Altans, were becoming alarmed by the fact that between 1850 and 1960, an average of four square miles of the Bay were filled each year. And in 1965, the McAteer-Petris Act established the San Francisco Bay Conservation and Development Commission (BCDC). The BCDC was charged with regulating development in and around the Bay.



1849



1965



2020

This graphic, from the “Save the Bay” website, illustrates what was perceived to be the possible future of the San Francisco Bay during the baby-boom triggered development years.

Then, in the 1960s, Berkeley citizens became alarmed about a proposal to fill in 2,000 acres off shore and began the “Save the Bay” organization.

Today, the Bay is in far better shape than could have been predicted 40 years ago. The Bay is some 40,000 acres larger than it was in 1961.

In 1975, Santa Clara County’s *Yacht Harbor Master Plan* was adopted.

In conjunction with the 1975 *Yacht Harbor Master Plan*, the BCDC issued permit No. 11-73. It approved a three-phase project for road improvements, landscaping, and dredging 50,000 cu-

bic yards of material from the north basin of the harbor. However, it stipulated that future development and maintenance dredging of the harbor would be considered only after the completion of a comprehensive plan that included: a time schedule, where and when permanent public access and passive recreational uses would be provided, and an environmentally acceptable solution for the

disposal of the harbor dredge spoils and a harbor plan that included details about maintenance, access, uses, costs, and funding.

This requirement for disposal of dredge spoils and the need to close the landfill were the impetus for the *Baylands Master Plan* which began in 1976 with studies of these key issues:

- Response to the BCDC’s requirement for dredge spoil disposal.
- Response to BCDC’s requirement for a recreational master plan.
- Selection of a closure plan for the sanitary landfill that met the RWQCB’s requirements.
- A guide to future conservation and improvement of the entire Baylands area.

### 1978 • Baylands Master Plan

In 1976, analysis prepared for the *Baylands Master Plan* categorized the Harbor Area as an area of established water use with a visually obtrusive landscape. Due to results of numerous studies all indicating that dredging could not go on for many more years, the Plan recommended that, after the landfill was capped, the harbor facilities be removed and the area returned to salt marsh.

Thus, on October 11, 1978, the Council adopted the *Baylands Master Plan* with a two-phase plan for the Harbor that included, eventually, closing it and, allowing it to return to salt marsh.

#### Interim Plan

The Interim Plan established a 15 to 20 year period in which the harbor would be kept open and dredged. It included a detailed dredging schedule

and a description of how the dredge spoils would be processed in the dewatering ponds for later use as landfill cap material. Given that it was to be open, the plan included some improvements i.e., screening the parking lot with earth forms, a clean up of the area, better storage facilities, a public hoist with auxiliary facilities, and an access-control gate at the south end of the tide gate overpass. It also called for some immediate restoration efforts in the areas surrounding the harbor i.e., removal of all utility poles and restoration of both Mundy Marsh and approximately 4 acres of Harbor Point.

#### Forecast Plan

The Forecast Plan states that when the dredging of the harbor is stopped, it might not fill up sufficiently to hold plants, especially the South Arm. It then defines a possible solution—a filling program in which low, temporary dikes will be built where required around the harbor and the area then hydraulically filled by dredging from the entrance channel or other area. It also calls for the removal of the yacht club, berths, and all buildings except for the harbor master’s cottage and rest rooms. (*At this time the Sea Scout building was intended for demolition.*)

For Harbor Point, the plan recommended that 4 acres be returned to salt marsh, and the remaining area be developed for recreational use i.e., a picnic area and trails. (*See Map 4.2*)

### 1988 • Baylands Master Plan Amended Summary Report

The goal of returning the harbor area to salt marsh was reinforced when ballot initiatives to keep the harbor opened were defeated in 1980 and 1985. In 1988, the City published an update to the *Baylands Master Plan Summary* that documented policy amendments for the Harbor area:

In 1980, the Council determined that continued dredging of the harbor was not feasible. They restricted the harbor to one final dredging and amended the lease to terminate on June 30, 1986. In 1981, the BCDC permit # 11-73 was amended to allow the final dredging—over a five year period—and imposed the condition that the piers and pilings be removed after the last dredging. Also in 1981, the Council dropped the dewatering concept. (*Council action Dec. 14, 1981.*)

In 1982, the City dedicated the Harriet Mundy Marsh which extends from Lucy Evans Nature Interpretive Center to Sand Point. It was named after Harriet Mundy in recognition of her continued perseverance and devotion to the marshlands. (*Council action Oct. 4, 1982.*)

In 1986, the Council officially closed the harbor berthing facilities on July 1st and directed staff to study the possible uses in the proposed aquatic park. They also clarified that the “possible filling



program” from the Forecast Plan section, was not necessarily going to be implemented.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Closure of the Harbor

The closure of the Yacht Harbor was probably the most controversial aspect of the *Plan’s* implementation. Many people, especially the Sea Scouts, were sad to lose this interface with the Bay. However repeated studies and attempts to solve the problem had all yielded the same result—that continued dredging was not feasible.

In 1987, per requirements of the final dredging permit issued by the BCDC, all floating gangways, walkways, and berths were removed from the harbor and sold for salvage. Also at this time, the walkways, pilings, and several buildings were demolished and removed from the area.

### Aquatic Park Development

The *Baylands Master Plan* included the possibility of developing the vacated harbor as an aquatic

park that might accommodate the Sea Scouts and provide boating amenities like a public hoist.

However, the consensus of the 1987 reports (*described in the “Harbor Point” sub-section on page 104 & 105*) was that without continued dredging the harbor channel would become too narrow and shallow to accommodate even the mooring of small Sea Scout boats. Therefore, the existing launch was removed, no hoist was installed, and in 1992, a sailing station was constructed comprising a pier and dock for hand-carried, non-motorized craft (canoes, kayaks, row boats, and wind surfers),

### Harbor Area Renovations

In 1991, funded by a \$50,000 County grant, the former Harbor Master’s House was restored and renovated to function as the Baylands Ranger Station. It is now on the City’s Historic Resources Inventory List. In 2000, funded by an Association of Bay Area Governments grant for \$50,000 the Marsh Front Trail (referred to in the *Baylands Master Plan* as the “Promenade”) was created along the edge of the Harbor Marsh between the Byxbee Park Hills parking lot and the Sea Scout building. In 2002, the gravel parking lot at the Sailing Station was replaced by a smaller “state-of-the-art” lot that is paved with concrete hardened base rock and drains into a bioswale (*Map 4.3*).

Around this time, the Sea Scout building—designed by local icon, Birge Clark and funded by the City’s “fairy godmother”, Lucie Stern—was also added to the City’s Historic Resources Inventory list as a Category 1 resource. The City sought proposals to relocate, repair, and lease the building and in July of 2007, the Council approved a tentative lease agreement submitted by the Environmental Volunteers—a group that provides environmental education to children—to completely renovate the Sea Scout Building for use as its headquarters. Under the terms of the lease agreement, the Environmental Volunteers agree to renovate and maintain the building for the duration of their occupancy.

In 2006, the road between the harbor entrance gate and the culvert bridge near the Nature Center was renovated and resurfaced to a consistent width of 28 feet to accommodate two lanes of vehicular traffic and bike lanes on both sides. Curbs were added to replace old utility pole bumpers along the road. Also, the utilities were undergrounded.

### Marsh Restoration: The Harbor Itself

The *Baylands Master Plan* suggested that a “filling program” would accelerate the reversion process and policy text included the following,

“... It is uncertain how long it will take for the yacht harbor to build up enough silt natural-



Photo courtesy of staff

The renovated Harbor Master's House functions as the Baylands Rager Station.

ly to hold plants. It will take many years for plants to start to grow throughout the entire area and it is possible the center of the South Arm will never fill in without human intervention. The harbor will revert to salt marsh much more quickly if helped by a carefully planned filling program. If implemented, low, tempo-

rary dikes will be built where required around the harbor and the area then hydraulically filled by dredging from the entrance channel or other area. More than one dredging cycle may be necessary to raise the ground to the desired level in the harbor area.”

However, the consensus of the 1987 reports was to not implement the filling program because an accelerated program would not allow the existing organisms a chance to adapt. One report projected that in 50 years, the harbor would reach a state of equilibrium after which the shape of the harbor bottom and channels would remain relatively static. The Santina report added that the elimination of the filling program was strongly supported by the regulatory agencies.

No filling program was implemented but, as of 2008, the harbor appears to be silting in naturally and able to retain plants.

### Marsh Restoration: Harbor Point

Once the harbor closure decision was made, the BCDC issued the final dredging permit with a requirement that, in addition to allowing the harbor to return to marsh, the City was to pro actively restore 4 acres of marsh at Harbor Point. In 1987, the City hired consultants to prepare studies regarding how to proceed. They included:

- *A Technical Report on Hydrology and Sedimentation* by Phillip Williams and Associates.
- *The Marine Facilities Design* by Santina & Thompson, Inc.
- *The Wetlands Enhancement and Restoration Study* by Wetlands Research Associates, Inc.

- *The Yacht Harbor Restoration Conceptual Study & Plan* by Santina & Thompson, Inc.

The *Wetlands Enhancement and Restoration Study (WRA Study)* initially identified 28 acres in the Harbor area as having potential for restoration to wetland habitat and upland buffer area. These areas were further evaluated, taking into consideration, the Baylands Master Plan, BCDC requirements, and public access requirements. As a result, the subsequent study, *The Yacht Harbor Restoration Conceptual Study & Plan (Santina Study)* established 8 Priority areas for restoration in the Harbor area. (These 8 areas are shown schematically on *Map 4.3*).

Associated with these 1987 reports were recommendations that the City establish a mitigation bank to fund the projects. Mitigation banks link: 1) agencies with unfunded restoration projects with 2) developers with mitigation obligations that they cannot fulfill on their building site.

The *Baylands Master Plan* echoed the BCDC requirement by proposing that approximately 4 acres be restored to marsh. The Forecast Plan map in the original *Baylands Master Plan (Map 4.2)* showed 4 acres as restored and the remaining portion developed as a picnic area including trails, observation platform, and a bike/pedestrian bridge that traversed the harbor.

Photo courtesy of Ingrid Taylor



Harbor Point and the harbor itself are two of the three restoration projects that have increased the natural area by about 50 acres. The Marsh Front Trail in the foreground follows the former harbor edge—it was completed in 2000.

However, the consensus of the 1987 studies was to restore as much of Harbor Point as possible to marsh. The Santina report specifically recom-

mended elimination of the proposed picnic area, trails, observation platform, and bridge shown in the Forecast Plan.

The City concurred with the Santina report and determined that the “right thing to do” was to restore 11 acres. The City sought funding for the additional area using the mitigation bank concept. That is, they sought a developer with mitigation obligations that could not be fulfilled at the site where the developer was building. Fortunately, at that time, the San Francisco International Airport needed to provide mitigation for its proposed expansion.

In the end, the City met its mitigation obligation by financing the restoration of 4 acres and the San Francisco International Airport provided enough funding for an additional 7.2 acres.

In 1992, the restoration process began by contacting Federal, State and County agencies to determine what permits were required and environmental interest groups to enroll their support of the project. Permits came from four agencies including the Army Corps of Engineers, State Department of Fish & Game, the State Lands Commission and the Bay Conservation and Development Commission. The project was also subject to the site and design process. The complete environmental review and permitting process took about two years. It is worth noting that the permitting agencies did not agree on what the final outcome was to be. For example, while some agencies thought that all the dredge spoils should be removed, the BCDC preferred to leave a mound on the site to create an “upland”



Photo courtesy of WRA, Environmental Consultants

In 2007, the environmental firm of WRA carried out the final stage of a 10-year monitoring program for the Harbor Point Restoration project which was completed in 1997.

area and a more diverse habitat. The approved plan included the “upland” area.

Phase I (4-acre portion paid for by the city) began in 1992 and was accepted as complete in May, 1994. Phase II (the 7.2-acre portion paid for by the San

Francisco International Airport) began in 1996 and was accepted as complete in December, 1997.

In 1998, the Harbor Point restoration project was recognized by the Peninsula Conservation Center Foundation as an Environmental Business Award

winner in the category of Land Use Planning and Management. And, in honor of the successful project, the Public Works Engineering Division received certificates and letters from United States Congresswoman Anna Eshoo, California State Senator Byron Sher, and California Assemblyman, Ted Lempert. (*Copies of the award and letters are on the following page.*) Mr. Lempert's letter stated,

“Taking advantage of a mitigation opportunity to return 7.2 acres of wetlands to a natural state took a lot of perseverance. Knowledge gained from the project is surely useful to future attempts to regain natural ecosystems. I hope that other Bay area wetlands custodians will follow your good example.”

Monitoring commenced after the completion of each phase and was done biennially thereafter for ten years per agency permit requirements. Additional interim-year monitoring (to check for invasive plant species) was also done for the Phase II marsh at the request of the funding agency, San Francisco International Airport Commission.

### Marsh Restoration: Mundy

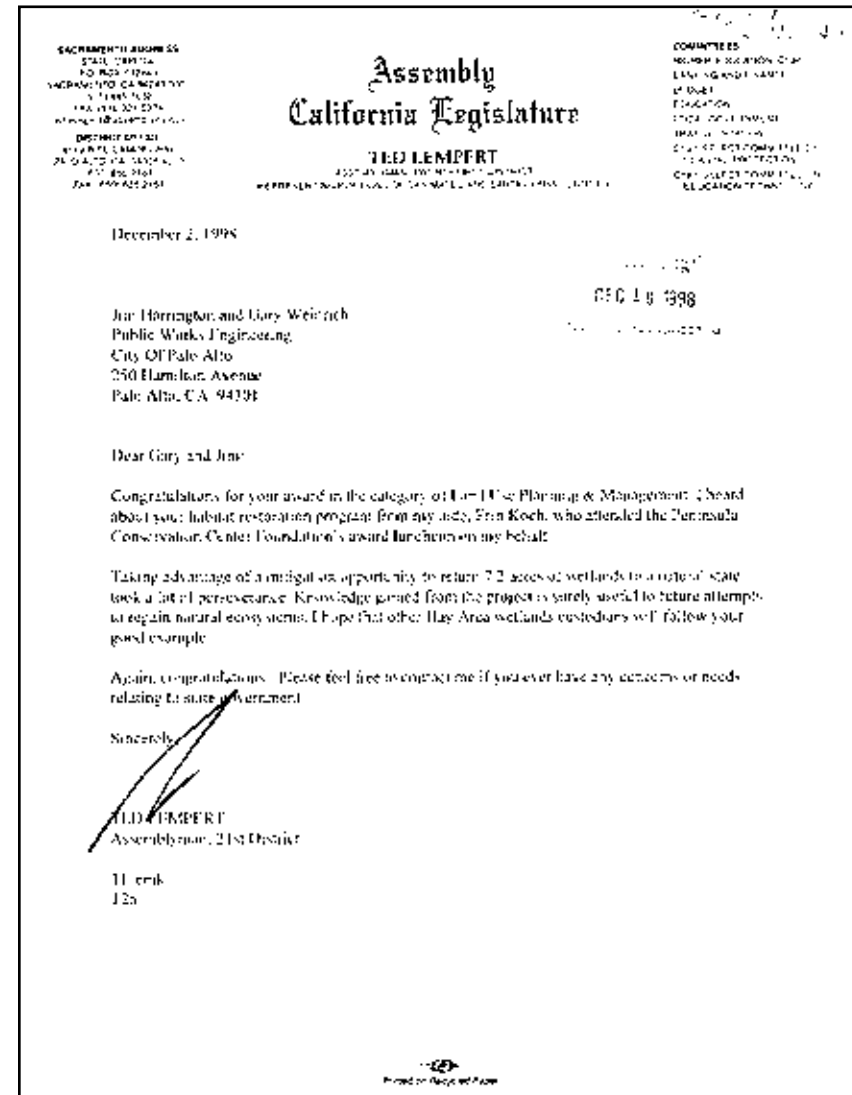
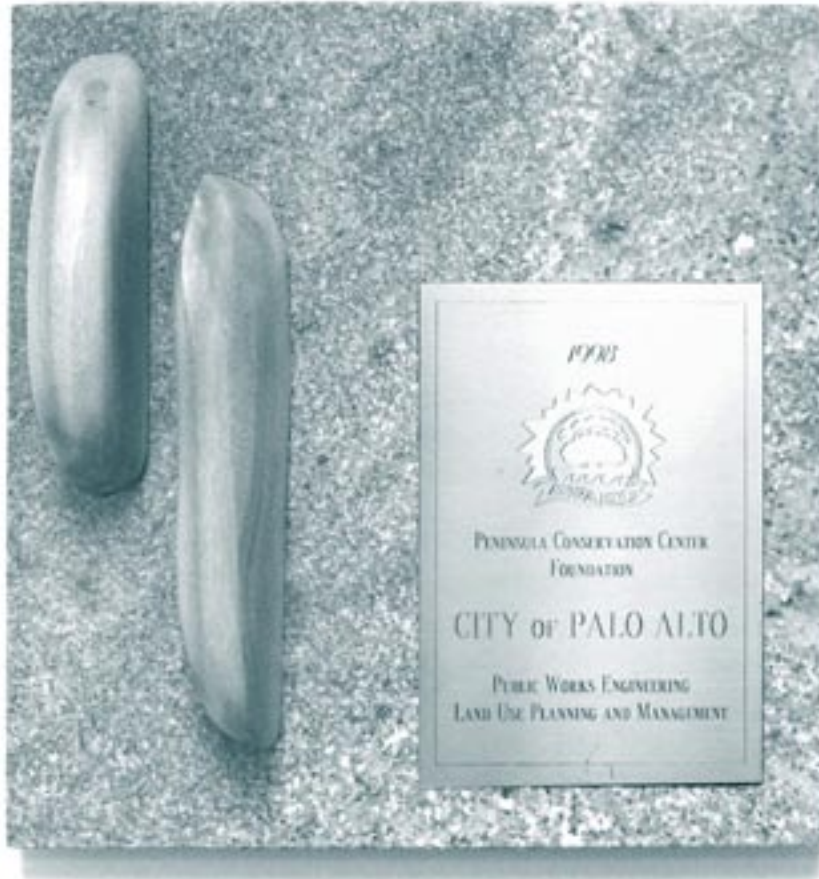
The area north of Harbor Point, is named Mundy Marsh, after Harriet Mundy, a tireless advocate of marsh preservation in the Baylands. This area correlates to Priority Area 3B (*Map 4.3*). The

*Baylands Master Plan* identified this area for restoration i.e., removing dried dredge spoils and excavating a channel to the Bay. In the end, this area was not included in the restoration project completed by the City; however, no more dredge spoils are being dumped there. And, at one point, volunteers hand dug a small channel to allow tidal action in this area. The area has been overgrown with Salsola.

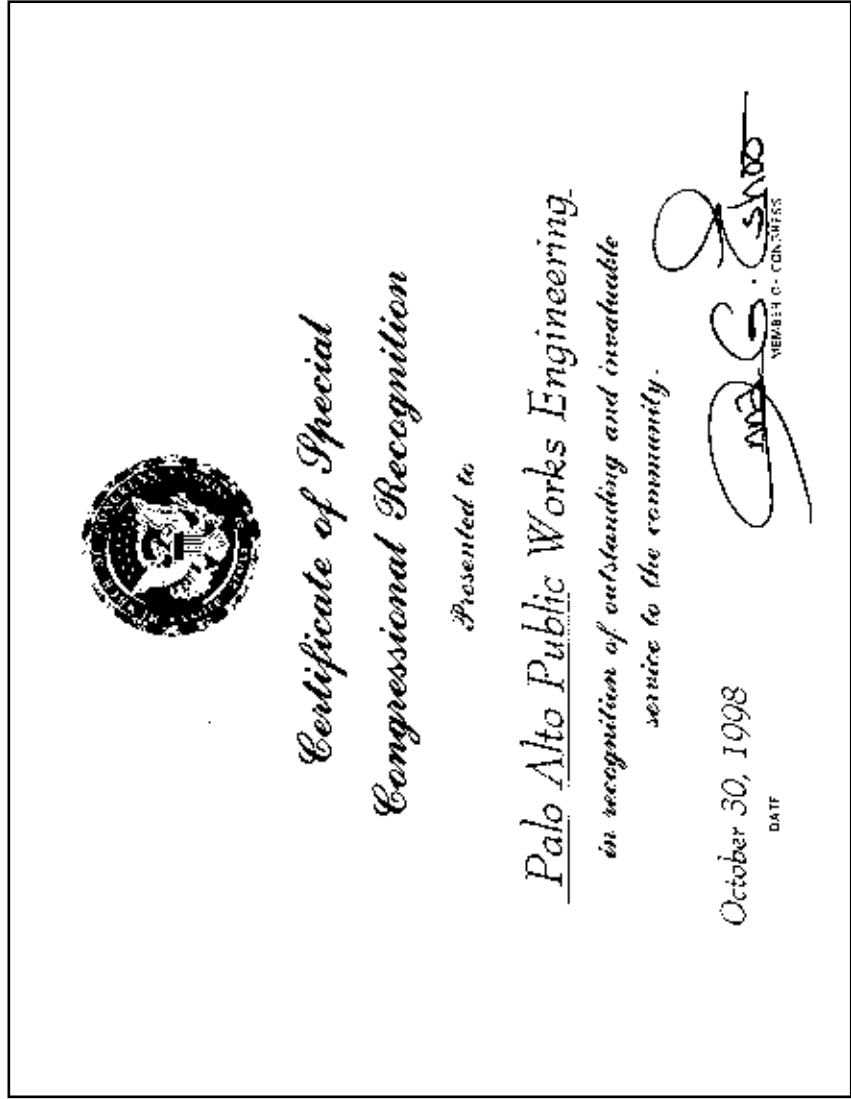
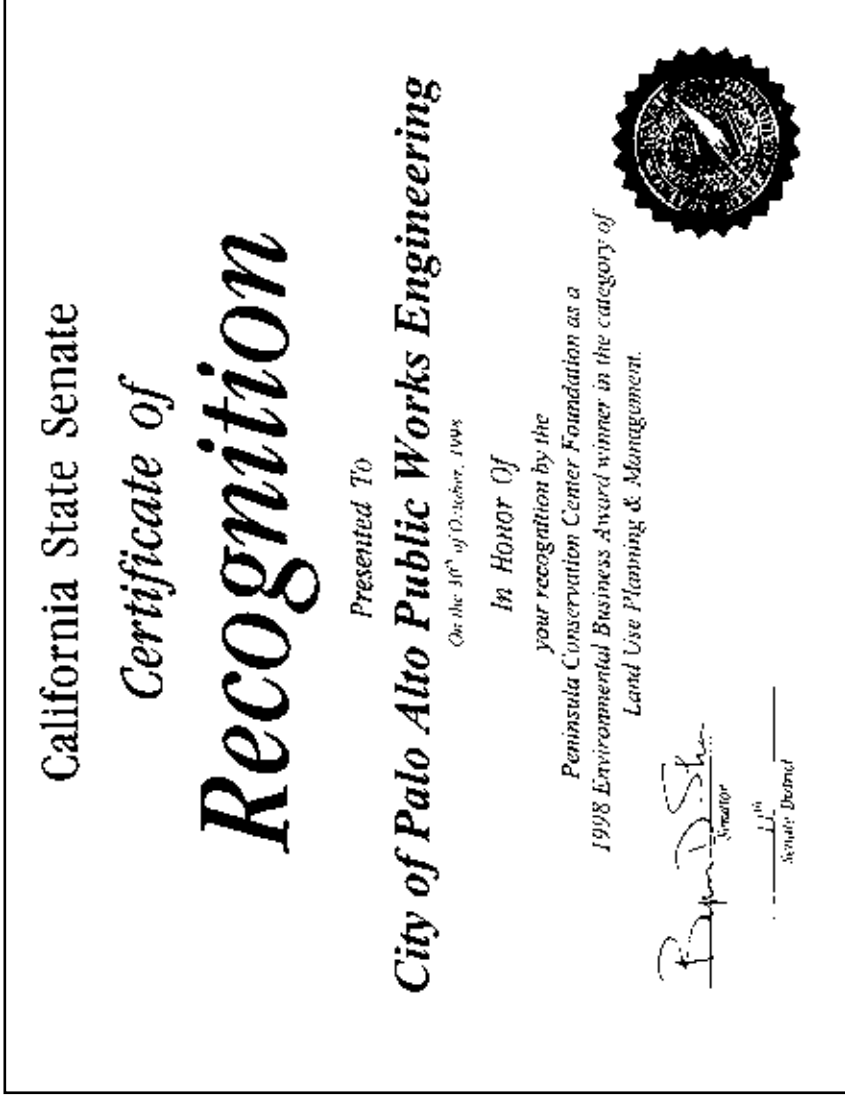
### Salt Marsh Demonstration Garden

The *Baylands Master Plan* Forecast plan specified a Salt Marsh Demonstration Garden in the Harbor Point area. However, the 1987 Santina report recommended eliminating it because, although a good way to illustrate plants, its location in a high human activity area would have made it unusable as habitat for wildlife. It was never created.

**The Harbor Point Restoration Project** is an example of the City's commitment to its stewardship of the Baylands. The original Baylands Master Plan called for 4 acres of the point to be restored to marsh and for some of the remaining area to be developed with trails and picnic facilities. However, before implementing the project, the City further investigated the restoration



scenarios and, in the end, restored over 11 acres (cont. next page) to marsh (even though it was more expensive). The project received an award from the Peninsula Conservation Center Foundation (which hangs on the wall in the Public Works Department at City Hall) as well as state and national recognition—see below.





In 2007, the City approved a tentative lease agreement with the Environmental Volunteers to completely renovate the Sea Scout Building and use it as a headquarters. The group provides environmental education to children.



### Harbor Area in Context

**Site Profile as of 2007**

- Zoning: PF(D)
- Land Use Designation: Public Conservation Land
- Dedicated Parkland: Yes



Harbor Area

# 1979 BMP Forecast Plan for Harbor Area (from original BMP)

## Salt Marsh Demonstration Garden

The Forecast Plan of the original *Baylands Master Plan* proposed a Salt Marsh Demonstration Garden. However, a series of wetlands analysis reports in 1987 recommended against it and it was not constructed.

## Mundy Marsh

The original *Baylands Master Plan* identified this as a potential restoration site and that was reaffirmed in the series of wetlands analysis reports done in 1987. See Priority Area 3B Map 4.2) It remains a site for future potential restoration.

## Harbor Point

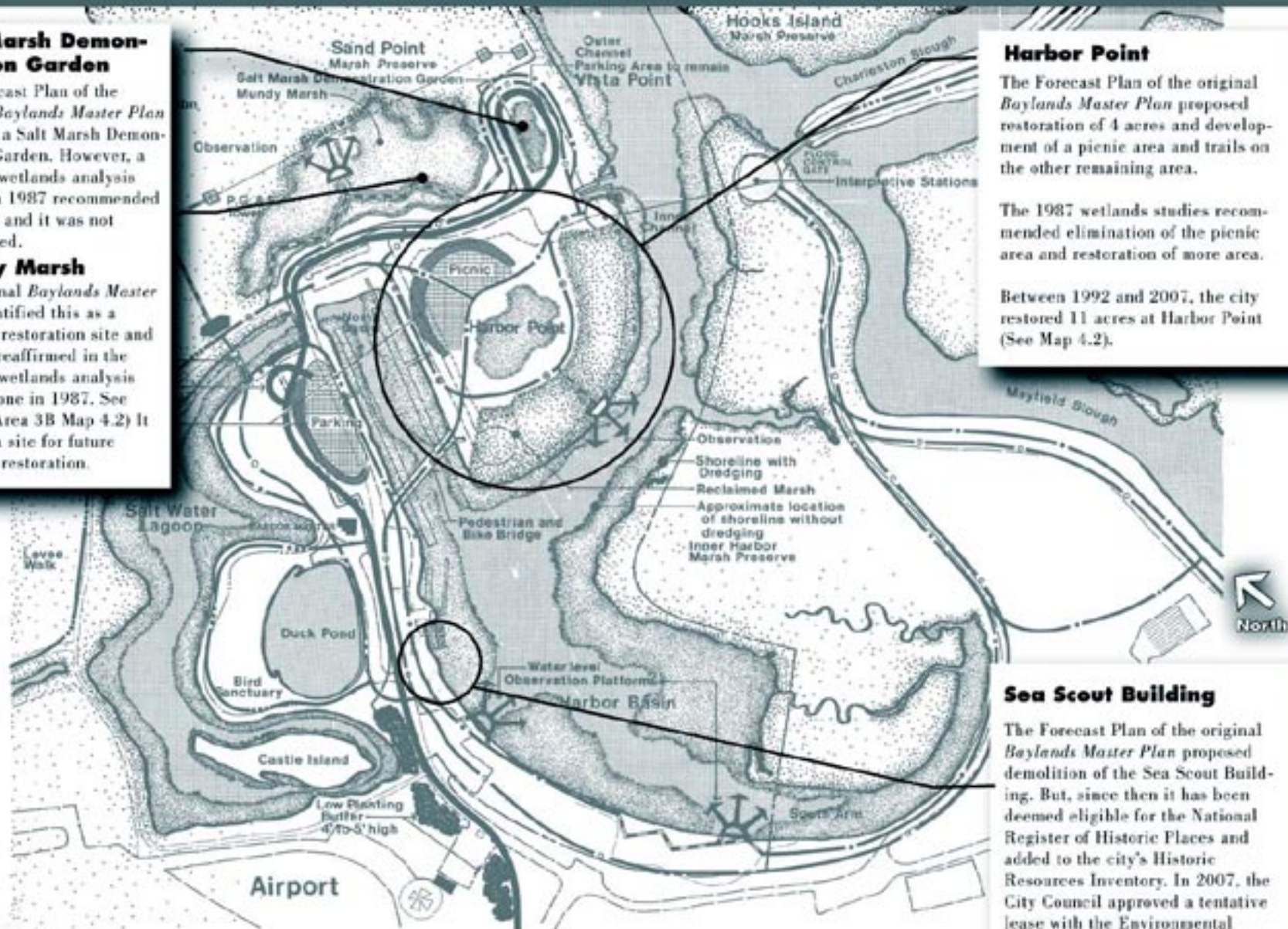
The Forecast Plan of the original *Baylands Master Plan* proposed restoration of 4 acres and development of a picnic area and trails on the other remaining area.

The 1987 wetlands studies recommended elimination of the picnic area and restoration of more area.

Between 1992 and 2007, the city restored 11 acres at Harbor Point (See Map 4.2).

## Sea Scout Building

The Forecast Plan of the original *Baylands Master Plan* proposed demolition of the Sea Scout Building. But, since then it has been deemed eligible for the National Register of Historic Places and added to the city's Historic Resources Inventory. In 2007, the City Council approved a tentative lease with the Environmental Volunteers who plan to completely renovate the building and use it as their headquarters.

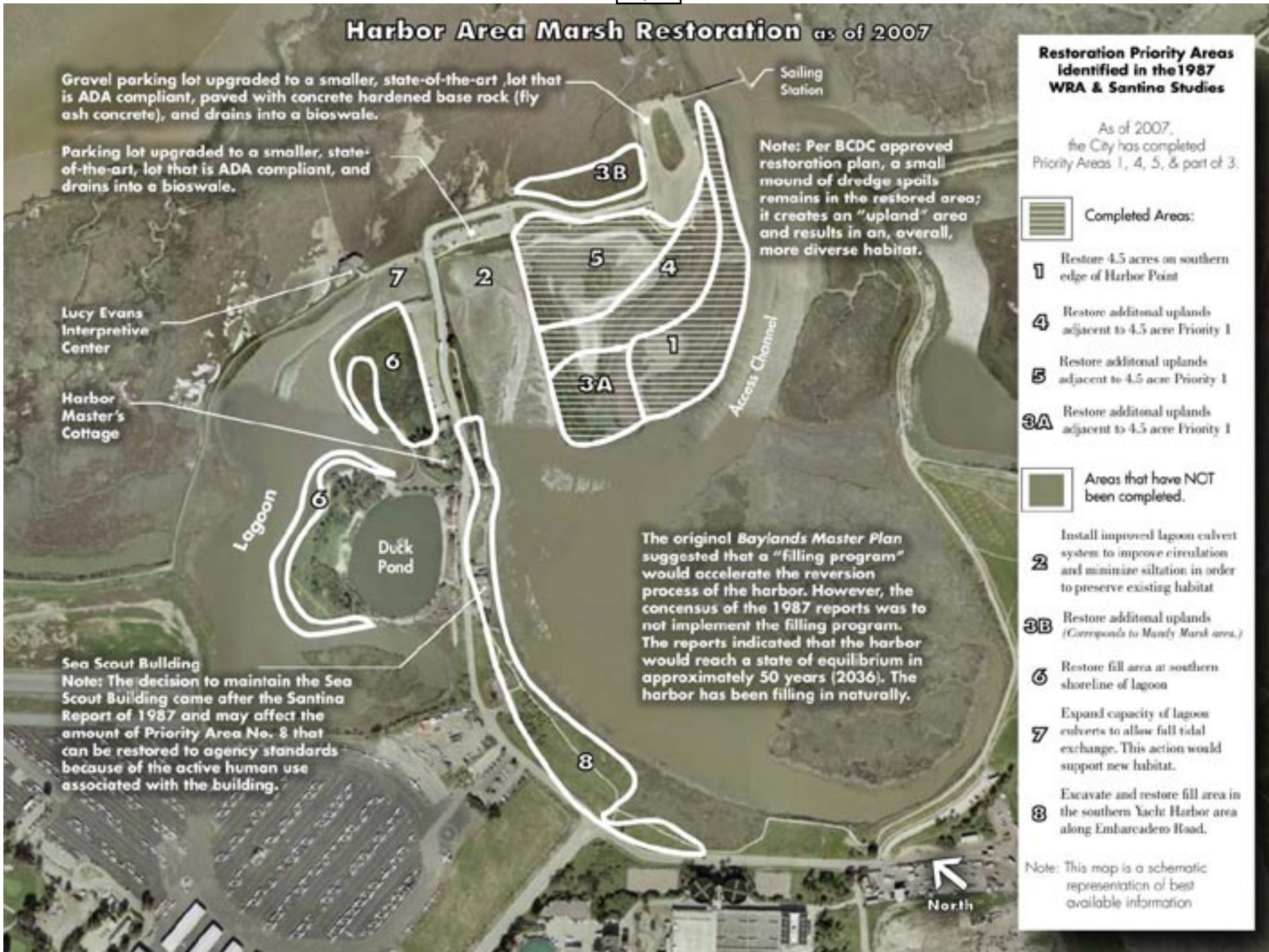


**BAYLANDS MASTER PLAN**  
 city of palo alto  
 ENVIRONMENTAL IMPACT PLANNING CORP. · EIR  
 STUDIO KAY · MASTER PLAN

Harbor Area —  
 Forecast Plan



# Harbor Area Marsh Restoration as of 2007



Harbor Area

## Harbor Area Policies (page 1 of 2)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Harbor area, activities in this area must also comply with policies stated in the “Overall”, “Flood Control”, and “Access & Circulation” chapters as well as policies stated for the surrounding areas.

### Closure of the Yacht Harbor

The Palo Alto Yacht Harbor was created in 1928 when the course of San Francisquito Creek was dredged out where it entered Mayfield Slough. Council action on June 2, 1980 restricted the harbor to one final dredging, and the harbor lease with the County was subsequently amended to terminate on June 30, 1986.

When the dredging of the Harbor was stopped, the yacht club and berths were taken out along with all the buildings except for:

- The harbor master’s cottage which was designated as a local Point of Historic Interest in

1969. It is on the City’s Historic Resources Inventory as a Category 2 resource which is defined as, A “Major Building of regional importance.” The Harbor Master’s Cottage is used and maintained as a city facility.

- The Sea Scout building which was added to the City’s Historic Resources Inventory in 2002. It is designated as a Category 1 which is defined as, An “Exceptional Building of pre-eminent national or state importance.” The current lease agreement between the City and the Environmental Volunteers (EV) requires that EV renovate and maintain the building.

### Aquatic Park Development

On June 9, 1986, Council directed staff to hire a consultant to study possible uses in the proposed aquatic park which resulted in the Sailing Station for hand-carried craft, completed in 1992.

### Harbor Area Renovations

1. Maintain the Harbor Master’s Cottage which is used as city facilities.
2. Proceed under the terms of the lease agreement between the City and the Environmental Volunteers Group regarding renovations and use of the Sea Scout building.

## Harbor Area Policies (page 2 of 2)

3. Screen parking lots with earth forms so that they are not so obvious from surrounding areas.
4. Complete the removal of all utility poles carrying overhead lines or used as parking bumpers. *(In 2005, most of the utility poles were removed. The ones around the water treatment plant and along the road to the landfill are yet to be removed.)*

### Marsh Restoration: The Harbor Itself

5. Allow natural processes to restore the marsh in the former harbor. It is silting up naturally and will eventually revert to a relatively nat-

ural salt marsh. As of 2007, the soil is deep enough to hold plants. The area will return to a relatively natural state. Analyses done in 1987 projected that it will take 50 years for the harbor to reach a state of equilibrium. It will take many years for plants to start to grow throughout the entire area and it is possible the center of the South Arm will never fill in without human intervention. *(The 1987 analysis reports as well as regulatory agencies recommended against the filling program.)*

### Marsh Restoration: Harbor Point

6. Maintain the 11 acres of restored marsh at Harbor Point.

### Marsh Restoration: Mundy Marsh

7. The Mundy Marsh area will be opened to tidal action and reclaimed as marshland. *(Corrolates to restoration Priority Area 3B on Map 4.3).*



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www.PaloAltoPhoto.com

The Snowy Egrets at the Bird Sanctuary are a particular favorite of photographers and is often happy to oblige them with a beautiful pose. Both the Great and Snowy Egret were hunted to near extinction around the turn of the 20th century. The National Audubon Society and federal laws were enacted for their protection. Very slowly the birds began to increase their range and numbers until today they are again a frequent and spectacular sight in the Baylands.

# 5.

# Duck Pond and Lagoon

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

In 1921, the City purchased this land. In the early 1930s the City adopted John Fletcher Byxbee's plan for the Baylands which included a large salt-water swimming pool facing a 47-acre salt water lagoon for canoes and small sail boats. The project took three years to complete and the 1,000,000 cubic yards of spoils were placed on adjacent sections of marsh where the City airport would later be developed. Maintaining the swimming pool proved to be difficult and it was soon closed. However, in 1948 with funding from the estate of Lucy Stern, part of the area was converted into a bird refuge (*Map 5.1*).

In 1959, when the boat-launching ramp and road were added to the yacht harbor, the lagoon (*Map 5.1*) was diked—cutting it off from the salt water and tidal action. Pipes and tide gates were installed to control the lagoon's level. And in 1969, a portion of the western end of the lagoon was filled to provide for airport expansion.

Also in the late 1960s the City engaged Helen Norman Proctor to design a landscape plan for the Duck Pond area. The design included a security fence for the bird refuge (*Map 5.1*).

By the 1970s, improvements were being implemented e.g.,

- A tide gate was installed at the southern end of the lagoon to improve tidal circulation as part

of the mitigation measures connected to the 1976 permit for continued use of the landfill issued by the Army Corps of Engineers.

- The Helen Norman Proctor landscaping plan was installed as part of the dredging permit requirements of the BCDC.
- A nature walk was constructed around the pond to provide greater access to both the lagoon and duck pond.

### 1978 • Baylands Master Plan

In 1976, the initial analysis prepared for the *Baylands Master Plan* categorized the Duck Pond and Lagoon as an area of established water use with a special character: bayshore landscape. It was ac-

knowledge that the “Duck Pond” was very popular; and, although relatively less natural than the salt marshes, provided valuable nesting and feeding habitat (especially for ducks) as well as opportuni-

ties for visitors to appreciate the surrounding mud flats and salt marsh. It recommended no changes.

Thus, on October 11, 1978, the Council adopted the *Baylands Master Plan* which did not include

any changes to this area except for the landscaping plan that was already underway—development of a green, park-like treatment between the duck pond, road, and harbor with some parking to remain for those unable to walk from remote lots. The landscaping was completed later that year.

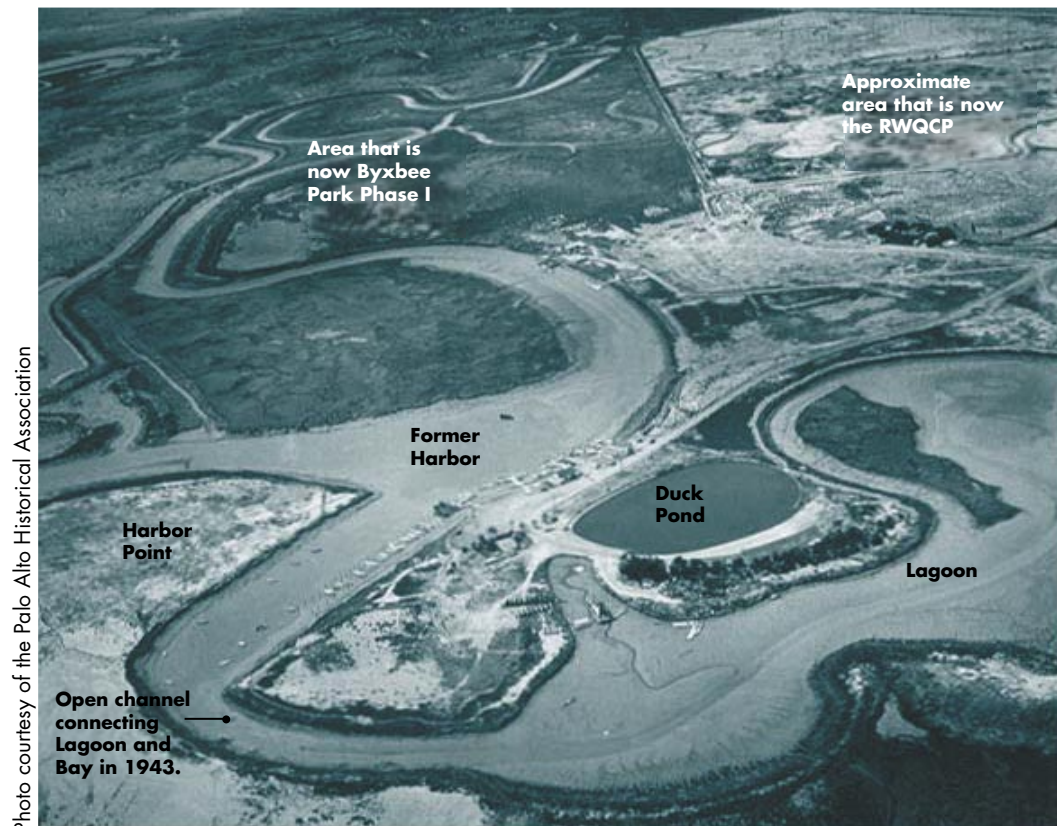


Photo courtesy of the Palo Alto Historical Association

1943 aerial photo of the Harbor Area shows an open connection between the Lagoon and the Bay. That channel was closed off and now a culvert is the only connection to the Bay (Map 5.1). In 1987, the Santina Report recommended enlarging the culvert between the Lagoon and the Bay to improve circulation in the Lagoon. Further study may be needed to assess the compatibility of this recommendation with the silting up of the harbor.

### 1988 • Baylands Master Plan Amended Summary Report

In 1988, the City published an update to the *Baylands Master Plan Summary* that documented the installation of the landscaping plan and irrigation system designed by Helen Norman Proctor around the Duck Pond and Yacht Harbor and Sea Scout buildings. There were no other changes in 1988.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

#### Improvements

The 1976 BCDC-required landscaping—designed by Helen Norman Proctor—is in a state of disrepair. The elaborate irrigation system was not sustainable and became non-functional. As a result only a small number of the original plants remain.





New picnic area—built in 1991—near the Harbor Master’s Cottage in the Palo Alto Baylands

In 1987, the *Yacht Harbor Restoration Conceptual Study & Plan* by Santina & Thompson, Inc. identified areas of potential restoration around the Duck Pond and Lagoon including improvement to the circulation in the Lagoon; however, these areas have not yet been restored and further study may be needed to determine if increasing the circulation in the lagoon would be compatible with the silting up of the harbor. (See *Harbor Chapter*)

Recent improvements include the following. In 1991, a new four-table picnic area with barbecues

and landscaping was added in the area northeast of the Harbor Master’s Cottage.

In 2000, the existing north and south parking lots were replaced with new “state-of-the-art” parking lots that drain into a bioswale (*Map 5.1*).

In approximately 2003, a 1,100-foot pipeline was constructed to provide reclaimed water to the duck pond. This allowed the City to stop using well water to irrigate the pond and saves about \$15,000 per year for well water fees.



Native plant nursery—built with Save The Bay volunteers in 2004 to propagate plants for marsh and riparian habitat restoration.

In 2004, the City, in partnership with Save the Bay, constructed a 1,600 square foot native plant shade house (nursery) near the Duck Pond to propagate plants for marsh and riparian habitat restoration.

Also, the palm trees have become a nesting stop for hundreds of herons. (*These may be the same herons that occupied a rookery in the Eucalyptus trees that were removed for the Santa Clara Valley Water District’s Matadero Creek Remediation Project.*)

Photo courtesy of staff



Chinese geese at the Duck Pond/Lagoon Area



## Duck Pond and Lagoon in Context

### Site Profile as of 2007

Zoning: PF(D)

Land Use Designation: Public Conservation Land

Dedicated Parkland: Yes



## Duck Pond & Lagoon Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Duck Pond and Lagoon, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Continuation of Use

1. The Duck Pond and Lagoon area will stay the same.

### Improvements

2. Repair, maintain, and modify as needed, the landscaping which was installed as a BCDC mitigation requirement for past dredging. -The landscaping plan provides a green, park-like treatment between the duck pond, road, and Harbor. *(Completed 1978—irrigation system was not sustained and much of this landscaping has died and been replaced by native plants and weeds.)*

3. Retain some parking for those unable to walk from remote lots. *(Completed 1978 and improved in 2000).*

Photo courtesy of staff



The Baylands Preserve is the largest tract of undisturbed marshland remaining in the San Francisco Bay. Fifteen miles of multi-use trails provide access to a unique mixture of tidal and fresh water habitats. Many consider this area to be one of the best bird watching areas on the west coast. The preserve has a substantial resident population of birds as well as being a major migratory stopover on the Pacific Flyway.

# 6.

## Natural Unit - Marsh Preserve

### Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

#### Before the Baylands Master Plan

The following is summarized information from *Exploring Our Baylands* by Diane R. Conradson, and *The Ohlone Way* by Malcolm Margolin.

For thousands of years, the Ohlone people lived in the area around the San Francisco Bay; however, their population never exceeded about 25,000, and their human presence was subordinate to that of other animal life. As a result, they left the natural system essentially untouched. This subordinate ended when the Europeans arrive with fire-

arms. Over the next two centuries, the roles of man and the other animals reversed, so that today the continuing existence of life in the Bay has become wholly dependent upon the decisions and actions of humans.

When the Europeans arrived, the Bay was ringed by 800 square miles of mudflats, marshes and shallow waters. These marshes and adjacent grasslands teemed with plant and animal life to an extent that astonished early visitors and is difficult to comprehend today. Recorded descriptions mention vast flocks of birds that were “uncountable”, and in numbers that “would hardly be credited by any-

one who had not seen them covering whole acres of ground, or rising in myriads with a clang that may be heard a considerable distance.” A French sea captain named la Perouse wrote, “There is not any country in the world which more abounds in fish and game of every description.”

By the mid 1770s, the Spanish had mapped the area from the delta to the Golden Gate—designating sites for both the Presidio and Mission Dolores. Russian traders soon followed seeking the luxurious fur of the sea otter and within a few years the sea otters had been nearly exterminated. Even the Hudson’s Bay Company had an out-

post at Yerba Buena. However, exploitation began in earnest in 1850s following the discovery of gold. Yerba Buena Cove was the first area to be filled but Suisun and San Pablo Bays were also drastically shallowed between as a result of hydraulic gold mining in the Sierra foothills. Between 1849 and 1914, over a billion cubic yards of mining debris flowed into the Bay via the the various water-courses and this deposition continues even today.

Two other industries to affect the Baylands were salt production and oyster farming. Fifty-five square miles of former marshland were eventually diked to create salt evaporation ponds and intertidal mud flats were fenced off for oyster farms from which oyster shells were harvested for their lime—used to make cement. The Bay and its wetlands were also used for disposing sewage and garbage, and for creating new “real estate”.

Diking, draining and filling continued until the open waters of the Bay had been reduced by about 55 square miles, or about 12%. The marshes were reduced even more—from over 300 square miles to fewer than 60—and had become a bare fragment of their pre-settlement condition.

Finally, in the 1960s, the political environment shifted and proposals to continue to filling thou-

### **Excerpts from *The Ohlone Way* by Malcolm Margolin**

Modern residents would hardly recognize the Bay Area as it was in the days of the Ohlones. Tall, sometimes shoulder-high stands of native bunch grasses (now almost entirely replaced by the shorter European annuals) covered the vast meadowlands and the tree-dotted savannahs. Marshes that spread out for thousands of acres fringed the shores of the Bay.

The intermingling of grasslands, savannahs, salt- and freshwater marshes, and forests created wild-life habitats of almost unimaginable richness and variety. The early explorers and adventurers, no matter how well-travelled in other parts of the globe, were invariably struck by the plentiful animal life here. “There is not any country in the world which more abounds in fish and game of every description,” noted the French sea captain, la Perouse. Flocks of geese, ducks, and seabirds were so enormous that when alarmed by a rifle

shot they were said to rise “in a dense cloud with a noise like that of a hurricane.”

Life in the ocean and in the unspoiled bays of San Francisco and Monterey was likewise plentiful beyond modern conception. There were mussels, clams, oysters, abalones, seabirds, and sea otters in profusion. Sea lions blackened the rocks at the entrance to San Francisco Bay. Long, wavering lines of pelicans threaded the air. Clouds of gulls, cormorants, and other shore birds rose, wheeled, and screeched at the approach of a human.

Nowadays, especially during the summer months, we consider most of the Bay Area to be a semi-arid country. But from the diaries of the early explorers the picture we get is of a moist, even swampy land. .... Water was virtually everywhere, especially where the land was flat. The explorers suffered far more from mosquitoes, spongy earth, and hard-to-ford rivers than they did from thirst-- even in-

the heat of summer. Places that are now dry were then described as having springs, brooks, ponds-- even fairly large lakes. In the days before channelizations, all the major rivers-- the Carmel, Salinas, Pajaro, Coyote Creek and Alameda Creek-- as well as many minor streams, spread out each winter and spring to form wide, marshy valleys.

Rivers and streams emptying into the Bay fanned out into estuaries which supported extensive tule marshes. The low, salty margins of the bay held vast pickleweed and cordgrass swamps. Cordgrass provided what many biologists now consider to be the richest wildlife habitat in all North America.

Today only Suisun Marsh and a few other smaller areas give a hint of the extraordinary bird and animal life that the fresh- and saltwater swamps of the Bay Area once supported. Channels crisscrossed the Bayshore swamps- channels so labyrinthian that the Russian explorer, Otto von Kotzebue, got



sands more acres of wetlands were halted to save the Bay's ecosystem from further destruction.

Within a few years laws and regulations at the local, state and national levels were in place to protect the Bay and tidelands. When in 1965 the City of Palo Alto set aside over 1,000 acres of wetlands for preservation and restoration, and established the Baylands Interpretive Center, the city was at

the forefront of this new relationship with the Bay and its tidelands.

The extensive marsh preserve in the Palo Alto Baylands is a valuable part of a system of Baylands sanctuaries, critical remnants of the tidelands that existed prior to European settlement. Even in its present degraded condition, the San Francisco Bay still contains one of the richest as-

semblages of plants and animals of any natural community in the world. And the future of this fragile system depends on the continuance and healthy condition of these remaining tidelands.

### **Excerpts from *The Ohlone Way* by Malcolm Margolin (continued)**

lost in them and longed for a good pilot to help him thread his way through. The channels were alive with beavers and river otters in fresh water, sea otters in salt water. And everywhere there were thousands and thousands of herons, curlew, sandpipers, dowitchers, and other shore birds.

The geese that wintered in the Bay Area were "uncountable", according to Father Juan Crespi. An English visitor claimed that their numbers "would hardly be credited by anyone who had not seen them covering whole acres of ground, or rising in myriads with a clang that may be heard a considerable distance."

When the Europeans first arrived they found, much to their amazement, that the animals of the Bay Area were relatively unafraid of people. Foxes were virtually underfoot. Mountain lions and bobcoats were prominent and visible. Sea otters, which now spend almost their entire lives in the water, were then readily captured on land. "Ani-

mals seem to have lost their fear and become familiar with man," noted Captain Beechey, and similar observations are repeated in the old journals of many early visitors. Otto von Kotzebue, an avid hunter, found that "geese, ducks, and nipes were so tame that we might have killed great numbers with our sticks." Von Kotzebue delighted in what he called the "superfluity of game." But one of his hunting expeditions nearly ended in disaster when one man made the mistake of hurling a javelin at a pelican. "The rest of the flock took this so ill, that they attacked the murderer and beat him severely with their wings before other hunters could come to his assistance."

Suddenly everything changed. Into this land of plenty, this land of "inexpressible fertility" as Captain la Perouse called it, arrived the European and the rifle. For a few years the hunting was easy-- so easy (in the words of Frederick Beechey) "as soon to lessen the desire of pursuit." But the advantages of the

gun were short-lived. Within a few generations some birds and animals had become totally exterminated, while others survived by greatly increasing the distance between themselves and people.

Today we are the heirs of that distance, and we take it entirely for granted that animals are naturally secretive and afraid of our presence. But for the Indians who lived here before us this was simply not the case. Animals and humans inhabited the very same world, and the distance between them was not very great.

The Ohlones lived in a world where people were few and animals were many, where the bow and arrow were the height of technology, --indeed, they lived in a world where the animal kingdom had not yet fallen under the domination of the human race and where (how difficult it is for us to fully grasp the implications of this!) people did not yet see themselves as the undisputed lords of all creation.



The Baylands is home to one of the most pr

Further information about the Natural Unit is best considered in terms of five sub-areas (*Map 6.4*) that are separate but related to each other by the ebb and flow of the tides, and by the movements and interdependence of the wildlife that live in and use these sites.

### Flood Basin (*Map 6.4*)

Historically, virtually all of the Baylands was salt marsh but in this basin area, freshwater from Matadero, Adobe, and Barron creeks meandered through the marshlands into the Mayfield and Charleston sloughs which surround the area. During heavy storms fresh water flooded the

area and since the 1930s, a levee system and tide gates have reduced salt water flow from the Bay. As a result, the Flood Basin is a combination of fresh water marsh in the southern portion and salt marsh in the northern portion.

In 1941, Palo Alto signed a purchase-option agreement with Leslie Salt Company for this 664-acre area. The agreement was made final in 1950, bringing it under City ownership. (*Annexed in 1948*).

In 1967, the Santa Clara Valley Water District (SCVWD) began implementing flood-control measures but paused in 1969 to await the final plans for a proposed County shoreline park. The plans

for the County park were dropped which was just as well because, by this time, the City was committed to maintaining this area in as natural state as possible—providing natural flood control and wildlife habitat—but not to the exclusion of the public. The Baylands trail system was expanded to include a 4.5 mile section around the flood basin and an area near the highway was used for the training and exercise of retrievers and other dogs.

In response to mitigation requirements of the 1976 permit to continue operations and expand the footprint of the landfill, the City engaged Water Resources Engineers to study restoring the marsh



As with all hares, black-tailed jackrabbits (*Lepus californicus*) rely on speed and camouflage (along with the characteristic “freeze” behavior) for their defense. When flushed from cover, a black tail can spring 20 feet at a time, they dig shallow depressions in the earth in which to lay during the hot afternoon hours and are mainly nocturnal, resting under bushes by day.

environment in the Flood Basin. The study, *Mathematical Model of the Palo Alto Flood Basin and Yacht Harbor* noted that the Flood Basin had been cut off from tidal circulation when the original tidegate was built in 1956.

Therefore, in 1977, the tidegate was modified to include a two-way gate that allows Bay water into the Basin under controlled conditions. In an ongoing effort to maintain the marsh environment, the tidegate was improved in 1993 and again in 2002. The most recent improvement included the addition of a hole through which fish can leave the Basin if conditions are not favorable.

Today, the Palo Alto Park Ranger controls the tidegate with three primary objectives:

1. Flood Control which requires adequate space for rain flow down Adobe, Matadero, and Barton Creeks.
2. Vector Management which requires the water level to stay below a specified height (to prevent ponding and breeding habitat for mosquitoes).
3. Habitat Management which requires a daily flush of tidal water to bring in necessary nutrients and aquatic life.

### Hooks Island (Map 6.4)

Fronting the Bay just south of the boat channel and separated from the flood control basin by Charleston Slough is Hooks Island. It is salt marsh, primarily a cord grass marsh with slough, and no high ground. In 1976, the *Baylands Master Plan* analysis of the site deemed that its remoteness in combination with the fact that no future access was proposed, made it perhaps the most valuable site for the continuance of undisturbed biological processes.



Harbor seals are sometimes seen in the water much smaller, in the 100 to 150 pound range. As with all true seals, the Harbor Seal's ear openings are just small holes in the skull.

### The Faber and Laumeister Tracts (Map 6.4)

What we now call the Faber Tract is part of the 230 acres of Palo Alto Baylands within East Palo Alto/San Mateo County. Peter Faber diked his tract and used it for cattle grazing and in 1944, when the City purchased it, the land was considered a potential site for industrial development. However, that changed in 1965 when the City dedicated it as parkland. By then the original dikes were broken and the land open to tidal action but it was re-diked to accommodate dredge spoils during the 1968 dredging of the harbor by the County. (*Although the County was operating the harbor, and dredging it, the City was responsible for providing a*

*place to put the dredge spoils*). The County planned to use this as a disposal site for two more dredgings but in 1971 the BCDC required the County to re-open the dikes and encourage reestablishment of the marsh. Volunteers helped replant marsh grass. (*For more about BCDC, see "Harbor Area"*).

In 1972, the City formally stated as its policy that the area was to remain in its natural state and not be used for future deposition of dredge spoils.

The Faber Tract has been planted with pickleweed, but ultimately became a fine cordgrass marsh. As cordgrass grows where there is more inundation, its success in this area indicates that the elevation in this area is lower than originally thought.

The Laumeister Tract is partially within San Mateo County. Palo Alto dedicated the area as park in 1965 and in the 1970s, San Mateo County was leaning towards designating it as a "resource management zone" to conform with their Open Space and Conservation Element.

### Agreement with Fish and Game to patrol the Faber Laumeister Tract

Although the Palo Alto rangers are responsible for trail maintenance, weed control, and resource management, they cannot issue citations for law violations outside of Palo Alto. For this and other reasons, the City has a cooperative agreement with



The Red-tailed Hawk is the most common hawk in North America. It is frequently seen sitting on trees or utility poles at the Baylands as it watches for rodents in the grass.

the U. S. Fish & Wildlife Service to “patrol” the Faber-Laumeister tract as part of the Don Edwards Wildlife Refuge complex. There is no cost to the City for this service.

In 1976, when the *Baylands Master Plan* team did the site analysis they observed that marshland vegetation had established itself over about 75% of the Faber tract under a program established by Dr. Tom Harvey, and expected that the process would continue. They determined that although it was in a younger stage of development and had received fill material (dredge spoils), this area was similar to the marsh preserve. They even thought it could provide an opportunity to research the results of

planting marsh vegetation on dredged material and the correlation of marsh development and tidal elevations. The Laumeister tract was deemed similar to the Faber tract and both were acknowledged as providing food for wildlife in the Bay (*Map 6.4*).

#### Sand Point Area (*Map 6.4*)

The *Baylands Master Plan* refers to all the marsh on both sides of, and including, the Lucy Evans Interpretive Center as Sand Point. In 1976, the analysis done for the *Baylands Master Plan* described Sand Point as perhaps the best known and most often visited section of the Baylands. The Lucy Evans Nature Interpretive Center and

boardwalks allow people to learn about and come in contact with a large, natural, undiked, and undisturbed salt marsh—a rare opportunity in San Francisco Bay. A variety of rodents find their homes in the marsh and crustaceans, mollusks, and birds also use the marsh. The area is a habitat for two endangered species, the salt marsh harvest mouse and the California clapper rail. Also, the salt marsh song sparrow and yellow throat (warbler), depend on this habitat. This marsh area, extending out into the Bay from the marsh preserve, also supports endangered species, native plants, and a great diversity of bird life, crustaceans, mollusks, and other invertebrates. (*Map 6.4*)



Snowy Egrets (*Egretta thula*) are can be seen at the Baylands all year long. In 2003, egrets nested for the first time ever in the palm tree grove near the Baylands Duck Pond. Their nesting season begins late March or April, when the female lays three to five eggs in a nest made of sticks. Both parents share incubation and nest-repair duties until the nestlings hatch, typically after 22 to 23 days, and both help feed the nearly helpless newborns.

### Inner Harbor Marsh (Map 6.4)

In 1976, the *Baylands Master Plan* analysis acknowledged that the marsh area, adjacent to the southern arm of the yacht harbor, had been reduced in size by previous dredging. However, the remaining portions were relatively undisturbed and expected to expand as they silted up. It was deemed to be a source of support for a variety of wildlife forms including endangered species.

### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* determined that four of the five Natural Unit sub areas were similar areas of natural tidal marsh with indigenous marsh landscape that were primarily undisturbed and had a high visual quality:

1. Hooks Island (*virtually undisturbed*)
2. Sand Point (*virtually undisturbed*)
3. Faber and Laumeister Tracts (*recovering from diking and dredge spoils*)

4. Inner Harbor Marsh (*even though portions had been affected by dredging*)

It warned that they were fragile and quite susceptible to modification and recommended that the area be left unchanged.

The fifth sub-area—the Flood Basin—was also categorized as an area of natural tidal marsh but because of its history and uses, the landscape was not considered to be indigenous but rather to be of a special character: bayshore landscape. However, the area was still deemed a valuable wildlife habitat, with excellent opportunities for nature obser-

Photo courtesy of staff



The eastern mud snail, *Ilyanassa obsoleta*, is the most abundant intertidal snail on San Francisco Bay mudflats and in the lower reaches of marsh channels, where it is often found in large herds. This invasive snail, which came to the S.F. Bay from the East Coast of U.S. in the late 1800s, dominates mudflats once occupied by the native horn snail *Cerithidea californica*. It feeds on diatoms and algal detritus that it gleans from the surface layers of the mud, captures and consumes minute worms that live in the mud, and scavenges on dead fish, crabs and other animal remains. It is fed on in turn by ducks and the larger shorebirds.

vation, education, hiking, and dog training, as well as carrying out its principal function as a basin for the storage of flood waters. Therefore, no changes were recommended except the completion of the SCVWD flood protection project that was under review—a flood wall and levees at the southern end of the flood basin.

Thus, on October 11, 1978, the Council adopted the *Baylands Master Plan* which did not include any changes to these natural areas except that on termination of the yacht harbor dredging, the inner harbor marsh area will expand as it silts in.

### 1988 • Baylands Master Plan Amended Summary Report

There were no changes to the policies in 1988.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Overview

The site analysis for the original *Baylands Master Plan* identified a natural unit that comprised the Faber and Laumeister Tracts, the Sand Point area, Hooks Island, the Inner Harbor Marsh, and the Flood Basin. The Plan recommended that the City continue its commitment to maintain these areas in as natural state as possible—providing natural flood control and wildlife habitat. And this has been done—public access to these areas is limited. In fact, activities like dog training that used to occur in the Flood Basin have been discontinued.

## Restoration Projects Completed (Map 6.2)

Since 1988, three areas have been restored and may be considered to be additions of the natural unit (Map 6.2):

### 1. Harbor Point

11 acres at Harbor Point were restored. The oversight agencies included the Army Corps of Engineers, State Department of Fish & Game, the State Lands Commission and the Bay Conservation and Development Commission. The 11-acre restoration was deemed to be completed and to meet agency standards by 1997. (See “Harbor” chapter.)

### 2. The Harbor Itself

The harbor was closed in 1986. The *Baylands Master Plan* had included a possible filling program, however the more detailed analysis done in 1987 recommended allowing the harbor to fill in naturally. That same analysis projected that in 50 years the harbor would reach a state of equilibrium. As of 2007, the harbor is silting in naturally and the soil is able to hold plants. (See “Harbor” chapter.)

### 3. The Emily Renzel Wetlands

This project created a freshwater pond and restored an area of salt-water marsh, both on the Former ITT Property. The project met standards established by oversight agencies including (but not limited to) the following: the Army Corps of Engineers, the US Department of Commerce Oceanographic and Atmospheric Administration, and the Regional Water Quality Control Board. It was deemed to be completed to agency standards in 1992. (See “Former ITT Property” chapter.)

## Future Potential Restoration Projects (Map 6.3)

Four more areas may be considered to be potential additions to the “Natural Unit” in the future (Map 6.3):

### 1. Harbor/Duck Pond/Lagoon Priority Areas from the 1987 Santina Study

In preparation for the Harbor Point Restoration project, the City hired consultants to prepare studies regarding how to proceed (For more information about these reports, see the “Harbor” chapter.) The studies identified 28 acres for restoration and presented them as a prioritized list of 8 sites (See Map 4.3). Priority Areas 1, 3A, 4, and 5 comprise the 11-acre completed restoration project at Harbor Point. Areas 2, 3B, 6, 7, and 8 remain as 17 acres of potential restoration sites.

### 2. The Mayfield Slough Remnant Marsh

This 11-acre area is officially a part of the state-recognized landfill but the *Baylands Master Plan* identified it as a potential restoration site and the City adopted a policy to not fill it and to reserve it for possible restoration in the future (See “Landfill” chapter and Maps 2.1, 2.4, & 6.3).

### 3. The Antenna Field

The original Baylands Master Plan envisioned the entire Former ITT property as restored marsh. However, the existing radio station and antenna field must remain until an alternative site is created. In 1993 the City and KFS entered into an agreement wherein the City will buy the easement from KFS once a new site has been constructed and approved by the FCC. The radio station buildings on the site have been deemed eligible for the National Register of Historic Places however, a portion of the site could be restored to marsh. (See “Former ITT Property” chapter.)

### 4. A portion of the LATP Site

The 1984 agreement with Los Altos identified a portion of the site as open space. The 1997/98 analysis for CIP Project 9701 identified a portion of the site as a wetlands restoration site (Map 12.1). Further, more up-to-date analysis is in progress.





The American White Pelican does not dive for fish as the Brown Pelican does. Instead, it dips its head underwater to scoop up fish. Several pelicans may fish cooperatively, moving into a circle to concentrate fish, and then dipping their heads under simultaneously to catch fish. These spectacular birds, with their amazing 9' wingspan, can be seen in the Palo Alto Baylands from mid-July through mid-December.

## Improvements

The flood project and trail improvements referenced in the policies of this chapter have been completed. (See *"Flood Protection"* and *"Access and Circulation"* chapters).

## Management Plan: Non-Native Plants

The need for a "management plan" has become even more critical as non-native plants have become major threats to the marsh environment and natural habitat. They must be actively controlled in order to preserve fragile habitat for wildlife and native plants. Following is some specific information about the invasive non-native plant problem.

- In 1997, non-native *Lepidium Latifolium* was noted in areas along the edge of the marshes and along the banks of San Francisquito Creek.
- In 1997, non-native *Spartina Alterniflora* became a threat to displace native cordgrass in the Baylands and, therefore, the nesting habitat for the Clapper Rail and other wildlife. A grant-funded program of annual spraying of low-toxicity herbicide was begun to help control this problem.
- In 2004, non-native Phragmites were discovered in the tide basin. This tall reed displaces

native vegetation and can eliminate important habitat and nesting areas for Salt Marsh Harvest Mice. Another grant-funded program of annual spraying of low-toxicity herbicide was begun to control this problem.

- In 2004, non-native *Dittricia Graveolens* was discovered at the Sailing Station parking lot and along roadways in the Baylands.

As of February 2007, the Open Space and Parks Division is currently working with ESA consultants to develop a comprehensive conservation plan for the natural unit of the Baylands. Because this plan



The burrowing owl prefers to nest in areas where the vegetation will not hide potential predators.

encompasses the entire Baylands, it is covered in the “Overall Environmental Quality” chapter.

Also, volunteers try to help with the non-native plant problem. Examples are:

- In 2004, the City partnered with Save the Bay to build a 1,600 square foot native plant shade house to propagate plants for habitat restoration and began a program for restoring six acres of marsh habitat infested with weeds.
- In 2006 and again in 2007, the Friends of Foot-hill Park, removed some non-native invasive *Dittrichia graveolens*.

### Decline in the Burrowing Owl Population

In 2005, it was observed that the burrowing owl population, of which there used to be eight to ten breeding pairs (*Map 1.3*), had declined to none. In fact, this is a region wide trend.

Staff consulted with other agencies and private experts to identify ways to try to reverse the trend.

As a result, staff:

- Stepped up enforcement of the leash laws and trail rules to prevent dogs, hikers, and bikers from entering the nesting areas

- Stepped up efforts to keep the vegetation cut low to provide adequate line of sight for predators.
- Created a nesting area with artificial nest boxes and low-growing native plants

As of February, 2008, there has been no indication that the owls have returned.

Programs regarding habitat for the burrowing owl and other animals that may be established in the future *Baylands Comprehensive Conservation Plan* will provide implementation measures for “Overall Environmental Quality” policy nos. 7 and 8.

Photo courtesy of staff



Cordgrass is native to the area. The bird is a Clapper Rail, which rarely flies and prefers to swim or wade when crossing tidal channels. The Fish and Wildlife Service conduct an annual airboat survey of the Palo Alto Baylands to determine the Rail population.

### Conversion of Salt Marsh to Brackish Marsh near the Unnamed Slough

As mentioned in the RWQCP element, in 1964, the water treatment plant built a new out fall—that flows into the Unnamed Slough and out to the Bay. This stopped the discharges near the yacht harbor. Today, programs like the fresh water restoration project in the Emily Renzel Wetlands and the Water Reclamation Program re-use approximately 2 million gallons per day of the plant’s discharge. About 26 million gallons per day of treated (fresh) water is discharged through the Un-

named Slough. This has contributed to conversion of salt water marsh to brackish marsh (*a mixture of fresh and salt water*), in areas adjacent to the Unnamed Slough (*Maps 1.2, 6.4, & 10.4*).

While brackish marsh is habitat to many animals it is not the habitat of the Clapper Rail or the Salt Marsh Harvest Mouse which are endangered species found in the area. Therefore, the conversion is being monitored by the City and periodically reported to state and federal agencies to ensure that the conversion will not result in a significant loss of habitat for these species. The 1991 moni-

toring study reported 4.6 acres of brackish marsh, the 1995 study reported 6.89 acres, and the 2002 study reported 10.6 acres. The most recent monitoring study, *Salt Marsh Conversion Assessment and Monitoring Study for the City of Palo Alto*, was done by WRA Environmental Consultants in November of 2007 and reported 13.63 acres of brackish marsh.

Several other San Francisco Bay marsh lands are experiencing similar conversions. For more information, refer to the monitoring reports available in the City of Palo Alto Public Works Department.



The Lucy Evans Baylands Interpretive Center was the first of its kind in the Bay Area and there is always lots to see at inside the the center. Shown are children participating in the educational displays and on-going classes -offered at the Center.

### Lucy Evans Nature Interpretive Center

The Baylands Nature Interpretive Center was built in 1967 on pilings at the edge of the salt marsh. A plank walk leads a quarter-mile across the marsh to open water and a panoramic view of San Francisco Bay. In 1978, it was rededicated as the Lucy Evans Nature Interpretive Center for “Baylands Lucy” who was a member of the Audubon Society

and explored the Baylands extensively and fought for their preservation.

The Center offers various programs and activities such as nature walks, animal and fossil workshops for children, an ecology laboratory, and displays of tidelands flora and fauna. It continues to be a popular destination in the Baylands and a wonderful asset to the community.

Improvements over the last 20 years include:

- Existing parking lot was replaced with a new “state-of-the-art” lot that drains into a bioswale.
- New planting strips installed at the parking lot.
- The boardwalk was upgraded.
- Double-pane windows and insulation were installed to reduce noise—funded by Pat Roy of Roy Aero Enterprises, one of two Fixed Base Operators at the Palo Alto Airport.



There's also lots to see outside at the Lucy Evans Baylands Interpretive Center. Shown are both veteran and beginner birdwatchers.

## The San Francisco Bay

Photos by Doug Peck courtesy of Community Services



Above, the City's Naturalist and friends examine the jaw of a Great White Shark. It is not likely that there were ever Great Whites this far south into the Bay; however, there are Leopard Sharks in this area even today. There are also Staghorn Sculpin, Starry Flounder, and Striped Bass to name a few, and it is not unusual to see folks fishing for Striped Bass in the Palo Alto Baylands (Note: a fishing permit is required for persons over the age of 12.)



Photos courtesy of staff

In addition to fish, the Baylands supports a great diversity of crustaceans, mollusks, and other invertebrates—particularly in the Sand Point area.

Photos courtesy of ©Maureen Gunn



Photos courtesy of staff



Top: Protecting the Bay doesn't mean not enjoying the Bay. Shown are windsurfers...waiting for wind.; Bottom: Save The Bay "Canoes on Sloughs" outing

## Migratory Birds and The Pacific Flyway

The following is excerpted from Exploring Our Baylands by Diane R. Conradson, Ph.D.

One of the most exciting and aesthetic experiences one can have in the Baylands is seeing thousands of birds standing, swimming, or flying only a few yards away.

The Pacific Flyway, the migratory skyroute followed by millions of birds, begins in the Arctic and gradually collects more and more ducks, geese and other water birds and shore birds from Alaska, western Canada and the United States as it courses south along the Pacific coast. A small number of birds following this "highway in the sky" migrate east of the Sierra Nevada, but most follow the Pacific coast.

San Francisco Bay is a key point on the Pacific Flyway. About 36 species live in the area as permanent residents. About 50 species spend the winter here and about 50 more species stop briefly to rest and feed as part of their migration before continuing to southern California, Mexico, Central America, and even southern South America. A few species, including swallows travel in the opposite direction; they are summer visitors that come north from South America.

There are essentially three habitats for Baylands birds: marshes, mud flats, and open water. The low, dense salt marsh vegetation shelters the bay's birds from storms and predators. The mud flats, washed by tidal waters, are filled with worms, crustaceans, mollusks, fishes

and little rodents, that provide food in an environment that discourages human intruders. Marsh cordgrass and pickleweed shelter many birds that high tides may flush briefly into the open water. A few species take advantage of manmade salt ponds and levees.

The primary restriction on the number of water and shorebirds appears to be the limited amount of mud flats and marshes along the Pacific coast rather than a lack of living space or food in their spring or summer nesting areas. Like most natural populations, birds live at their biological maximum. Each bird must have its physical place in the world or die. As habitats are destroyed for other uses, their inhabitants cannot go elsewhere because "elsewhere" is already supporting its maximum population. Birds, like most animals are largely creatures of instinct and would not go elsewhere anyway. The Pacific Flyway provides the water birds' pattern of life, the marshes and mud flats of the bay provide their living space. Some birds react to a kind of "mass psychology. they flock and migrate, court, nest and raise their young in response to the actions of the entire group. If the group is too small, the remaining members cease to perform the functions necessary to continue their existence.

One pair or ten pairs or one hundred pairs of creatures do not necessarily mean that the species will continue to survive.

The following is excerpted from the United Nations News Service website

Numbers of migratory birds—considered to be some of the best gauges of the state of global biodiversity—are plunging in the face of a changing environment, according to the United Nations Environment Programme (UNEP).

The decline is being recorded for many species along all of the main migration corridors, which birds utilize on their journeys, spanning thousands of miles, between their breeding and wintering grounds. Their dependence on healthy habitats and ecosystems makes them among the key indicators as to whether the international community is truly addressing the decline and erosion of the planet's nature-based assets. The overall decline is a reflection of the larger environmental problem tied to the global loss of habitats and biodiversity. Migratory birds are dependent on stop-over sites to rest and refuel as they make their long voyages, but these locations are threatened or disappear as a result of agricultural, urban, infrastructural and industrial development.



Photos courtesy of staff



Cliff Swallows: These migratory birds arrive around mid-March Center. One or two broods are raised before the birds depart, typically around mid-August, on their long migration south.

# South Bay Salt Pond Restoration Project

## Project Description

Restoration of 15,100 acres of Cargill's former salt ponds in South San Francisco Bay.

## Background

The loss of approximately 85 to 90 percent of the tidal marsh in the San Francisco Bay led to dramatic losses of fish and wildlife in tidal marsh habitat, decreased water quality and increased turbidity in the Bay.

In 2000, Cargill proposed to consolidate its operations and sell lands and salt production rights on 61 percent of its South Bay operation area. Negotiations headed by Senator Dianne Feinstein led to an agreement for public acquisition of these ponds. The agreement is between: the California Resources Agency, Wildlife Conservation Board, California Department of Fish and Game (DFG), California State Coastal Conservancy, US Fish and Wildlife Service (USFWS), Cargill, and Senator Dianne Feinstein. The State of California approved purchase of the property on February 11, 2003. The USFWS and DFG are the landowners and land managers, and with Cargill's technical assistance, are currently conducting the initial stewardship of the salt ponds. Supporters and signatories of the agreement include the San Francisco Bay Joint Venture, Save The Bay, National Audubon Society, Citizens Committee to Complete the Refuge, and many other agencies, organizations, and individuals.

## Project Goals

### 1. Restore and enhance a mix of wetland

**habitats:** The Project is restoring and enhancing a mosaic of wetlands, creating a vibrant ecosystem. Restored tidal marshes will provide critical habitat for the endangered California clapper rail and the salt marsh harvest mouse. Large marsh areas with extensive channel systems will also provide habitat for fish and other aquatic life and haul out areas for harbor seals. In addition, the restored tidal marshes will help filter out and eliminate pollutants. Many of the ponds will remain as managed ponds and be enhanced to maximize their use as feeding and resting habitat for migratory shorebirds and waterfowl traveling on the Pacific Flyway.

### 2. Provide for flood management:

Flood management is integrated with restoration planning to ensure flood protection for local communities. Where feasible, flood capacities of local creeks, flood control channels, and rivers will be increased by widening the mouths of the waterways and reestablishing connections to historical flood plains. As ponds are opened to the tide, levees between the newly created tidal marsh and local communities are built or enhanced to provide flood protection.

### 3. Provide wildlife-oriented public access and recreation opportunities:

Public access, wildlife-oriented recreation, and education opportunities are being planned concurrently with restoration and flood management. Public uses could include creation of Bay Trail segments for biking and hiking, and provision of hunting, and fishing opportunities, bird watching, environmental education, and other recreational opportunities.

## Relationship to Palo Alto

Although the Palo Alto Baylands are not a part of the area being restored by this effort, (It includes only lands acquired from Cargill in 2003—Map 6.1 ), the project is of great interest to Palo Alto. First, the Palo Alto Baylands are adjacent to the project and the design will need to be integrated with the Palo Alto Baylands. Second, as the restoration project breaches levees to open previously diked ponds to tidal action, there is potential to affect existing flood protection in the Bay. To address this, the US Army Corps of Engineers (ACOE) is conducting a sister project, the Shoreline Study. The Shoreline Study includes all of Santa Clara County Baylands. The two projects are closely entwined and are, sometimes, even confused with each other. City Staff are participating in the design process for both projects. (For Shoreline Study, see "Flood Protection" chapter.)



Map 6.2

## Areas Restored Since the Original Baylands Master Plan (as of 2007)

- 1 Harbor Point
- 2 The Harbor Itself
- 3 Emily Renzel Wetlands



Map 6.3

### Areas Identified for Future Potential Restoration (as of 2007)

- A** Harbor/Duck Pond/Lagoon Priority Areas from the 1987 Santina Study
- B** Mayfield Slough Remnant Marsh
- C** A Portion of the LAMP Site
- D** The Antenna Field

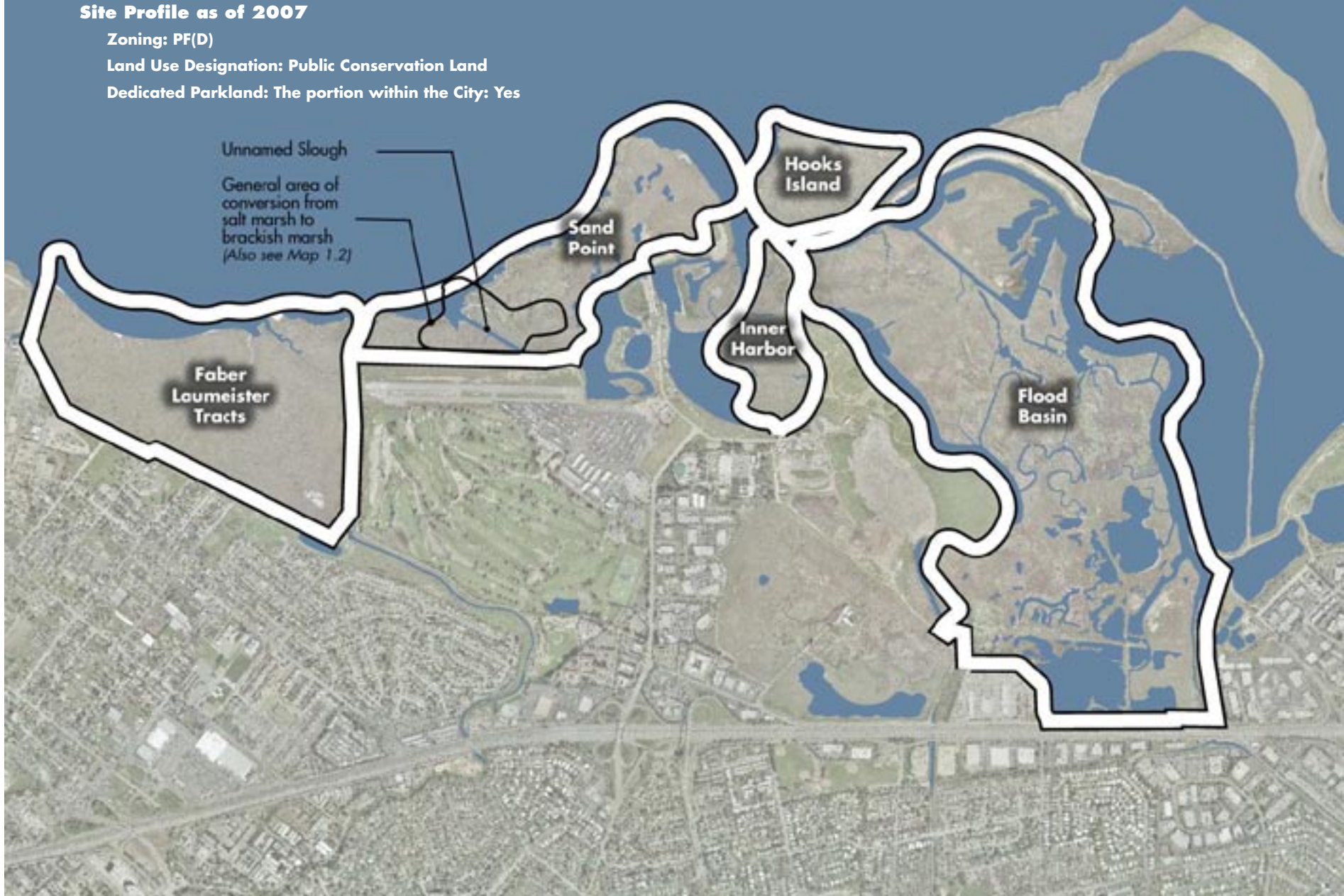


Natural Unit-Marsh Preserve

### Natural Unit in Context

**Site Profile as of 2007**

Zoning: PF(D)  
Land Use Designation: Public Conservation Land  
Dedicated Parkland: The portion within the City: Yes



## Natural Unit Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Natural Unit-Marsh Area, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Overview

In 1976, the Natural Unit comprised the Faber and Laumeister Tracts, the Sand Point area, Hooks Island, the Inner Harbor Marsh, and the Flood Basin. Since then three areas have been restored and may be considered to be part of the natural unit. They are Harbor Point, the harbor itself, and the Emily Renzel Wetlands. Because of the high biological value of these areas, only a few changes are proposed. They include:

### Improvements

1. Maintain the trails described in the Access and Circulation section.

### Management Plan

2. Complete the management plan for these areas as well as the entire Baylands that is currently underway. *(The Open Space and Parks Division is currently working with ESA consultants to develop a "Comprehensive Conservation Plan" for the natural unit of the Baylands.)*
3. Prohibit access to Hooks Island.

### Lucy Evans Nature Interpretive Center

4. Lucy Evans Nature Interpretive Center to continue present operations.

Photo by Tony Avelar /courtesy of the Palo Alto Daily News



Each year, the Athletic Center is booked solid by twelve user groups playing three different sports, seven days a week, from 9:00 am until 10:00 pm. Above is photo of an American Legio



# 7.

# Athletic Center/PASCO Site

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

In 1946, local sports enthusiasts founded the Palo Alto Live Oaks, or PALO Club. Over the years, the club boosted many improvements to local facilities including the construction of the Baylands Athletic Center in the 1970s. The local history book, *Palo Alto: A Centennial History*, by Ward Winslow and the Palo Alto Historical Association, goes on to say, “The club also obtained the original franchise in 1950 for local Little League baseball which has blossomed into today’s profusion of youth leagues for both boys and girls, including Willie McCovey and Babe Ruth baseball, Bobby Sox softball, Pop Warner football and AYSO and CYSA soccer.”

When built, in the 1970s, the center comprised a lighted softball field, baseball field, and a covered grandstand with seating for 500 people. The facility was also designed for multi-purpose use so that it could be used for concerts.

### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* categorized the center as an established land-oriented use and an existing urban park. There were no plans for new construction; therefore, no changes were recommended except improvements to the lighting to reduce glare and light spill beyond the playing fields.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* which included the continuance of current activities but also mandated reduction of glare from night lighting.

### 1988 • Baylands Master Plan Amended Summary Report

There were no changes to the policies as of 1988.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

## Continuation of Use

The Center continues to be a wonderful asset to the community. Each year, from March through October, the facility is booked solid by twelve user groups playing three different sports, seven days a week, from 9:00 am until 10:00 pm—approximately 2,500 hours of activity per year. The Athletic Center parking lot is also a trail head for the San Francisco Bay Trail.

## Improvements

By 1988, the decomposition and settling of the landfill underlayers had resulted in excessive unevenness of the ground within the Center and twelve-hundred tons of topsoil were added to level the playing field surfaces. In 1989, a new concession stand was constructed.

In 2005, the lighting improvements mandated by the *Baylands Master Plan* were implemented. The new field light casements are specifically designed and shielded to reduce spillage of light and glare beyond the immediate site. The new security lighting in the parking lot has flood lights controlled with a photocell and programmable time clock. Both the field light fixtures and the security lights represent significant improvements in terms of energy efficiency, efficacy of field illumination, and reduction in glare and off site spill factors. Also in 2005 the irrigation system was replaced.



Photo by Barry Walton copyright 2008, www.barrywaltonphoto.com

This Athletic Center is a popular place to start and finish organized runs. Above photo shows participants in the “Run for a Healthy World” sponsored by Habitat for Humanity and Runners World. It also shows the ponding in the parking lot that staff often refer to as the “Second Duck Pond”. The parking lot is slated for repair in FY08/09.

As of February 2008, the City Capital Improvement Budget includes plans to fix the Athletic Field parking lot which has subsided significantly

and often fills with water (*it is sometimes referred to as the “Other Duck Pond”*), as well as to improve the fencing, dugouts, and bleachers.

Photo by Norbert van der Groeben; courtesy of The Palo Alto Weekly



Another organized race that starts and finishes at the Baylands Athletic Center is the Palo Alto Weekly's annual "Moonlight Run". Mark your calendars! The above photo is from the 2004 "Moonlight Run" and demonstrates the difference between the glare and light spillage of the old and new lights.

Photo courtesy of Community Services staff



The new light field and security lights represent significant improvements in terms of energy efficiency, efficacy of field illumination, and reduction in glare and off site spill factors.

Athletic Center



The current PASCO/Waste Management site comprises both non-parkland and parkland. The current PASCO/Waste Management lease ends in June of 2009. The future use of the site is undetermined.

## PASCO Yard

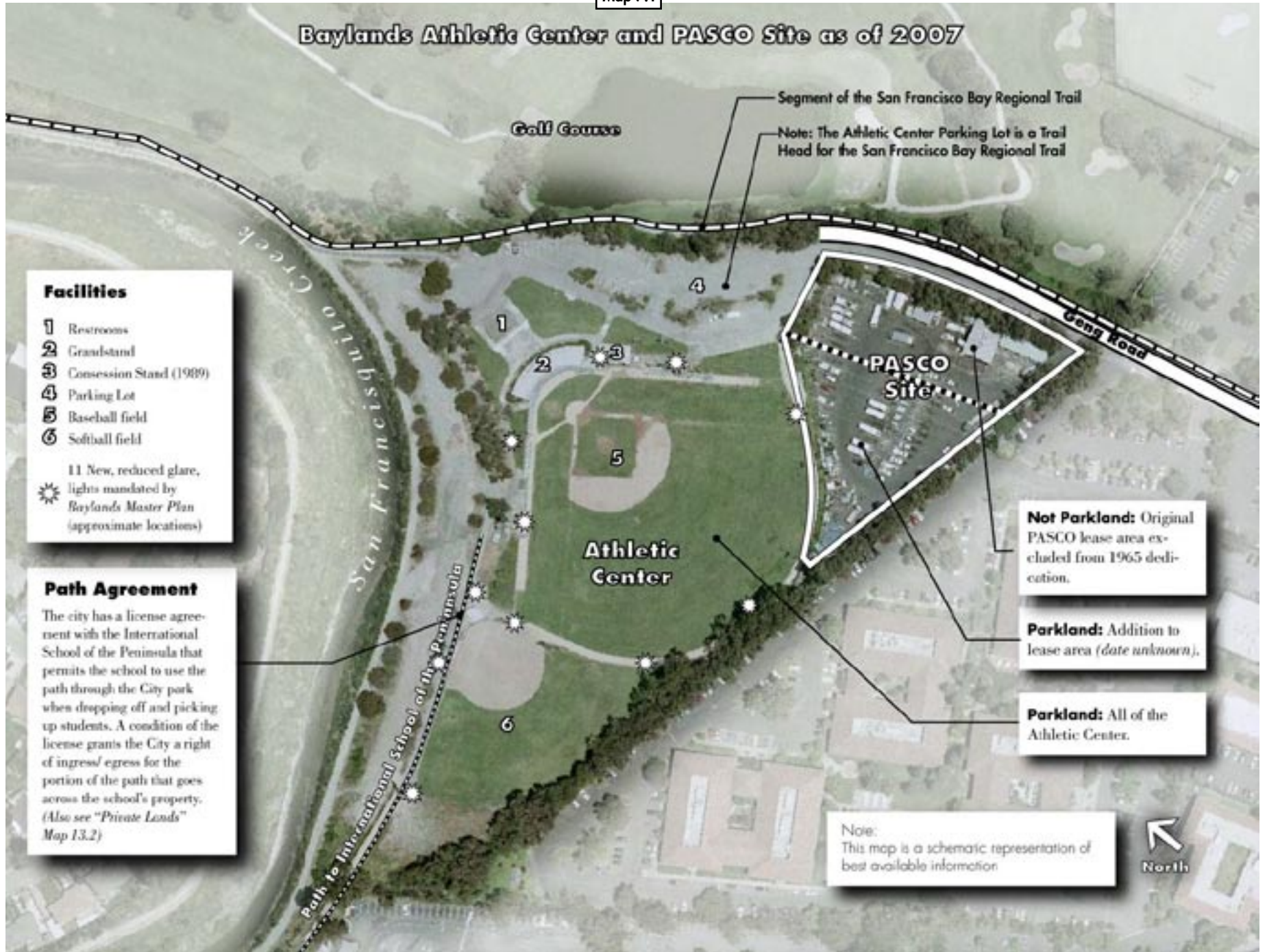
By 1958, the City had a contract with the Palo Alto Sanitation Company (PASCO) for garbage collection. In addition, the City leased about an acre of land on Geng Road to PASCO for their service yard. In 1965, when the City dedicated its parks, the 1-acre PASCO site was excluded from the dedication. Then, in 1983 PASCO expanded

their lease area to approximately 2 acres. The additional area was dedicated parkland and never went to a public vote as required so a portion of the current PASCO site is partially on parkland (*See Map 7.1*). The Council approval that allowed non-park use of this area required that the land revert to parkland upon the sooner of termination

of the PASCO contract or closure of the landfill. In 1999, PASCO was sold to Waste Management and the Council approved a new agreement for PASCO/Waste Management for a term of up to ten years—it will end on June 30, 2009.

Map 7.1

# Baylands Athletic Center and PASCO Site as of 2007



### Facilities

- 1 Restrooms
- 2 Grandstand
- 3 Concession Stand (1989)
- 4 Parking Lot
- 5 Baseball field
- 6 Softball field

11 New, reduced glare, lights mandated by Baylands Master Plan (approximate locations)

### Path Agreement

The city has a license agreement with the International School of the Peninsula that permits the school to use the path through the City park when dropping off and picking up students. A condition of the license grants the City a right of ingress/ egress for the portion of the path that goes across the school's property. (Also see "Private Lands" Map 13.2)

Segment of the San Francisco Bay Regional Trail

Note: The Athletic Center Parking Lot is a Trail Head for the San Francisco Bay Regional Trail

**Not Parkland:** Original PASCO lease area excluded from 1965 dedication.

**Parkland:** Addition to lease area (date unknown).

**Parkland:** All of the Athletic Center.

Note: This map is a schematic representation of best available information



Athletic Center

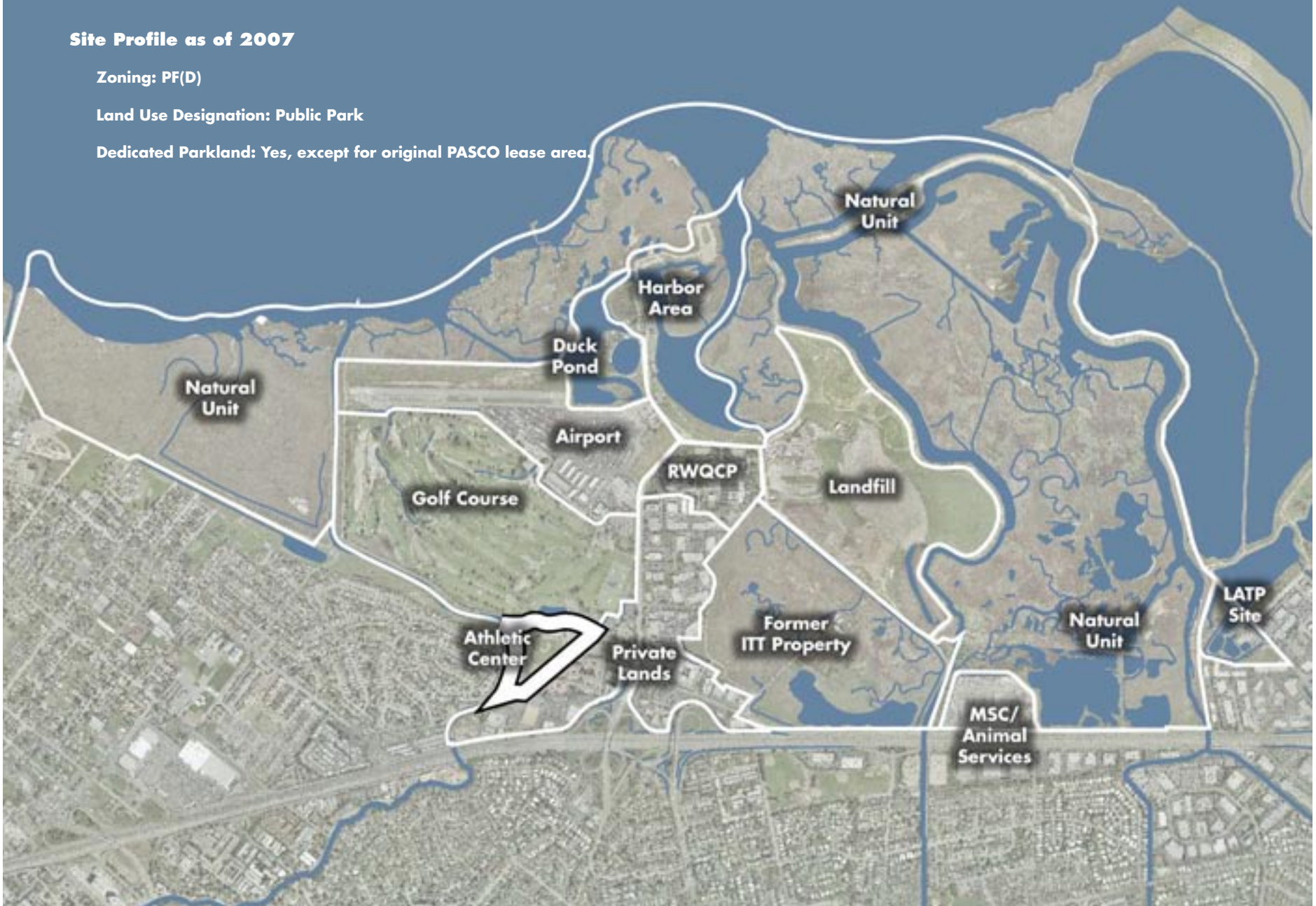
## Athletic Center in Context

### Site Profile as of 2007

Zoning: PF(D)

Land Use Designation: Public Park

Dedicated Parkland: Yes, except for original PASCO lease area.



## Athletic Center Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Athletic Center, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Continuation of Use

1. Continue current Athletic Center activities.

### Improvements

2. Maintain and continue to improve standards of low external glare night lighting. (*New lighting installed in 2005*)

Photo courtesy of Rob de Geus, Staff member



The Palo Alto Municipal Golf Course is a classic 18-hole championship course designed by famed golf course designer, William P. Bell. It is fun and challenging for all levels of golfers. In the fiscal year 2006/07, 76,337 rounds of golf were played



# 8.

# Municipal Golf Course

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

This acreage was acquired by the City over a 30-year period including the 1940s and 1950s. Like its surroundings it was salt marsh but it also had a unique feature—the original course of San Francisquito Creek wound its way through this area on its path to the Bay. However, when the City adopted John Fletcher Byxbee’s plan which included a golf course, a transformation process began. Harbor dredge spoils filled in the marsh and San Francisquito Creek was rerouted more than a half-mile to the northwest—creating a 184-acre expanse of reclaimed land for future development. *(For more information about the rerouting of San Francisquito Creek and the County boundary line, see the Flood Chapter.)*

By the 1950s the citizens were ready for their golf course and in 1952, the mayor named a Citizen’s Committee of 100 members whose task was to come up with a plan. The City Council adopted the proposal provided \$75,000 could be raised by subscription for the \$217,000 project. By 1952, the group had raised \$83,000, paced by a \$25,000 gift from the Lucie Stern estate and Joseph Eichler donated the clubhouse. The golf course opened in 1956.

### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* categorized the center as an established land-oriented use—urban park. Although a major renovation was underway, no impacts were recognized and no changes were recommended.

The policy mandate to implement the approved renovation plan was fulfilled as follows. In 1977 the City raised \$1.8 million to renovate the golf course by issuing golf course lease revenue bonds. The bond sale was facilitated by setting up a non-profit corporation: Palo Alto Golf Course Corporation. The improvements included a new clubhouse and pro shop and were completed in 1978.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* which provided for the continuance of the current use and implementation of the approved renovation plan.

### 1988 • Baylands Master Plan Amended Summary Report

There were no changes to the Golf Course policies in 1988.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Golf Course Master Improvement Plan

The improvements mandated by the *Baylands Master Plan* were completed in 1978. Then, during the decade of the 1980s, the golf business increased dramatically and in an effort to address customer demands and economic viability, a number of studies were completed. Then, in 1992, the Council approved the preparation of a master plan to incorporate the findings of these studies, as well as to plan for the future of the aging facility. In 1997, the Council adopted the *Palo Alto Municipal Golf Course Master Improvement Plan* prepared by Amphion Environmental, Inc. and Halsey Daray Golf in conjunction with David J. Powers & Associates and H.T. Harvey & Associates.

The plan noted maintenance issues related to the low elevation, toxic salt and sodium levels in the soil, high water table, and flat topography that prevents drainage or leaching of accumulated salts. And the plan contained a full range of recommendations for a period of approximately twenty years into the future. The



Photo courtesy of the Palo Alto Golf Club

Golfer enjoying the challenge of the 18th hole at the Palo Alto Municipal Golf Course

recommendations were presented in the plan's Executive Summary as follows.

### Golf Course

- Install a new irrigation system.
- Use reclaimed water upon completion of the new blending station. Continue to use potable water on greens and tees as long as possible.
- Improve site drainage through regrading. Install a sub drainage system that incorporates a raised detention lake. Sand cap 8 fairways to improve drainage and turf conditions. Improve an additional six fairways by providing an increased maintenance program to raise the grades over time.
- Rebuild and reshape the aged greens, tees, bunkers and traps in conjunction with the drainage improvements.
- Address airport safety issues by raising the fence near the sixth fairway and planting additional trees.
- Install improvements such as repaved cart paths and rest room modifications required by the Americans with Disabilities Act (ADA).

### Driving Range and Practice Areas

- Install a new 75 foot high fence and realign the range to address safety issues.
- Add night lighting to extend hours of play.
- Sand cap the range to encourage turf growth, improve play and enhance the range appearance.
- Expand existing practice area to incorporate a chipping green and enlarged putting area.

### Parking Lot

- Increase the available parking by both repaving/restriping the existing lot and expanding it to the south and west. Provide for a total of 326 cars (an expansion of approximately 45%). Provide for an exit only onto Embarcadero Road. Fulfill the requirements of the ADA for accessible parking and meet the City Off-street Parking regulations for parking layout and interior landscaping.
- Extend the existing bike path to Embarcadero Way from where it currently terminates at the golf course's western boundary.

### Restaurant and Golf-shop

- Expand the existing restaurant to increase the seating areas in the restaurant, bar, and provide a new outside deck. Expand the existing kitchen, upgrade electrical, heating and HVAC systems, and incorporate required ADA modifications throughout the building.

- Expand the existing golf shop to improve the starter and merchandise areas, and increase merchandise storage space.
- Design building expansions to stay within the envelope of the existing roof line and retain the existing architectural style.
- Enhance building exterior with an improved entry area, modify exterior storage yard on the south, and screen service area on the north side of the building. Incorporate a new cart wash water recycling system, and a covered cart storage in the fenced exterior storage yard.

### Maintenance facility

- Address environmental and legal concerns with a new equipment wash water recycling system, chemical storage facility, and above ground fuel tank.
- Relocate the existing sand storage to reduce the impact of blowing sand and dust.
- Expand the existing shop to provide equipment repairs, staff lockers and changing room facilities that meet state and federal safety and work place requirements.

In 1998, the City sold Certificates of Participation (COPs) in the amount of \$8.6 million to fund the high-priority components of the plan i.e., the new irrigation system, new drainage system, and rehabilitation of the fairways. This work was completed in 2001. Additional components of the plan have been funded via the Capital Improvement Program.



Photo courtesy of Rob de Geus, Staff member

The Palo Alto Municipal Golf Course offers year-round lessons for all ages and skill levels.

As of February 2008, only the following components of the *Palo Alto Municipal Golf Course Master Improvement Plan* are still to be completed:

- Expansion of the parking lot
- Extension of the existing bike path to Embarcadero Way
- New chemical storage facility to address environmental and legal concerns
- Rehabilitation of the aged green, tees, bunkers and traps for holes 1, 2, 6, 9, 12, & 14.
- Repaving of cart paths 9, 12, & 18.

The installation of a sub drainage system that incorporates a raised detention lake has been eliminated from the plan.

### Feasibility Study for Possible Redesign of Golf Course to Accommodate Playing Fields

In March 2005, the Council directed staff to conduct a feasibility study of redesigning the 18-hole championship municipal golf course to free up acreage for sports fields. The objectives were:

- creation of 20-40 acres of new playing fields
- improvement of the golfing experience and provision of additional golfing amenities;
- expansion and enhancement of natural habitat

- helping to address San Francisquito Creek flood control needs.

The Council was also interested in facilitating redevelopment of nearby private properties, and identifying private funding strategies that could help cover the costs of the construction.

A working group was assembled from members of the golfing community, the San Francisquito Creek Joint Powers Authority, Ken Kay Associates, and the golf course design firm of Robert Trent Jones II.

The result was presented to the Council in March 2006. It included two main options:

1. Add up to two playing fields while retaining an 18-hole golf course, however, the cost to reconfigure as many as eight golf holes reduced the desirability of this option.
2. Provide a new, smaller type of golf course or practice facility as well as several sports playing fields however, the cost was estimated to be over \$18,000,000 and the marketability of a smaller golf course was deemed unpredictable.

Although the report did not recommend either option, it noted that the study contained information that would be useful in helping the City participate more effectively in the San Francisquito Creek Flood Control Study underway. It recom-

mended that the Council participate in locating funding for the golf course/recreation component of the flood control project if the San Francisquito Creek Joint Power Authority/Army Corps of Engineers flood control study identifies feasible multi-use flood control/recreation options.

### Flood Control Study / Golf Course

Some of the options being considered by the San Francisquito Creek Joint Powers Authority (JPA) for flood control may make use of the golf course land for a widened San Francisquito Creek channel or an over-flow basin. As a member agency of the JPA, the City participates in all such discussions—also see “Flood Protection” chapter.

# Palo Alto Municipal Golf Course as of 2007

**Recreational Trail**



**Facilities**

- A** Golf Course Maintenance Yard
- B** Parking Lot
- C** Club House & Restaurant
- D** Driving Range



San Francisquito Creek

Entrance road to airport & golf course

Embarcadero Way

Faber Place

Embarcadero Road

San Francisquito Creek

The Friendship Bridge is an important connection in the regional trail system

Segment of the San Francisco Bay Regional Trail

Three (of five) remaining tasks of the 1997 Golf Course Master Improvement Plan are:

- New chemical storage facility to address environmental and legal concerns
- Rehabilitation of the aged green, tees, bunkers and traps for holes 1, 2, 6, 9, 12, & 14.
- Repaving of cart paths 9, 12, & 18.

Note: The installation of a sub drainage system that incorporates a raised detention lake has been eliminated from the plan.

A fourth remaining task of the 1997 Golf Course Master Improvement Plan is the expansion of the parking lot (Note relationship to Access & Circulation Vehicular Policy No. 12.)

A fifth remaining task of the 1997 Golf Course Master Improvement Plan is the extension of the off-road bike trail, on the northwest side of Embarcadero Road, to Embarcadero Way. (Note relationship to Access & Circulation Vehicular Policy Nos. 4, 5, & 6 as well as all Trail policies.)



Golf Course

### Golf Course in Context

**Site Profile as of 2007**

Zoning: PF(D)

Land Use Designation: Public Park

Dedicated Parkland: Yes



## **Golf Course Policies** (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Municipal Golf Course, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### **Continuation of Use**

1. Continue its present use.

### **Development of the Facilities**

2. Continue with the implementation of the *Palo Alto Municipal Golf Course Master Improvement Plan*.

Photo by and courtesy of the Ingrid Taylor



The Palo Alto Municipal Airport (PAO) serves general aviation and over personnel estimate that these flights occur about once per day. The PAO was also used to fly critically needed supplies to Watsonville following the Loma Prieta Earthquake.



# 9.

# Municipal Airport

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

World War I triggered a national interest in aviation and by the 1920s it was a part of Palo Alto life with stunt flyers selling rides from an airfield on Embarcadero Road. There was also a flying field at Stanford University; in fact, Stanford University was designated as Aviation Ground School Number 1 by the Aeronautics Branch of the Department of Commerce. This prompted Stanford to propose a more sophisticated airport on university land near the corner of Stanford Avenue and El Camino Real and the City Council passed a resolution in support of the proposal.

In the meantime the City had begun purchasing marshland and harbor dredge spoils were filling in the area designated as airport in John Fletcher Byxbee's Baylands plan. In 1935—just as noise issues forced the Stanford Avenue airport to close—the Palo Alto Municipal Airport (PAO) opened with two runways and a complex of buildings. In 1941, it was leased to Palo Alto Airport, Inc. From 1943-1945, it was closed and leased to the Federal government but, in 1946, it was again leased to Palo Alto Airport, Inc. and reopened to the public.

In the early 1950s, the City's plans for the golf course required that the airport be relocated (*to its current location*), but this time, only one runway

was built. It is important to note that, at this time, the City-owned airport was in San Mateo County; and San Mateo County along with the Federal Aeronautics Board helped to fund the move and related improvements. Then, in 1963, the County boundary was adjusted to follow the realigned San Francisquito Creek—thereby moving the airport into Santa Clara County and allowing Palo Alto to annex the land. (*For more information about the realignment of San Francisquito Creek see "Flood Protection" chapter.*)

In 1964, the City signed a 25-year lease agreement with Santa Clara County putting the operation of the airport under their control. By this

time the City had become very concerned about the environmental quality of the wetlands and in 1965, dedicated most of the Baylands as parkland including land adjacent to the airport. Then in 1967, the County lease was extended to 50 years and the County's *PAO Master Plan*—which governs the lease—was adopted. At that time, the County's *PAO Master Plan* called for:

- Construction of a second runway parallel to the existing one (*this was to be built only when required to satisfy additional demand and was a low priority item in the County's Capital Improvements Program.*)
- Two additional fixed base operator (FBO) facilities. (*The second FBO was under construction. There were no applicants for the third FBO site.*)

To accommodate the expansion described in the County's *Airport Master Plan*, voters approved the removal of three areas from park dedication:

- 11 acres of marsh along proposed second runway
- part of the lagoon south of the duck pond
- an area south of the existing runway.

In the following years, a tower was constructed for the air traffic controllers and a temporary terminal—in a trailer—was put in for County Staff. In 1969, a portion of the lagoon was filled to provide for the expansion; however, the expansion was not carried out. In fact, as the City began to prepare

the *Baylands Master Plan*, a reevaluation of the *Airport Master Plan* was considered to be a sub-task.

### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* categorized the airport as an established land-oriented use but a visually obtrusive landscape. It recommended against any intensification or expansion of the facility but affirmed the construction of a new terminal—as shown on the Forecast Plan map (*Map 9.1 and 9.2*). It also recommended landscape screening.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* which included the following.

#### Capacity and Activity

The plan noted that there were 370 aircraft based at the airport. It also noted that there were 216,000 flights to and from the airport between Sept. 1976 and Sept. 1977. The plan mandated that there were to be no changes in airport activities that would increase the intensity of airport use or significantly intrude into open space.

#### Improvements/Development of Facilities

The plan also:

- Called for the terminal to be relocated.

- Ruled against the construction of the second runway and called for the area to be planted with native grasses and left as open space.
- Affirmed that the second FBO (*already under construction*), should be completed
- Ruled against the construction of the third FBO.
- Called for a strip of planting to be added from the airport entrance east along Embarcadero Road to the junction with the shoreline road (*Map 9.1 and 9.2*).

#### County Lease

The *Baylands Master Plan* mandated that the *Airport Master Plan* and County lease were to be amended as needed to conform to the *Baylands Master Plan*.

### 1988 • Baylands Master Plan Amended Summary Report

In 1987, the City published an update to the *Baylands Master Plan Summary* that included the following changes:

#### Capacity and Activity

Policy text was revised to increase the number of aircraft based at the Palo Alto Airport from 370 to 510. It was also revised to indicate that there were 193,000 flights to and from the airport between Nov. 1, 1985 and Oct. 31, 1986.

## Improvements/Development of Facilities

The completion of the second FBO was noted.

## County Lease

Policy text was modified to document that the County lease had been amended, on May 20, 1980, to clarify that a second runway and expansion of permanent aircraft tie down spaces would not occur without concurrence of the City.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

## Comprehensive Plan

Policy T-57 calls for supporting the “continued vitality and effectiveness of the airport without significantly increasing its intensity or intruding into open space areas.” Also, *Comprehensive Plan* Map L-5 identifies the airport as a part of the East Bay-shore Employment District. See “Privately Owned Lands” for information about the Comprehensive Plan policies for this Employment District

## Capacity and Activity

There are still 510 aircraft based at the Palo Alto Airport. During the last five years the number of



Photo by Planning staff

The terminal building is not accessible from the Embarcadero Road Urban Corridor. Its access is from Harbor Road and within 300’ of the now restored harbor and natural area (*Map 9.2*). Its existing location and access route increase vehicle traffic into the natural area of the Baylands.

take offs and landings has ranged from a low of 174,376 in 2006 to a high of 214,038 in 2003. In calendar year 2007, the count was 178,876.

## Improvements/Development of Facilities

- There has been no expansion of the facilities.
- The terminal building has not been relocated. Access to the terminal is not from the Embarcadero Road Urban Corridor which is deemed to be urban use. Access to the terminal building is from Harbor Road (*Map 9.2*), and within

300 ft of the now restored harbor and natural area. It is directly adjacent to Area A which is identified as a future potential restoration area (*Map 6.2 and 6.3*). Its existing location and access route increase vehicle traffic into the natural area of the Baylands.

- In 2001, the landscape screening along Embarcadero Road and the planting of the (second runway) pad—mandated in the *Baylands Master Plan*—were both completed.
- In 2001, new fencing and lighting were installed.

- In 2005, the levees along the northeast edge of the airport were restored to their original contours and height—consistent with the 1979 airport lease agreement for levee maintenance.

The current policies of the *Baylands Master Plan* preclude expansion of the airport; however, the three sections of Baylands removed from parkland in 1969 to accommodate the expansion anticipated at that time, have not been rededicated.

### County Lease

Between 1988 and 2005, the County operated the airport under the lease which expires in 2017 and per the policies of the *Airport Master Plan*, *Baylands Master Plan*, and *Palo Alto Comprehensive Plan*.

However, in FY 2005/2006, the County hired a consultant to update the 1982 Master Plan for the County’s three airports and prepare business plans for the three airports. The business plan recommended that the County terminate its involvement in the PAO after the lease expires. It noted, that the County had assumed all of the business risk associated with operating the PAO; that the PAO had historically operated at a deficit; and that opportunities to generate additional revenue were extremely limited due to physical, environmental, and policy constraints. The business plan recommended that the County do the following:

1. Terminate its involvement in the PAO in 2017 or earlier if desired by the City
2. Limit future County capital investment in the PAO to the local match necessary for essential, non-deferrable, Airport Improvement Project (AIP)-eligible maintenance projects or security related projects mandated by Federal agencies
3. Require the City to submit all future Airport Improvement Project grant applications
4. Raise tie-down rates and fuel flowage fees to help make the PAO financially self sustaining and recover as much of the County’s original investment in the PAO as possible prior to the lease expiration.

Pursuant to this report, the County indicated to the City that, based on financial considerations, it did not intend to renew the lease beyond 2017. This prompted the City to conduct a series of analyses regarding the future of the airport.

On June 6, 2006, the City auditor submitted the “Review of Palo Alto Airport’s Financial Condition and Comments on Santa Clara County’s Proposed Business Plan for the Airport” to the Joint Community Relations Commission. The report recommended that the City Manager be authorized to notify the County Board of Supervisors that:

1. The City of Palo Alto supports moderate increases in tie down fees at the Palo Alto Air-

port, but the fees should be competitive with fees as nearby airports.

2. Because it is a regional resource, the City expects and encourages the County to continue operating the Airport per the terms of the lease through at least 2017.
3. The County has benefited from operating the Palo Alto Airport, and should continue to maintain and improve the Airport facilities per Federal Aviation Administration (FAA) regulations. The City has agreed to provide grant assistance when necessary.

On December 16, 2006, the County approved the business plan but delayed action for six months to provide the City an opportunity to present viable development options for the PAO .

On December 18, 2006, the City Council authorized the creation of the Palo Alto Airport Working Group (PAAWG) to analyze PAO operations and develop a viable business model (s) for the PAO.

On June 4, 2007, the PAAWG presented its report, *The Community Value, Economic Viability and Future Management of Palo Alto Airport*, to the City Council (*see Reference Document List in Appendix for web address of this report*). It concluded:

- The PAO is an important transportation, business, economic, recreational and emergency preparedness asset for the City and its residents;

- The PAO can be operated on a self-sustaining economical basis and be cash positive without requiring any financial support from the City;
- The continued operation of the PAO by the County will diminish the resource value of the airport and threaten its long-term viability.

These conclusions led the PAAWG to recommend that the City Council:

1. Direct the City Manager to negotiate an early termination of the existing PAO/County lease;
2. Appoint an interim manager for the PAO; and
3. Issue an RFP for the long-term management of the PAO, which will ensure its asset value to the community is maintained and will preserve its economic value into the future.

The City then engaged Austin Wiswell, former Chief of the Division of Aeronautics for the State of California Dept. of Transportation and author of the *Airport Land Use Planning Handbook* (2002), to assess the County’s findings, the PAAWG’s recommendations, and the significant responsibilities of running a municipal airport.

On July 6, 2007, Mr. Wiswell submitted his review which included a recommendation that the City re-examine its *Baylands Master Plan* to determine if an accommodation can be made for additional hangers and relocation of the terminal fa-

cility. Additional hangers represent an enhanced and steady revenue base. Mr. Wiswell indicated that architectural modifications to hangars have made them aesthetically less intrusive and that building additional hangers would not necessarily translate into more intense use.

On September 18, 2007, staff submitted a comprehensive report to the Finance Committee covering all the information developed so far. In its conclusion, the report:

- Recognized the many benefits the airport currently provides and can provide to the greater community.
- Did not support the PAAWG recommendations to appoint an interim manager or to issue an RFP for long-term management at this time.
- Advised that running the airport would be a major responsibility to be approached with careful planning—a gradual transition period that addresses the issues identified in this report is recommended.

The report recommended that the City plan for gradual (approximately 3 years) transition of oversight that would allow time for :

1. Council consideration and development of the airport’s mission.
2. Staff work with the County to master basic information and requirements.

3. An outline of all City obligations and responsibilities for the PAO whether it operates the PAO or contracts it out.
4. An economic analysis to determine the long-term viability of the PAO and providing assurance that sufficient funds can be generated to offset annual expenses and capital work.
5. A thorough Hazardous Materials analysis.
6. Obtaining written confirmation from the County on a waiver of re-payment of the County’s original investment.
7. Assessing and seeking the most viable management arrangement for the airport.
8. Consideration of the Army Corp of Engineer’s recommendation on San Francisquito Creek.
9. A complete legal analysis of the County/City PAO lease and examination of all the airport contractual agreements.

On November 13, 2007, staff forwarded this report, along with answers to questions posed by the Finance Committee, to the Council. One of the Finance Committee questions was, “How are the master plans for the Baylands and the Airport in conflict?” Staff’s response was,

“The County would like to construct hangars at PAO in order to generate more revenue. The [1988] *Baylands Master Plan* states, ‘In gen-

eral, make no changes in the airport activities that will increase the intensity of the airport use or will significantly intrude into open space'. The word 'intensity' is a key term, but it is not defined. The County's proposal to add hangars in the open space adjacent to Embarcadero Road could be considered a visual intrusion into the open space and an intensification of use. The vacant acreage the County has selected, space adjacent to Embarcadero Road, is considered the entrance to the Baylands."

On November 14, 2007, the Council voted to begin immediate negotiations to end the lease with the County within 3 years. The Council also directed staff to develop a work plan with cost estimates for long term management of the airport.

### Santa Clara County Airport Land Use Commission (ALUC)

Because the guidelines established by the ALUC apply to the entire Baylands, this topic is covered in the "Overall Environmental Quality" chapter.

### Public Service Transport Services

#### Medical

Palo Alto Airport (PAO) serves the Stanford Medical Center in several ways. The Hospital has its own helipad on the top of the building, allowing



Photo courtesy of Ihab A.B. Awad

As there is no fueling facility at the Stanford Hospital helipad, the Stanford Life Flight medevac helicopter depends on the Palo Alto Municipal Airport (PAO)-.

the Stanford Life Flight helicopter as well as other medevac helicopters, to bring patients directly to the hospital. However, there is no refueling possible at the hospital due to fire safety consid-

erations. Life flight and other helicopters use PAO as the closest and most convenient refueling location. There are often several such operations at PAO in a single day.

Photo courtesy of Ihab A.B. Awad



The PAO is important for public services, like the Civil Air Patrol and County Sheriff's Department.

In addition to providing a refueling station for the medevac helicopters, the PAO serves general aviation airplanes, such as Angel Flight, bringing patients from outlying areas for further land

transfer to the hospital for various non-emergency treatments. Control Tower personnel estimate that these flights occur about once per day.

Finally, airplanes regularly bring organs for transplant into the airport.

#### **Law Enforcement and Emergency**

The PAO is also an available refueling point for California Highway Patrol, Police, and Sheriff helicopters and airplanes. While this service is not used often, it can be helpful during a law enforcement response or an emergency. In fact, the PAO was used to fly critically needed supplies to Watsonville following the Loma Prieta Earthquake.

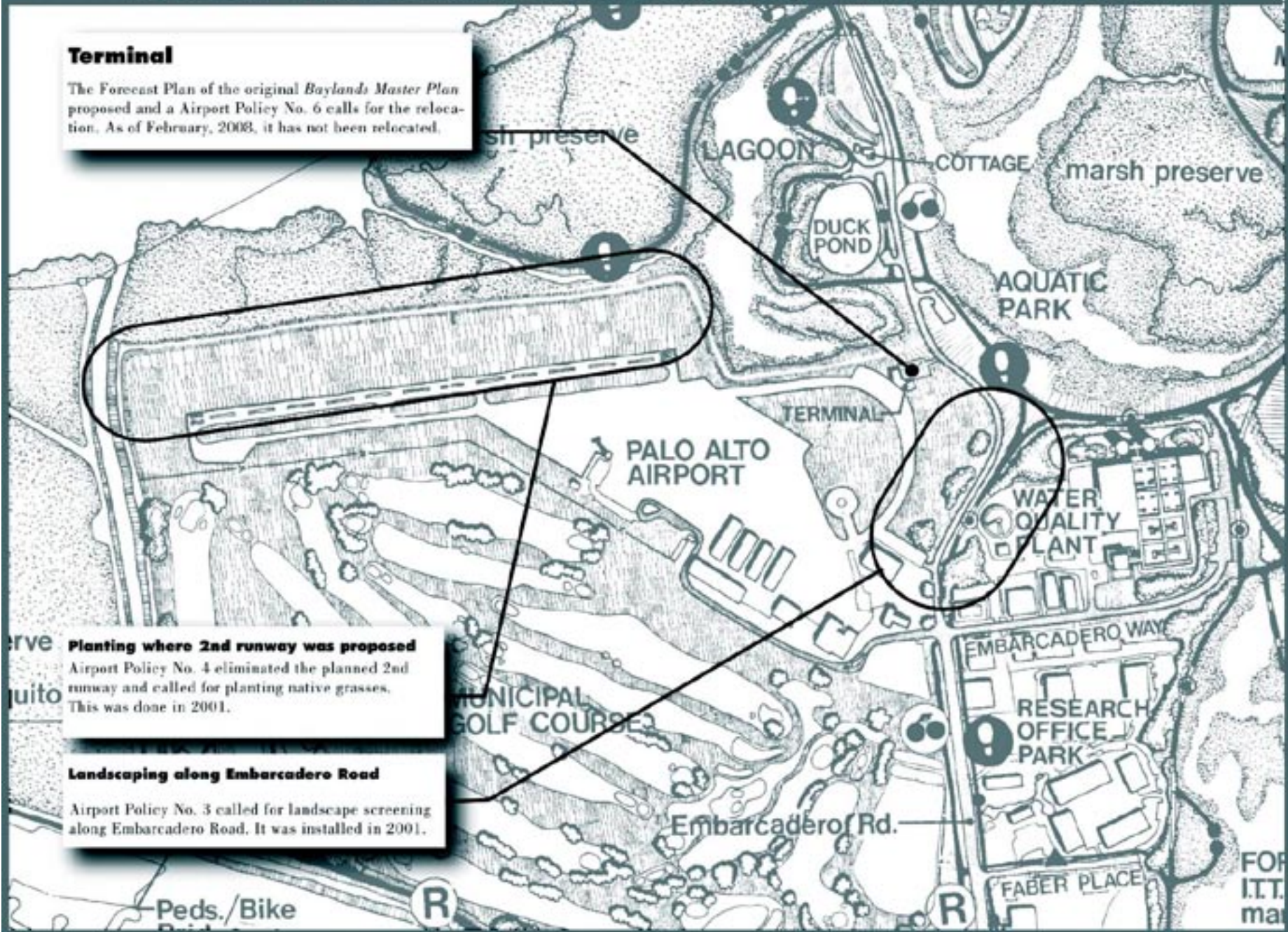
#### **Civil Air Patrol**

The Civil Air Patrol (CAP) is an Air Force Auxiliary organization providing search and rescue services. The CAP has an airplane based at the PAO which often conducts search missions, for example when an emergency locator signal is detected. And, to maintain readiness, it regularly conducts training missions from PAO.

# 1979 BMP Forecast Plan for the Municipal Airport (Detail from original fold-out map)

## Terminal

The Forecast Plan of the original *Baylands Master Plan* proposed and a Airport Policy No. 6 calls for the relocation. As of February, 2008, it has not been relocated.



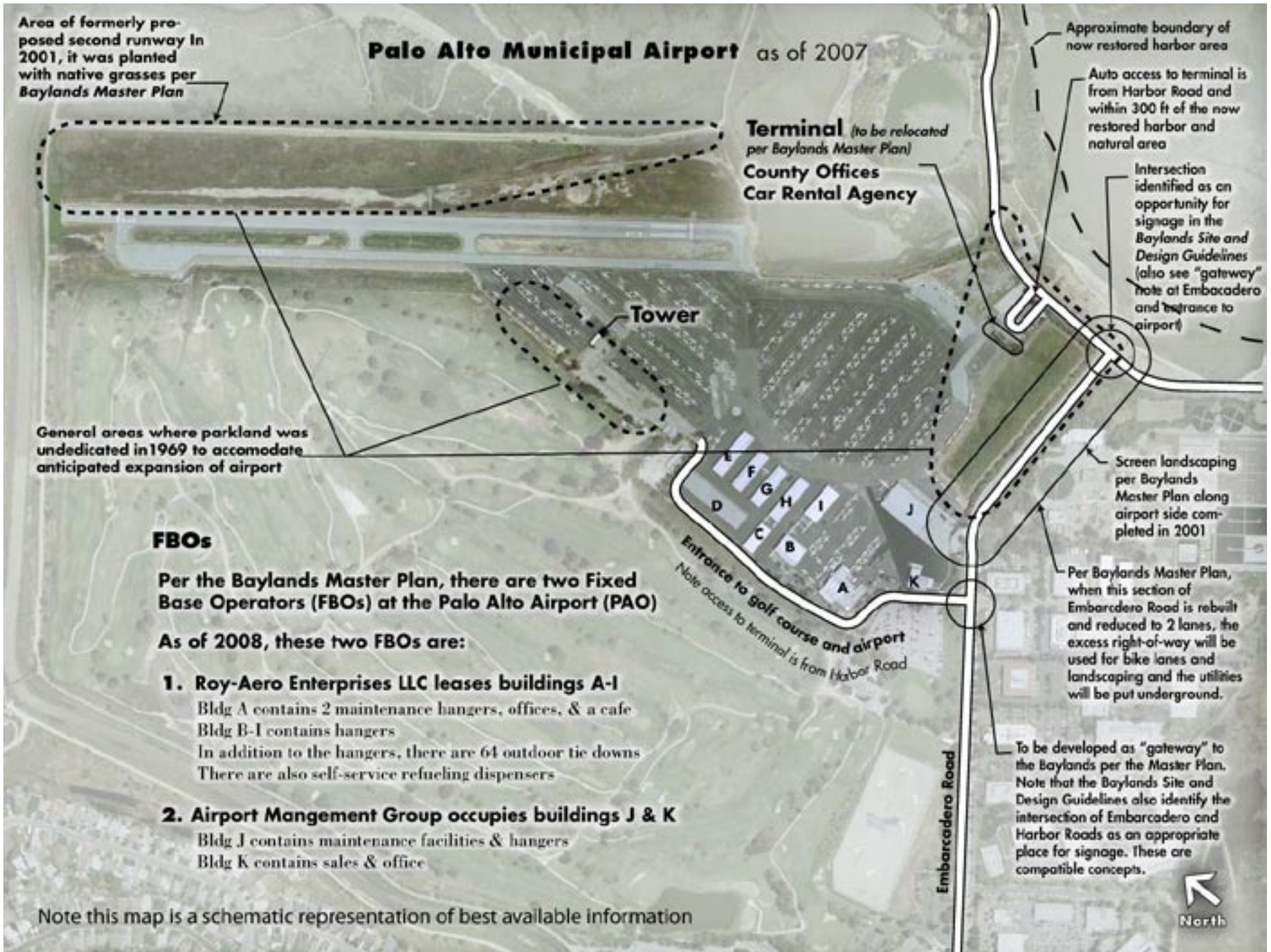
## Planting where 2nd runway was proposed

Airport Policy No. 4 eliminated the planned 2nd runway and called for planting native grasses. This was done in 2001.

## Landscaping along Embarcadero Road

Airport Policy No. 3 called for landscape screening along Embarcadero Road. It was installed in 2001.





## Airport in Context

### Site Profile as of 2007

Zoning: PF(D)

Land Use Designation: Public Facilities

Dedicated Parkland: No



## Airport Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Municipal Airport, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Capacity and Activity

1. The Palo Alto Airport, base for no more than 510 aircraft, will stay much the way it is. Charter flights and general aviation, which is mostly private aircraft, made about 202,000 flights to and from the Palo Alto Airport in 2007, and this total is expected to remain about the same. No changes in airport activities are planned that would take over a significant amount of the airport.
2. In general, make no changes in the airport activities that will increase the intensity of airport use or will significantly intrude into open space.

### Improvements/Development of Facilities

3. Maintain landscaping to screen the airport along Embarcadero Road from the airport entrance to the intersection of Embarcadero

Road and the shoreline road. (*Landscaping completed 2001*)

4. The second runway, provided for in the 1976 *Santa Clara County Airport Master Plan*, will not be built because it would present a safety hazard and be detrimental to the environment. Maintain the native grasses planted on the abandoned second runway pad and leave as open space. (*Landscaping completed 2001*)
5. The airport will have two Fixed Base Operators (FBO), service areas for aircraft, but the third FBO described in the 1976 *Santa Clara County Airport Master Plan* will not be built.
6. Relocate the terminal (*The current location and access to the terminal brings traffic to within 300' of the new established natural area—the restored harbor.*)

### County Lease

The City has leased the airport to Santa Clara County until 2017. The County lease was amended May 20, 1980, to clarify that a second runway and expansion of permanent aircraft tie down spaces shall not occur without concurrence of the City. In 2007, the County indicated that it did not intend to renew the airport lease after 2017 and on November 14, 2007, the City Council voted to begin immediate negotiations to end the lease within three years and directed staff to develop a work plan with cost estimates.



The Regional Water Quality Control Plant has been designed to remove most of the organic pollutants found in wastewater. The plant consistently removes 99 percent of these organic and solid pollutants which has gone a long way to restoring the health of the South Bay. Shown above is a school tour of the waste-water clarifiers. Also see "Thank you" letter from one of the tour participants in this chapter.

# 10.

# Regional Water Quality Control Plant

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

Palo Alto started public sewage improvements in 1898 by approving \$28,000 in bond money to fund construction of the City's first sewer network, which was completed in 1899. Private cesspools and privies were banned, and the City health officer had all properties hooked up to the sewer system within a few years. The sewer system served about 3000 people and discharged untreated sewage from a twelve-inch diameter out fall pipe into Mayfield Slough (near the Sea Scout Building) at the edge of South San Francisco Bay. Stanford University and Mayfield also laid lines emptying into the slough. Public health in town was

improved but not in the Baylands. In the 1920s, a Baylands park and yacht harbor were being planned and City leaders feared health contamination to boaters and park enthusiasts. Also, tide-induced sewage overflows on City streets made population growth of the City and Stanford University untenable. The State Board of Public Health prescribed a solution that included a primary treatment plant and a new out fall discharging further from the shore. A 3.7-acre site was identified near Embarcadero Road and planning of Palo Alto's first treatment plant began.

Plant operations began July 1, 1934, which made the Palo Alto Treatment Plant the first wastewater treatment plant on South San Francisco Bay.

The plant could treat three million gallons per day and served a cannery as well as 20,500 people in Palo Alto and Stanford. The plant discharged the wastewater 700 feet offshore. Solids were digested, dried, and used as park fertilizer. Immediately after World II, treatment capacity was increased to five million gallons per day to deal with the seasonal Sutter Packing Company cannery wastes. The plant was upgraded again in 1957, for the post-war boom, in order to treat up to ten million gallons per day.

Meanwhile, the neighboring City of Mountain View constructed a primary treatment plant in 1951 which was expanded to enhanced primary treatment in 1961. The City of Los Altos constructed a primary treatment plant in 1957.

Over the years, people witnessed the increased signs of pollution and stress on the environment of shallow South San Francisco Bay. With increased public attention on water quality both locally and nationally, a larger effort was needed to clean up the Bay. In December 1962, the plant received its first discharge permit from the California Regional Water Pollution Control Board. In response, the plant built a new out fall—into the Unamed Slough (*Map 10.4*)—in 1964 to stop periodic discharges near the location of the former yacht harbor. A 1966 long range plan recommended adoption of secondary treatment in anticipation of state regulations requiring disinfection of effluent and higher oxygen levels in receiving waters. The study also recommended possible consolidation with neighboring communities.

In October 1968, the Cities of Mountain View and Los Altos agreed to retire their treatment plants (*Also see Chapter 12, The “Los Altos Treatment Plant Site”*). They became partners with the City of Palo Alto to construct a cost-effective regional secondary treatment plant. The original 3.7-acre site was not large enough to accommodate the regional plant—approximately 21 more acres was needed. By this time, much of the surrounding area had been dedicated as park land but, in 1968, the citizens voted to undedicate 4.5 acres for the treatment plant expansion. Approximately 1.5 acres of privately owned land was acquired by eminent do-

main. The 1968 pact extends until July 1, 2035, sets Palo Alto as the operator of the plant, and requires Palo Alto, Los Altos and Mountain View and their sub-partnering sewer agencies, East Palo Alto Sanitary District, Stanford University, and Los Altos Hills to share in the proportionate costs of upkeep. The Regional Water Quality Control Plant was designed in 1969. Construction started in 1970 and was completed in 1972.

Since 1972, the plant has provided complete secondary treatment of wastewater and complete incineration of the sewage sludge. The treated water has been discharged, after disinfection, to an unnamed slough near the Palo Alto Airport and then to San Francisco Bay, some 1,500 feet in distant from the point of discharge. The plant has helped significantly reduce the amount of pollutants reaching the Bay.

In 1975, the Santa Clara Valley Water District constructed an advanced reclamation facility and operated it for a time before selling it to the RWQCP. In 1980, to further protect the Bay, the RWQCP was upgraded to an advanced (tertiary) wastewater treatment facility through the addition of fixed film reactors and dual media filters at a cost of \$8.8 million. In 1987, a capacity expansion project was completed to assure that the treatment plant effluent standards could be met during periods of heavy rainfall. Numerous other projects have been completed to optimize performance, safety, and reliability.

## 1978 • Baylands Master Plan

### Advanced Wastewater Treatment Facility

In 1976, the *Baylands Master Plan* analysis cited the need for the Advanced Wastewater Treatment Facility. The report indicated that:

- The construction of two 42-foot biological treatment towers located between the main structure and the refuse disposal area access road would result in removal of landscaped plants, although extensive landscaping was planned after construction (*Map 10.2*).
- The towers would result in a constriction of the corridor between the treatment plant and the south arm of the yacht harbor.
- The vertical form of the towers also represents an aesthetic intrusion into the flat topography of the Baylands.

The adopted *Baylands Master Plan* policies supported the construction of the Advanced Wastewater Treatment Facility and called for landscape screening of the new towers. It recommended that the towers be scaled down visually by the use of earth forms and vegetation.

The facility was completed in 1980. It is owned by the City but as a part of the Regional Plant, it is financially supported by the partner agencies.

## South Bay Discharger

Also in the 1970s—despite planned improvements of the treatment plant—the California RWQCB proposed another requirement that all South Bay cities begin work on an out fall pipe to carry sewage discharge north of the Dumbarton Bridge where the tidal interchange is less limited. In 1972, the affected cities formed the South Bay Discharger Authority and funded a comprehensive study of the situation and an environmental impact report. Based on this report, the Environmental Protection Agency (EPA) decided that further study would have to be done before a decision would be made. The EPA hired Bechtel Corporation to look at the consequences of implementing various wastewater management alternatives. One alternative involved constructing a pipeline through the Palo Alto Baylands. The line would traverse the flood basin adjacent to the freeway, cross the area between the former ITT property and the landfill, cross Embarcadero Road, and continue out through an unnamed slough. The Bechtel report was underway when the City began the *Baylands Master Plan*. Upon its completion, the EPA, RWQCB, and the South Bay cities were to decide which alternative to implement.

The adopted *Baylands Master Plan* policies did not support the construction of the South Bay Discharger pipeline.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* that included policies that supported the construction of the Advanced Wastewater Treatment Facility but not the construction of the South Bay Discharger.

### 1988 • Baylands Master Plan Amended Summary Report

#### Advanced Wastewater Treatment Facility

There were no changes to the policies for the RWQCP in 1988.

#### South Bay Discharger

Although it was not noted in the 1988 Amended Summary, during the period between 1978 and 1988, the South Bay Discharger studies were completed and the regulatory agencies concurred that the pipeline should not be constructed. The concept was dropped.

### 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

## Advanced Wastewater Treatment Facility

The RWQCP consistently removes 99 percent of the organic and solid pollutants found in wastewater. The plant also removes dissolved metals from the wastewater; in fact, the RWQCP discharge must meet many quality standards higher than those for drinking water. This has gone a long way to restoring the health of the South Bay.

#### Required Landscaping

The landscape screening of the Advanced Wastewater Treatment towers (*No. 13 on Map 10.3*), that was installed per the approved plan in 1980, has degraded over time; a restoration project to improve the landscaping is scheduled for FY08/10.

#### Brackish Water near the Unnamed Slough

As mentioned earlier, in 1964, the plant built a new out fall—that flows into the Unnamed Slough and out to the Bay (*Map 10.4*). This stopped the discharges near the yacht harbor. Today, programs like the fresh water restoration project in the Emily Renzel Wetlands and the Water Reclamation Program re-use approximately 2 million gallons per day of the plant's discharge. About 25 million gallons per day flow through the Unnamed Slough out to the Bay. This has contributed to conversion of approximately 14 acres of salt marsh to brackish marsh (*a mixture of fresh water and salt water*) in the area adjacent of the slough. This conversion

is monitored by the City and periodically reported to state and federal agencies. (See “Natural Unit” for more information.)

### Secondary Clarifiers

In 1988, two tanks were added to the facility (No. 11 on Map 10.3). These tanks serve to clarify the secondary effluent and remove solids from the liquid stream. The required landscaping for the new secondary clarifiers included berms (soil from the excavation for the dugout tanks) and landscaping south of the plant to screen the tanks from the Byxbee Park area. Some of the required landscaping for the Secondary Clarifiers is outside of the RWQCP site—on adjacent parkland. As with the Advanced Wastewater Treatment Facility, a restoration project is scheduled for FY 2008-2010 to address degradation in this landscape screening.

### Integrated Regional Water Management Plan

In 2003, the State established a policy that grant funds would more likely go to projects included in an adopted integrated water management plan.

In response to this, a diverse group of agencies, covering nine Bay area counties, developed the Integrated Regional Water Management Plan (IRWMP) and the City adopted it in November of 2006. The plan is available at <http://www.bayareairwmp.net>.



1999 aerial photo of the Palo Alto Regional Water Quality Control Plan (Also see photo of Palo Alto Sewage Treatment Plant taken around 1948 in the “Overall Environmental Quality” chapter.)

The goals of the plan are:

1. Foster coordination, collaboration and communication among Bay Area agencies responsible for water and habitat-related issues.
2. Achieve greater efficiencies and build public support for vital projects.
3. Improve regional competitiveness for funding.



The IRWMP includes 3 recycled water projects:

1. Project #55: Mountain View/Moffett Area Water Recycling Project is the project to construct a recycled water trunk line from the Palo Alto RWQCP south to Mountain View to serve approximately 120 customers.
2. Project #64: Palo Alto Recycling Project is a project to serve recycled water produced at the RWQCP to the City of Palo Alto, focusing on customers located within the Stanford Research Park area.
3. Project #65: Palo Alto Regional Water Quality Control Plant Water Recycling Program - Phase 3 Expansion is an outcome of the long-term goals study, which is the RWQCP's sustainability road map. It is a multi-purpose project designed to address recycled water quality and salinity management quality issues, the effluent receiving water quality issues, and to expand recycled water production, distribution, and use. The three components of the Project are: (1) replace existing chlorine disinfection with ultraviolet light, (2) install a desalter for advanced treatment of the recycled water; and (3) expand the recycled water distribution system in Palo Alto.

## Water Reclamation

In 1991, the RWQCP partners began a study of the feasibility of expanding the use of recycled water to serve additional customers. In 1992, the

results were published in, “Water Reclamation Master Plan for the RWQCP” and an EIR was done which identified potential projects. In 1995, the Council certified the EIR but suspended im-



plementation of the projects because the need and viability were uncertain. At that time the Council adopted the Reclamation Policy. It was based on two objectives:

1. To reduce metals discharge to the Bay in order to meet the mass limit of the RWQCP discharge permit, and
2. To supplement the water supply.

The policy included two guidelines:

1. The RWQCP will maintain the current recycled water to Shoreline Park, the Mountain View/North Bayshore Area, Greer Park, Palo Alto Golf Course, and water truck hydrants.
2. Evaluation of the projects covered in the EIR could be triggered by the following conditions:
  - Changes in the RWQCP discharge permit requirements
  - Increased mass loading to the RWQCP
  - Requests by partner or local agencies
  - Availability of federal or other funds
  - Supply side issues

One of the projects identified in the Water Reclamation Master Plan EIR (1995) was the redevelopment of the pipeline serving the Shoreline Park reuse site. This project came up for reconsideration in 2003 when the pipeline became deteriorated beyond repair—the wastewater discharge

permit required that the plant maintain delivery service to existing reuse sites. Because the pipeline would traverse sensitive wetlands, an in depth study would be required and the State Water Resources Control Board approved a grant for the study. In June, 2003, the City hired Raines, Melton, & Carella, Inc., to prepare the study which was to include:

- investigation into the use, delivery and storage alternatives, environmental impacts, and reuse site impacts of reclaimed water for landscape irrigation in the service area
- A facilities planning report;
- An environmental clearance document;
- Commitments from users

In 2006, the Mountain View/Moffet Field project was included in the IRWMP as Project #55. The project is under construction and scheduled for completion in early 2009 (*Map 10.1*).

Also in 2006, the City completed a Recycled Water Market Survey to update the Water Reclamation Master Plan (1995). The Survey identified a project to serve about 840 acre-feet per year of recycled water demand. However, further study was needed to determine the feasibility and to seek grant funding. The State Water Resources Control Board (SWRCB) approved a planning grant for the

study and other potential funding was identified.

In April 2007, the City hired RMC Water & Environment to prepare a *Recycled Water Facility Plan*. The plan would meet all the requirements of the SWRCB and provide analyses of all the essential components of a potential expanded recycled water system to serve additional users in the City. The objective was to develop the plan so that it would be ready to implement and, thus, be well-positioned to receive any available outside funding.

As of February, 2008, this project is in the planning stage.

### Long Term Goals Study

The RWQCP was constructed in 1970. Over the years environmental concerns, technologies, and regulations changed significantly and in 1998, the Council directed staff to do a Long-Term Goals Study to determine guiding principles for future modifications and improvements to the RWQCP.

Over a period of 2-3 years, public workshops were held by a core group of about 20 stake holders. The workshops resulted in a list of long-term goals presented to the Council. The goals are;

- Meet future capacity needs
- Meet or exceed regulatory requirements

- Minimize or eliminate toxins in the influent (e.g. dioxin)
- Minimize energy consumption and maximize energy life cycle efficiency
- Minimize or eliminate potentially hazardous chemical usage
- Minimize or eliminate total release of toxins to the environment
- Minimize impact on ecosystem
- Minimize impacts on community and neighboring communities
- Minimize or justify financial impacts on ratepayers
- Involve stakeholders in the decision making process
- Immobilize or beneficially reuse persistent toxins
- Take a leadership role in promoting beneficial reuse and environmental enhancement
- Maximize worker safety
- Maximize recycled water as a supplemental water source

The report noted that the goals would assist in designing the future new wastewater system and that conceptual design work would begin in 2004.

### Disinfection Process

During the workshops that resulted in the long-term goals, stakeholders expressed concern about the use of chlorine gas to disinfect treated water discharged into the Bay. In fact, elimination/minimization of chlorine use was core to several of the newly established long-term goals. In October of 2004, the City hired Raines, Melton & Carella, Inc., to assist the City and stakeholders to become knowledgeable in available disinfection technologies.

By 2006, the preferred solution was to replace the existing chlorine disinfection facility with a technically sound, environmentally friendly, and financially viable ultra-violet (UV) disinfection facility. In June of 2006, the Council approved a contract for the preparation of a disinfection facility plan i.e., a



A school class tours the Operations Control Room which is the nerve center of the Regional Water Quality Control Plant .

Photo courtesy of staff

technical analyses, refinement and confirmation of facility requirements, life cycle analyses, environmental review, and economic review for the comparisons of UV and Chlorine disinfection.

In July of 2007, the Council amended the existing contract with the same firm—now called RMC Water & Environment to proceed with the design of the UV Disinfection Facility. Also in 2006, the UV facility was included in the IRWMP as a component of Project #65.

As of February, 2008, the project is in the design phase.

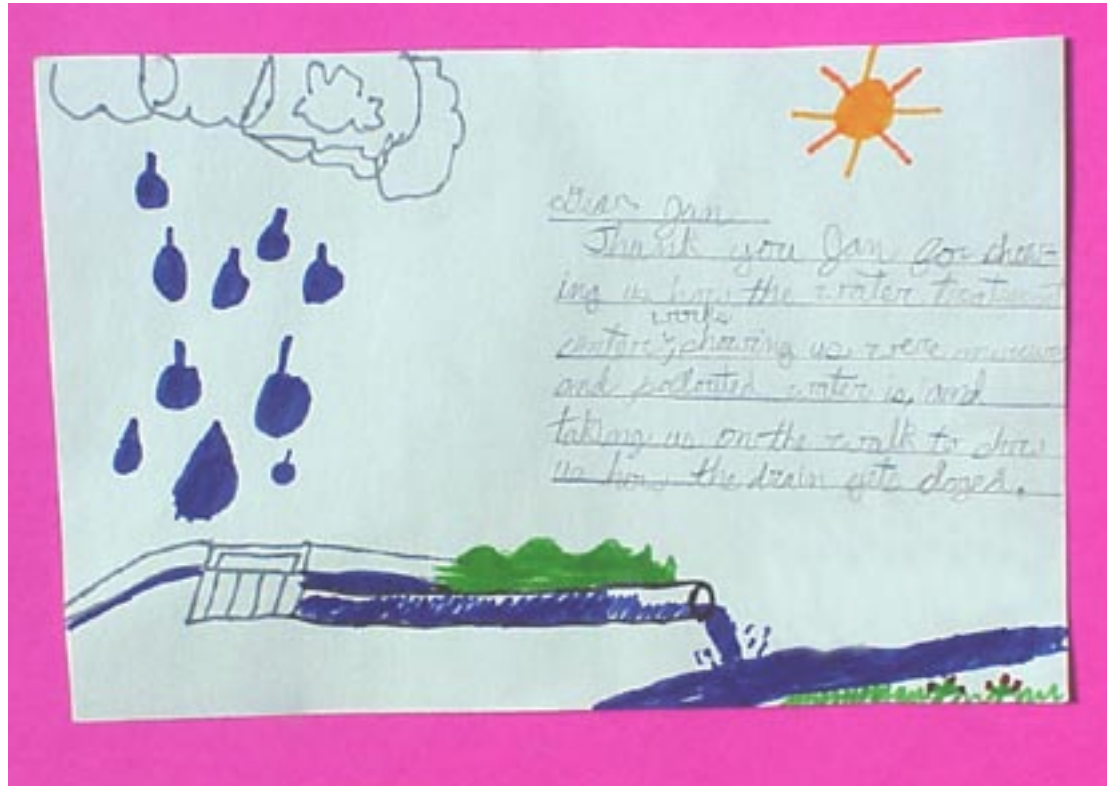
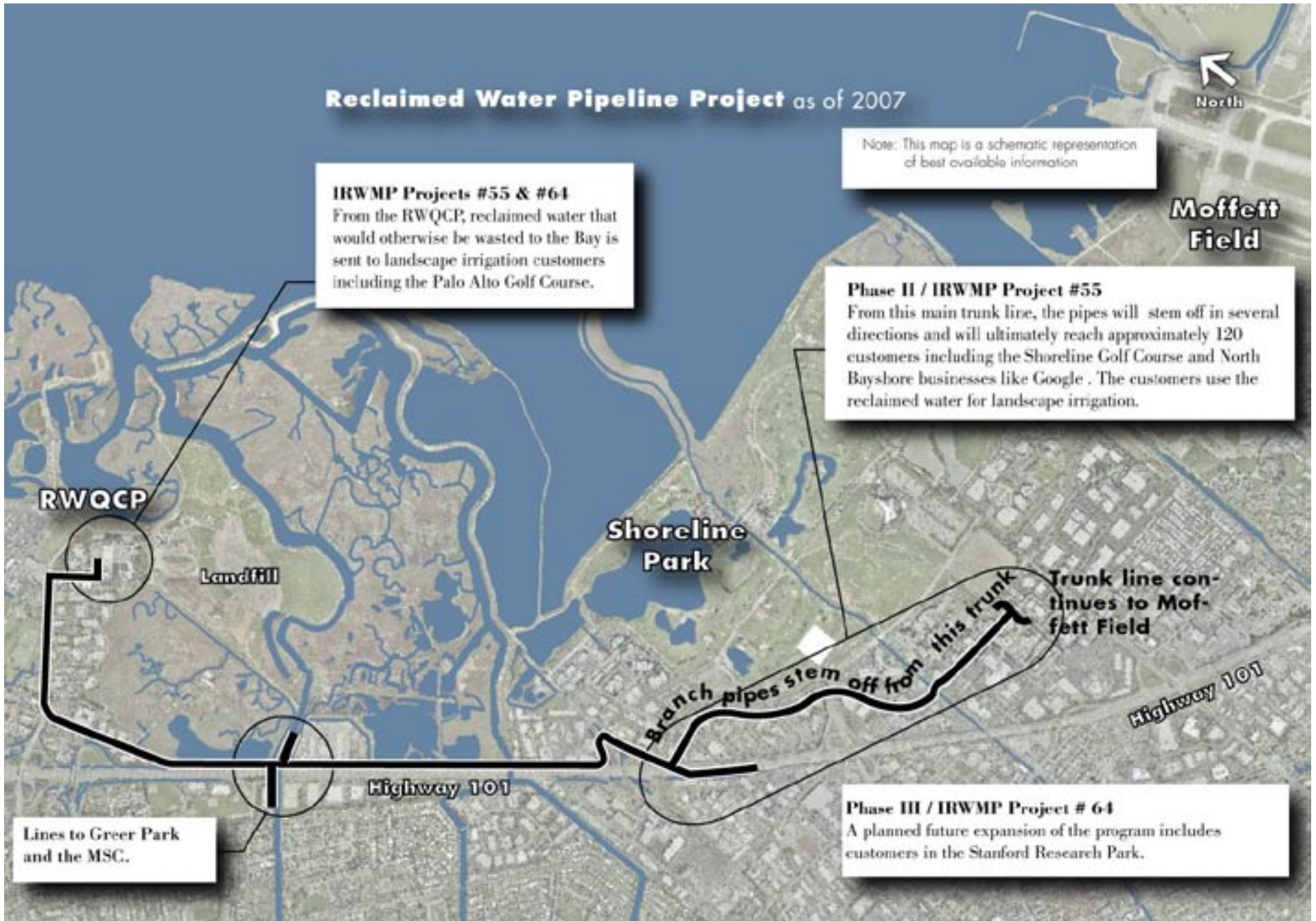


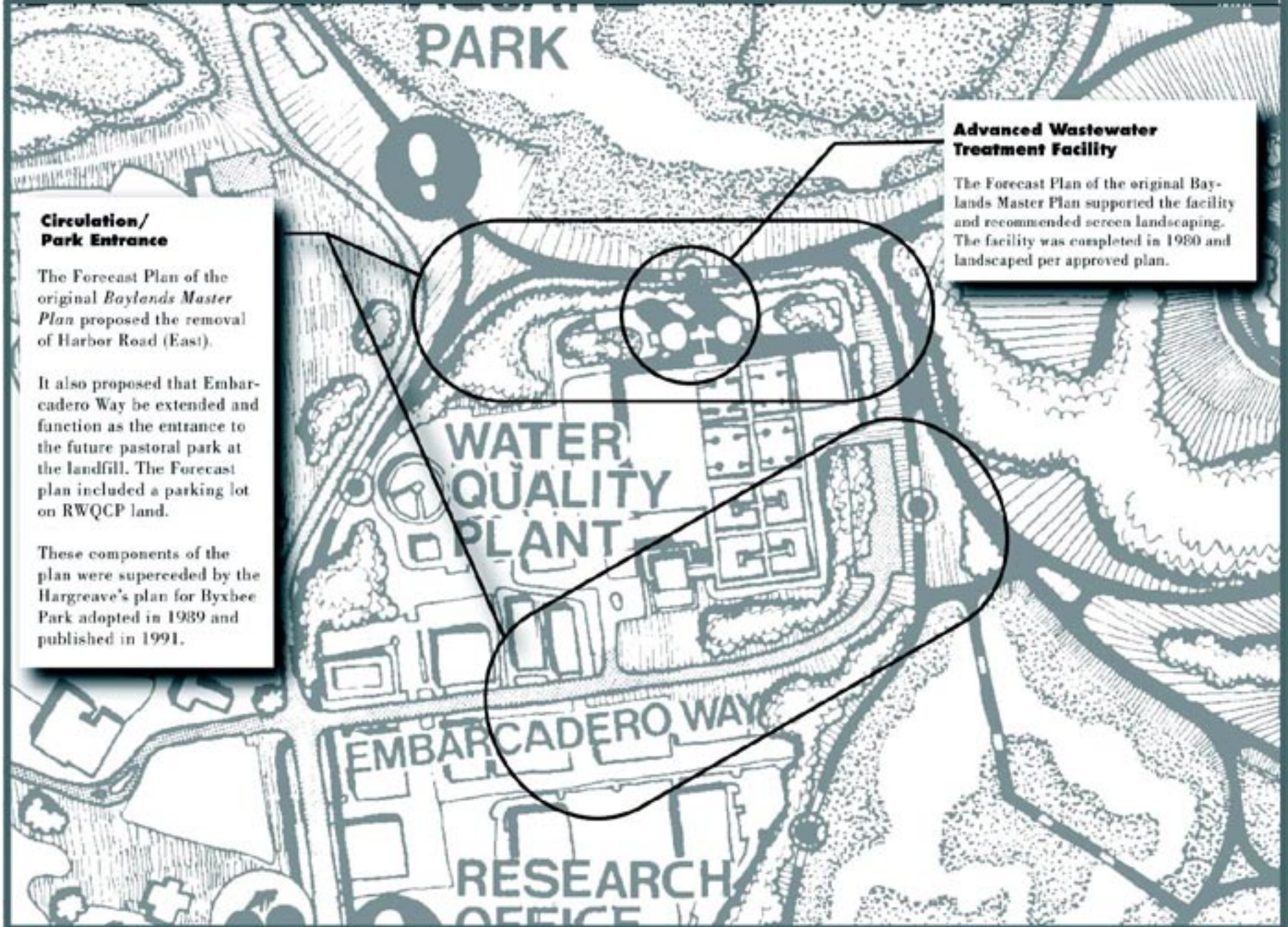
Photo courtesy of staff

A thank-you letter from a young student who toured the RWQCP reads, "Dear Jan, thank you Jan for showing us how the water treatment center works, showing us where mercury and poluted water is, and taking us on the walk to show us how the drain gets clogged."



RWQCP

## 1979 BMP Forecast Plan for RWQCP (Detail from original fold-out map)



### Circulation/ Park Entrance

The Forecast Plan of the original *Baylands Master Plan* proposed the removal of Harbor Road (East).

It also proposed that Embarcadero Way be extended and function as the entrance to the future pastoral park at the landfill. The Forecast plan included a parking lot on RWQCP land.

These components of the plan were superseded by the Hargreave's plan for Byxbee Park adopted in 1989 and published in 1991.

### Advanced Wastewater Treatment Facility

The Forecast Plan of the original *Baylands Master Plan* supported the facility and recommended screen landscaping. The facility was completed in 1980 and landscaped per approved plan.



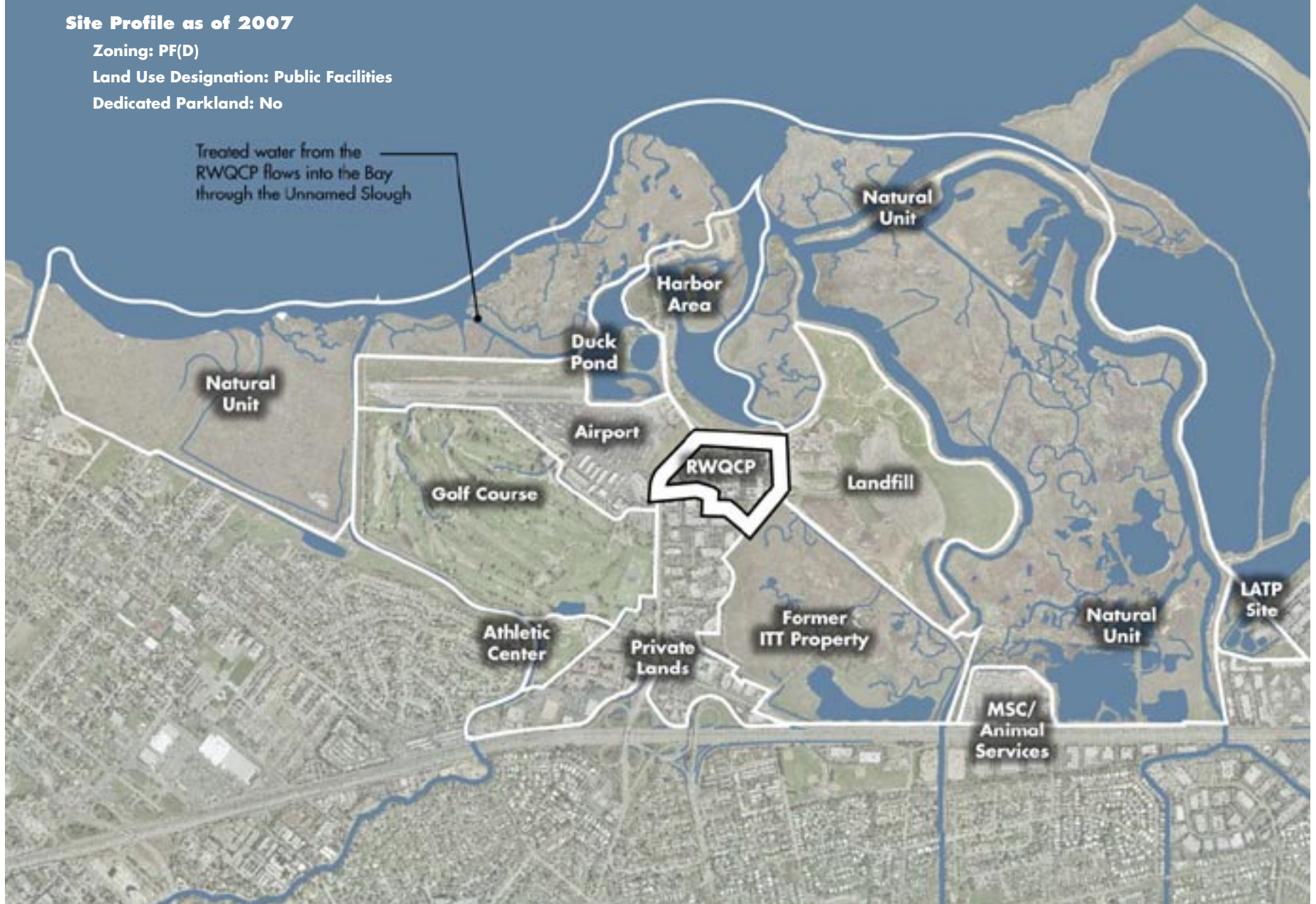
# RWQCP in Context

## Site Profile as of 2007

Zoning: PF(D)

Land Use Designation: Public Facilities

Dedicated Parkland: No





## RWQCP Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the RWQCP, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

### Advanced Wastewater Treatment Facility

1. The advanced waste treatment improvements to the Regional Water Quality Control Plant were completed in 1980. The project was landscaped per approved plan. The landscaping shall be maintained. *(A restoration project is scheduled for FY 2008-2010 to address degradation of the landscaping.)*

### Water Reclamation

2. Water Reclamation Projects shall be evaluated and guided by the adopted Reclamation Policy. *(Council adopted Reclamation Policy on April 24, 1995)*

### Long Term Goals

3. Projects and development of the RWQCP shall be evaluated and guided by the Long-Term Goals established in 2001. *(Council endorsed Long-Term Goals on October 2, 2001—see page 180-181)*

Photo courtesy of staff



# 11.

## MSC & Animal Services

### Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

#### Before the Baylands Master Plan

Around 1914, the City entered into a lease agreement with Stanford University for the area that is now the site of the Sheraton Hotel on El Camino Real. Here the City built its Municipal Services Center (MSC) to house facilities for public works, utilities, purchasing and stores, maintenance and equipment, and animal services. However, by the 1960s the City had determined that this was not the best use of that land and hired Paul Huston to explore the possibility of moving the MSC to the Baylands. The City then sub-leased the El Camino site to the Holiday Inn Hotel.

Meanwhile, a filling project was proposed near the Bayshore Freeway that required only 6 feet of fill,

and in 1964, the area was filled for the relocation of the facilities from the El Camino site. This relocation project was coincidental to the dedication of City-owned lands as parkland in 1965 and the ordinance specifically excludes the MSC site from park dedication, in order to accommodate the MSC facilities. This exclusion was one of five. (*Map A.1 in Appendix.*)

By 1967, some components of the MSC had been relocated to the Baylands site—where they are today. These included the facilities for public works, utilities, purchasing and stores, and maintenance equipment. The remaining component of the MSC—Animal Services—was intended to be merged with the County’s Humane Society facility; however, at the last minute, the County withdrew its

offer, and by 1972, the Animal Services component was relocated along with the other MSC facilities.

#### 1978 • Baylands Master Plan

In 1976, the analysis prepared for the *Baylands Master Plan* categorized the complex as an established land-oriented use/urbanized landscape with intensive, high impact development. There were no plans for new construction and no projected new impacts. Therefore no changes were recommended.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* which included the continuance of current operations; but also called for new landscape screening between the MSC and the future landfill area park.

## 1988 • Baylands Master Plan Amended Summary Report

There were no changes to the policies for the MSC and Animal Services facilities in 1988, however the following are significant activities that occurred at the facility around 1987.

### Animal Services Center

Between 1978 and 1988, an isolation building and a euthanasia room were added to accommodate an increase in animals handled, new services, and changes in legal requirements.

### SCADA Building

The Utility Control Center was built in 1987. It houses the system to control personnel and equipment for remote operation and monitoring of the electric, gas, wastewater, water, and storm water utilities. The equipment described is called SCADA which stands for Supervisory Control and Data Acquisition. In addition, the building is an emergency response center during interruptions to the utility system and acts as a daily operating center for the electric system.

### MSC Master Plan

In 1987, the City prepared an MSC Master Plan—it is covered in the 2008 section that follows.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Comprehensive Plan

In 1998, the City adopted the current *Comprehensive Plan*. Map L-5, in the *Comprehensive Plan*, establishes an employment district called the San Antonio Road/Bayshore Corridor District. The district includes the MSC site. Comprehensive Plan policies for this district include:

Policy B-33 states, “Discourage actions that could increase the cost of business space in the San Antonio and East Bayshore areas.” And supportive text for Policy B-33 says, “The East Bayshore and San Antonio areas serve a special economic role. Its relatively low-cost space provides opportunities for a variety of service industries and start-up businesses that could not feasibly locate in the higher cost areas. This role should be protected in the future.”

Policy L-46 states, “Maintain the East Bayshore and San Antonio Road/Bayshore Corridor areas as diverse businesses and light industrial districts. And supportive text for Policy L-46 says, “These areas provide valuable space for small businesses

and support services. The design of new or redeveloped buildings and landscaping, particularly northeast of the Bayshore Freeway, should reflect the area’s location near the Baylands. Connections to the nearby Baylands should be strengthened by taking advantage of views and improving bicycle and pedestrian connections to the open space area.”

### Municipal Services Center

#### MSC Master Plan

In 1987, the team of Singer & Hodges, Inc. Landscape Architecture and Woodson/Barksdale Architects, developed a Master Plan for the Municipal Service Center. The purpose stated in the MSC Master Plan was to develop a comprehensive master plan for the modifications to the present MSC and to set forth guidelines for future development. It was approved by the City Council on May 18, 1987.

#### Seismic Bracing of MSC Buildings

The overall conclusion of the 1987 MSC Master Plan was that the facility was functionally obsolete.

As part of the routine care of buildings within the City’s inventory of facilities, the condition of each building is reviewed periodically. The MSC buildings were built in the early 1960s and are of tilt-up construction. Such construction has come under scrutiny as a result of damage to that type of building during earthquakes.



**Seismic bracing  
(typ.)**

Replacement of the MSC facilities was considered to be too expensive. In 1998, this temporary bracing was installed. It is not a full seismic upgrade. The bracing is designed to prevent building collapse and ensure life safety for the occupants in the event of an earthquake. The structures would be unusable afterwards.

In 1997, a Request for Proposals was sent out for structural engineering consultants to evaluate the buildings and make recommendations to mitigate any seismic deficiencies. Dames & Moore was contracted to provide this report. Their recommendation was to replace the facility entirely since all the buildings are collapse hazards. In the event of an earthquake, the buildings could be subjected to forces four times as great as they are capable of handling.

Replacement of the facilities was considered to be too expensive. Dames & Moore was contracted to

design temporary bracing. In 1998, Anderson Pacific was contracted to install the temporary bracing that still exists on site. The temporary bracing is not considered, nor should be considered, a full seismic upgrade of the buildings. Extensive damage is expected to occur and the buildings are expected to be unfit for use after a major seismic event. The bracing is designed to prevent building collapse and ensure life safety for the occupants, even though the structures will be unusable.

Federal Emergency Management Agency (FEMA) maps all areas relative to their flood potential.

The MSC is in an area that can be expected to flood to a depth of 3 feet. Risk maps done by the U.S. Geological Survey show the area to be prone to liquefaction in the event of an earthquake.

### **Landscape Screening**

The following four paragraphs are excerpted from Section G of the MSC Master Plan's recommendations: "Landscaping, Bayland and Flood Wall Considerations." This information is relevant to the *Baylands Master Plan* policy for the MSC, which requires screening between the MSC and the future landfill area park.

"The most meaningful improvements to the appearance of the MSC will be additional landscaping.

The majority of the proposed landscaping will occur around the perimeter of the site. The intention of the landscaping will be to screen and soften the visual impact of the MSC from the surrounding Baylands and from East Bayshore Road and Highway 101.

It is recommended that a 30 foot landscaped buffer zone be established between the toe of the flood control levee (the flood wall) and the perimeter fence. The buffer zone should be made up of plants, groves of trees and shrubs conforming to the *Baylands Master Plan* plant list prepared by Helen Norman Proctor. The

ground plan should be hydroseeded with a naturalized low growing grass. The slopes of the flood control levee should be planted in a similar naturalistic fashion to further screen the MSC. The buffer planting would be best irrigated by water conserving emitter or low flow bubbler head type irrigation system.”

During the 1987 review process of the MSC Master Plan, the Architectural Review Board added the following comment, “The frontage and buffer landscaping should be given a high priority for funding as a first phase of the implementation of the Master Plan.”

The MSC Master Plan diagrams that illustrate this excerpt are shown in *Map 11.2*.

In 2005, the Matadero Creek Remediation Project partially implemented (in some areas), the Baylands Master Plan requirement for landscaping between the MSC and the future landfill area park. At the west corner of the MSC, between the creek and the MSC fence, all existing plants were removed, including a row of Eucalyptus trees, and some new replacement trees and shrubs were planted. Along the southwest side of the MSC, a new landscape buffer similar to the MSC Master Plan was installed. However, along the northwest and northeast (rear) sides of the MSC, the creek bypass channel and new access road greatly reduced or eliminated the potential planting

area outside the MSC fence. For this reason, fewer landscape trees were planted; and for over 400 feet, no perimeter landscaping was installed. (*Map 11.2*). It is no longer possible to implement the additional landscaping shown in the MSC Master Plan outside of the MSC fence.

### **Photovoltaic Project**

In May 2003 the City was awarded a Department of Energy grant to fund approximately half of a

\$2.7 million solar installation at various public sites as part of the City’s Photovoltaic (PV) Demonstration Project. The other half of the funding was provided by the City’s Utilities Department. The objective of the project was to demonstrate the benefits and versatility of clean, renewable photovoltaic (solar) systems and to showcase sustainable design to the community. A diverse range of photovoltaic system types were installed on a variety of City buildings and sites to educate staff, the pub-



Photo courtesy of staff

The photovoltaic panels installed along the frontage road at the MSC are “trackers”. They pivot to follow the sun—maximizing the amount of electricity they can produce each day.

lic, and even other city governments about solar electric technology. In addition to reduced utility costs, the City will generate revenue from providing locally-created “green attributes” of the energy generation to the City’s Green Energy Program.

The three PV systems have been installed:

- On the roof of the Lucy Evans Interpretive Center (*a periscope allows visitors to view the panels*)
- On the roof and over certain doors of the Cubberley Community Center



These Utility Department transformers are stored at the MSC—on a huge concrete pad designed and built specifically for that purpose

- On carports and along the frontage road of Highway 101 at the MSC.

It is estimated that the power generated at the three sites will produce enough electricity to supply the needs of 75 homes.

### **Integrated Vehicle Fueling Facility**

In July 2003 Council approved a contract with Blymyer Engineers to design a new Integrated Fueling Facility. The project entails the design of an

entirely new automotive fueling facility including two underground storage tanks, dispensing equipment and all associated piping, electrical and leak monitoring systems. In September 2006 the City engaged American Construction to install the system. Completion is anticipated in the fall of 2008.

### **Electrical Co-generation Facility**

In 2001, Palo Alto installed four natural gas fixed electrical generators at the MSC to supplement peak demand on the electrical grid. These generators are operated once a week.

### **MSC Equipment Washing Facility Upgrade**

CIP Project # VR-01002 (FY 06/07 ) followed the completion of the new fueling facility. The wash pad which was inadequate to handle the sediments from mud-covered heavy equipment, was frequently overwhelmed and in need of maintenance, and potentially violated the Federal Clean Water Act. The new wash facility was constructed in the current location of the existing fueling station. It has a larger wash water collection sump, an additional wash water storage tank, a new wash water treatment system, and is enclosed in a concrete masonry unit structure to prevent wash water runoff from entering the storm drain system.

## Animal Services

Since 1993, the City of Palo Alto has provided regional animal control and sheltering services to Los Altos, Los Altos Hills and Mountain View. On December 15, 2003, the Council approved new 10-year service agreements with Los Altos, Los Altos Hills and Mountain View and a 20-year service agreement with the City of Sunnyvale. In order to accommodate the additional need to house and treat the increased number of animals from Sunnyvale, plans were developed to expand the administrative area of the shelter. The four other cities agreed to share in the cost of the shelter design and construction.

In 1996, the City retained a consultant, Adamson Associates, to evaluate the condition of all of the City's buildings. The report recommended renovations for the Animal Shelter that included: electrical, mechanical, Americans with Disabilities Act (ADA) upgrades, roofing, painting, and flooring. These recommendations were incorporated into the City's Infrastructure Management Plan and Capital Improvement Program. However, renovations were delayed due to the potential contract with the City of Sunnyvale.

In February 2004, Council approved a contract with Philip Henry Architecture for design services for the shelter improvements. The proposed expansion project would have combined the renovations to the existing building recommended in the Adamson Associates report as well as provided expanded dog kennels and more space for the shelter needs of both Palo Alto and the other client cities.

Between May of 2006 and February of 2007, the project was advertised for bids three times. However, all the bids have been greater than the construction budget. The partner cities have not agreed to increasing their portion of the funding and all bids have been rejected.

On March 27, 2007, the Sunnyvale City Council voted to withdraw from participation in the project, opting instead to secure animal services through a contract with the Silicon Valley Humane Society.

As of February 2008, a modified improvement plan that includes accessibility upgrades, new roof, heating, and air conditioning is expected to be advertised for bids in mid 2008.



Surrendered pet snake, a Bol Python named "Monty", meeting a prospective adopter at the Animal Services Center in the Palo Alto Baylands, March 2001

Photo courtesy of Animal Services Center Staff

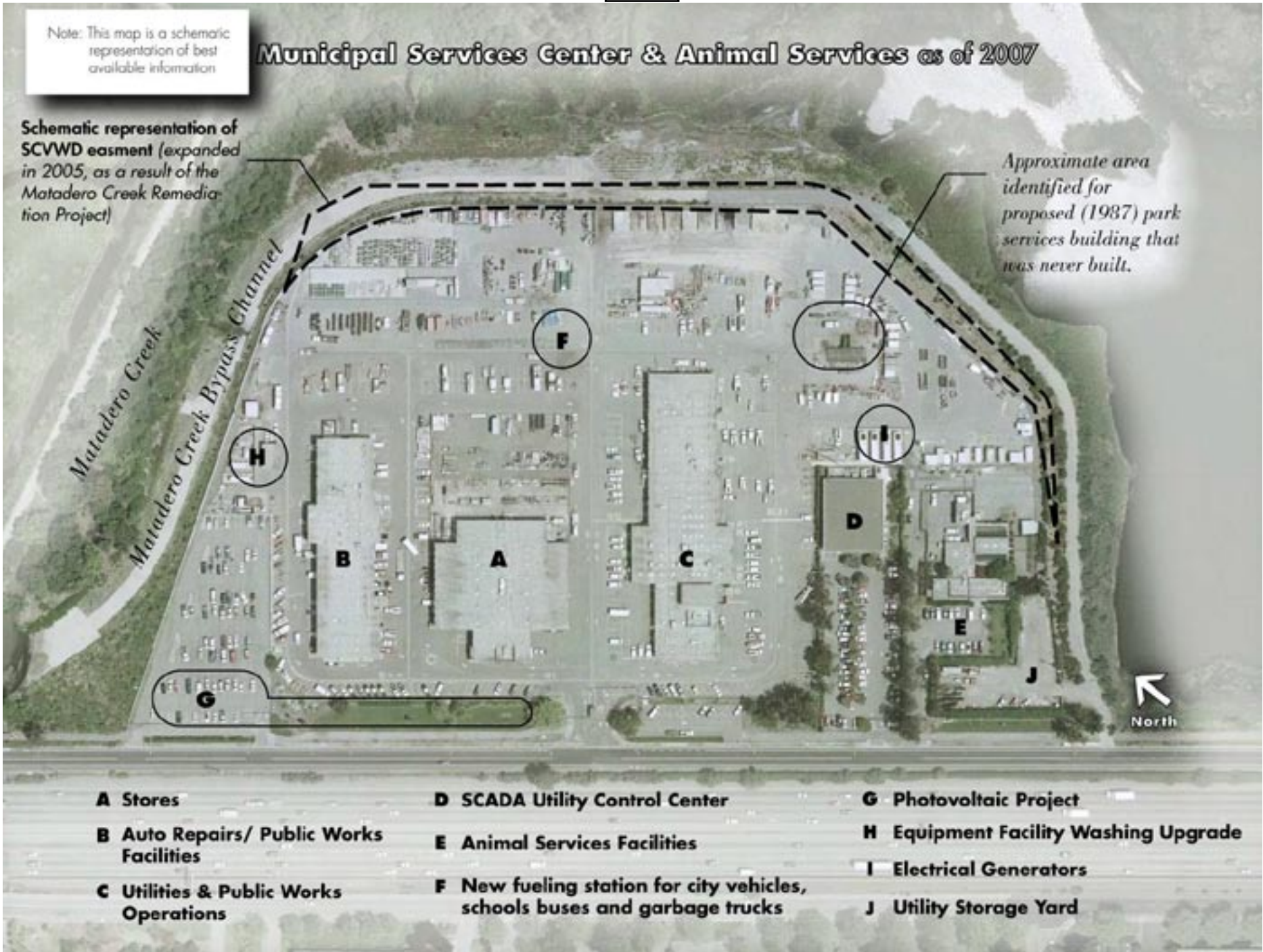


Note: This map is a schematic representation of best available information

# Municipal Services Center & Animal Services as of 2007

Schematic representation of SCVWD easment (expanded in 2005, as a result of the Matadero Creek Remediation Project)

Approximate area identified for proposed (1987) park services building that was never built.

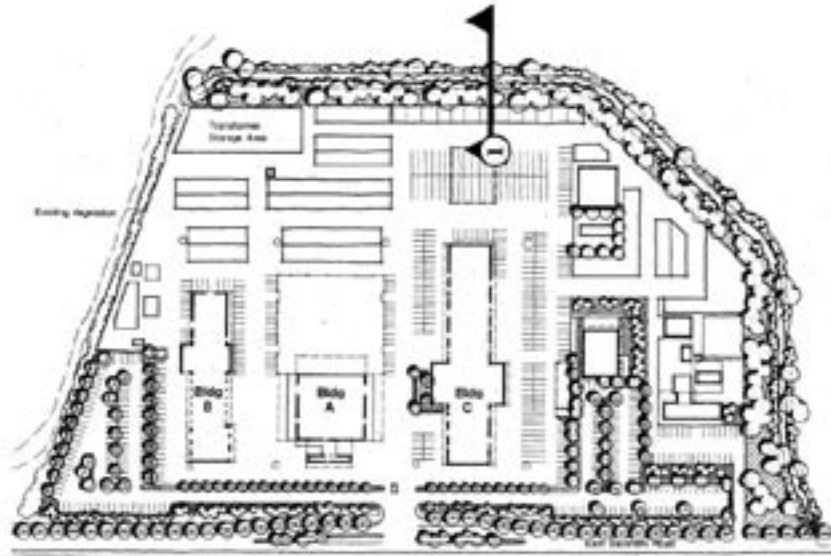


- |                                                |                                                                                  |                                             |
|------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------|
| <b>A</b> Stores                                | <b>D</b> SCADA Utility Control Center                                            | <b>G</b> Photovoltaic Project               |
| <b>B</b> Auto Repairs/ Public Works Facilities | <b>E</b> Animal Services Facilities                                              | <b>H</b> Equipment Facility Washing Upgrade |
| <b>C</b> Utilities & Public Works Operations   | <b>F</b> New fueling station for city vehicles, schools buses and garbage trucks | <b>I</b> Electrical Generators              |
|                                                |                                                                                  | <b>J</b> Utility Storage Yard               |

MSC/Animal Services

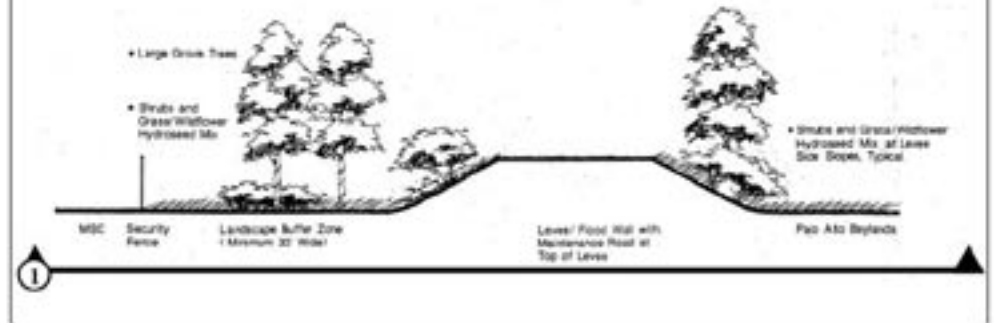
### A. 1987 MSC Master Plan: Landscaping Plan

As shown in the plan, the 1987 MSC Master Plan included a landscaping plan that implemented the Baylands Master Plan policy to add screen landscaping between the MSC and the future landfill area park.



### B. 1987 MSC Master Plan: Landscaping Plan Section at the Levee/Access Road

As shown in this section drawing, the 1987 MSC Master Plan landscaping plan utilized the 30' wide planting area between the MSC fence and the SCVWD levee/access road.



### C. 30' Wide Planting Area (2001 Aerial Photo)

Aerial photography from 2001 shows the 30' wide planting strip utilized by the 1987 MSC Master Plan landscaping plan.



### D. Planting Area Reduced or Eliminated (2006 Aerial Photo)

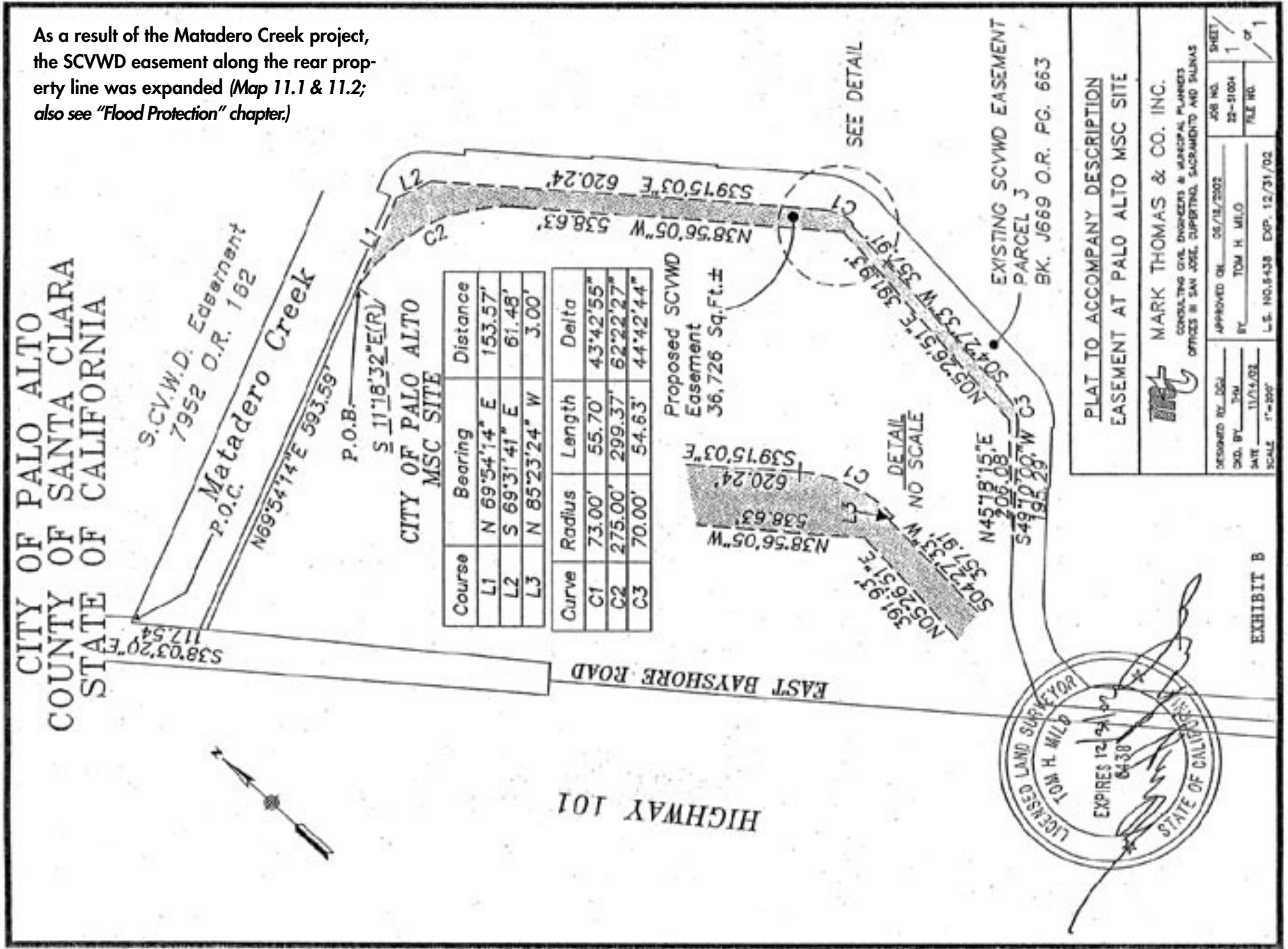
2005 Matadero Creek Remediation Project Landscaping Installation:

1. The bypass channel reduced the planting area to a 10' wide strip behind a retaining wall; some trees were planted in this area.
2. The relocated SCVWD access road eliminated the planting strip and no landscaping was installed in this area. It will not be possible to install the remaining landscaping shown in the MSC Master Plan outside of the MSC facility fence.
3. Landscaping installed in this area is per the MSC Master Plan's landscaping plan.
4. Existing plants were removed and replacement planting installed (This area was not a part of the MSC Master Plan's landscaping plan.)



### SCVWD Easement at the MSC Site

As a result of the Matadero Creek project, the SCVWD easement along the rear property line was expanded (Map 11.1 & 11.2; also see "Flood Protection" chapter.)



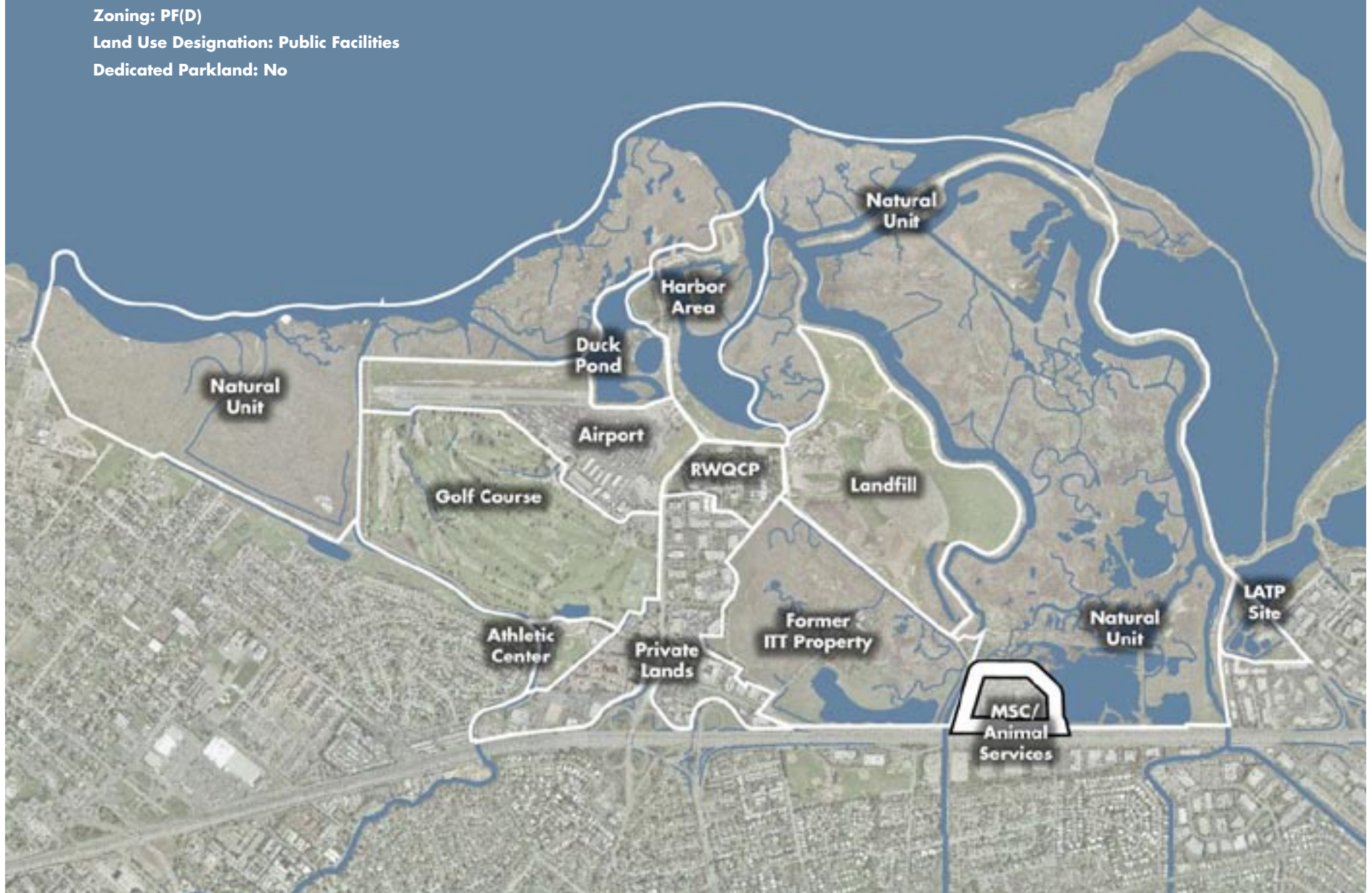
### MSC/Animal Services in Context

**Site Profile as of 2007**

Zoning: PF(D)

Land Use Designation: Public Facilities

Dedicated Parkland: No



## **MSC/Animal Services Policies** (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the MSC and Animal Services, activities in this area must also comply with policies stated in the “Overall”, “Flood Control”, and “Access & Circulation” chapters as well as policies stated for the surrounding areas.

### **Municipal Services Center**

1. Continue current operation of the Municipal Service Center.
2. Add screen landscaping between the MSC and the future landfill area park and maintain all perimeter landscaping.

### **Animal Services**

3. Continue operation of the Animal Services Center.



Photo courtesy of staff

From 1958—1972, the Los Altos Treatment Plant Site functioned as a mu with the City of Los Altos. In 2007, the City of Palo Alto became the sole owner of the property and began the process of annexing the site. The future use of the site is undetermined.

# 12.

# Los Altos Treatment Plant Site

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

Los Altos developed the site as a sewage treatment plant and operated the plant from 1958 to 1972.

### 1978 • Baylands Master Plan

Although a part of incorporated Los Altos, this area was not adjacent to Los Altos; it was adjacent to Palo Alto. Therefore, the Santa Clara County Local Agency Formation Commission (LAFCO) placed the land within Palo Alto's sphere of influence—compelling Palo Alto to assign a Comprehensive Plan land use designation. The City assigned the "Public Park" designation to the area.

The analysis prepared for the Baylands Master Plan did not address this site, but when the Planning Commission developed its recommendations for the Council, they unanimously recommended that the Public Park land use designation for Los Altos Sewer Plant site remain as shown in the Comprehensive Plan at that time and the Council adopted that recommendation.

### 1988 • Baylands Master Plan Amended Summary Report

On August 10, 1984, Palo Alto and Los Altos entered into a lease/purchase agreement for the former LATP site. Highlights of the agreement included:

- After 8 years of payments, Palo Alto would own an undivided half interest in the site.
- Palo Alto was to control the site's use but lease revenue would be divided between the two cities.
- If no development occurred within 15 years, either party could elect to convey its interest to the other party and would then be obligated to pay one-half of an agreed upon price.
- The property was divided into two areas: 9.3 acres were deemed developable, and 3.973 acres were to be dedicated as open space conservation.

At this time, Palo Alto was interested in possibly developing a solid waste facility on the 9.3-acre developable portion. And when the *Summary* doc-

ument was updated in 1988, the following note was added to the LAMP Site policy, “Staff was directed to explore the use of this site as a future solid waste transfer station (*Council action, July 2, 1984*).”

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Chronology 1984—February 2008

Between 1984 and 1991, Palo Alto made payments per the agreement and became the owner of an undivided half interest in the site. The site was managed by Palo Alto and rented to various tenants including the Palo Alto Utilities Department for a staging/storage area. Rental revenue was divided between the cities equally.

By 1991, Palo Alto, Sunnyvale, and Mountain View had entered into a 30-year agreement to use the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station) and the original idea of using the LAMP site as a refuse transfer station was abandoned. The City began to explore other possible uses for the site.

In FY1996/1997, the Council approved funding for the Los Altos Treatment Plant Site Development Project to explore options for use of the site. This project included a proposal for a refuse operations facility, a household hazardous waste facility, and a Utility storage area at the site.

Analysis done for this project resulted in dividing the site into three areas (*See Map 12.1*):

#### Area A

3.9 acres was undeveloped and consisted of non-native grasslands on top of fill material and brackish marsh along the perimeter of a remnant slough channel, separated from Area B by a levee. (*Area A was designated as open space in the original (1984) agreement between Palo Alto and Los Altos.*)

#### Area B

6.64 acres was the site of the former sewage treatment plan (LAMP), which contained a vacant industrial facility, non-native grassland, and six abandoned treatment ponds (B1 through B-6).

#### Area C

2.62 acres adjacent to the RWQCP metering station and separated from Area B by Ditch 1, was primarily undeveloped, mostly non-native grassland and contained a smaller vacant industrial facility.

Because the project site was close to the San Francisco Bay and was found to have potential wetlands on site, the City’s consultants prepared a Jurisdictional Waters and Wetlands Report, an Environmental Impact Report (EIR), and a Conceptual Mitigation and Monitoring Plan in August 1996, August 1997, and August 1999, respectively.

In December 1996, the Army Corp of Engineers (ACOE) sent the City of Palo Alto a letter stating they concurred with the Jurisdictional Waters and Wetlands Report for the LAMP site. This jurisdictional delineation expired in November 27, 2001.

### Land Use Designation Change From Park

In 2000, the Palo Alto City Council certified the EIR, but chose not to pursue development of the proposed project at that time. Also in 2000, the Council approved both a Land Use Designation change and pre-zoned the site.

- The land use designation was changed from Public Park to a combination of Public Conservation Land for approximately 8.96 acres and Major Institution Special Facilities for approximately 4.62 acres.



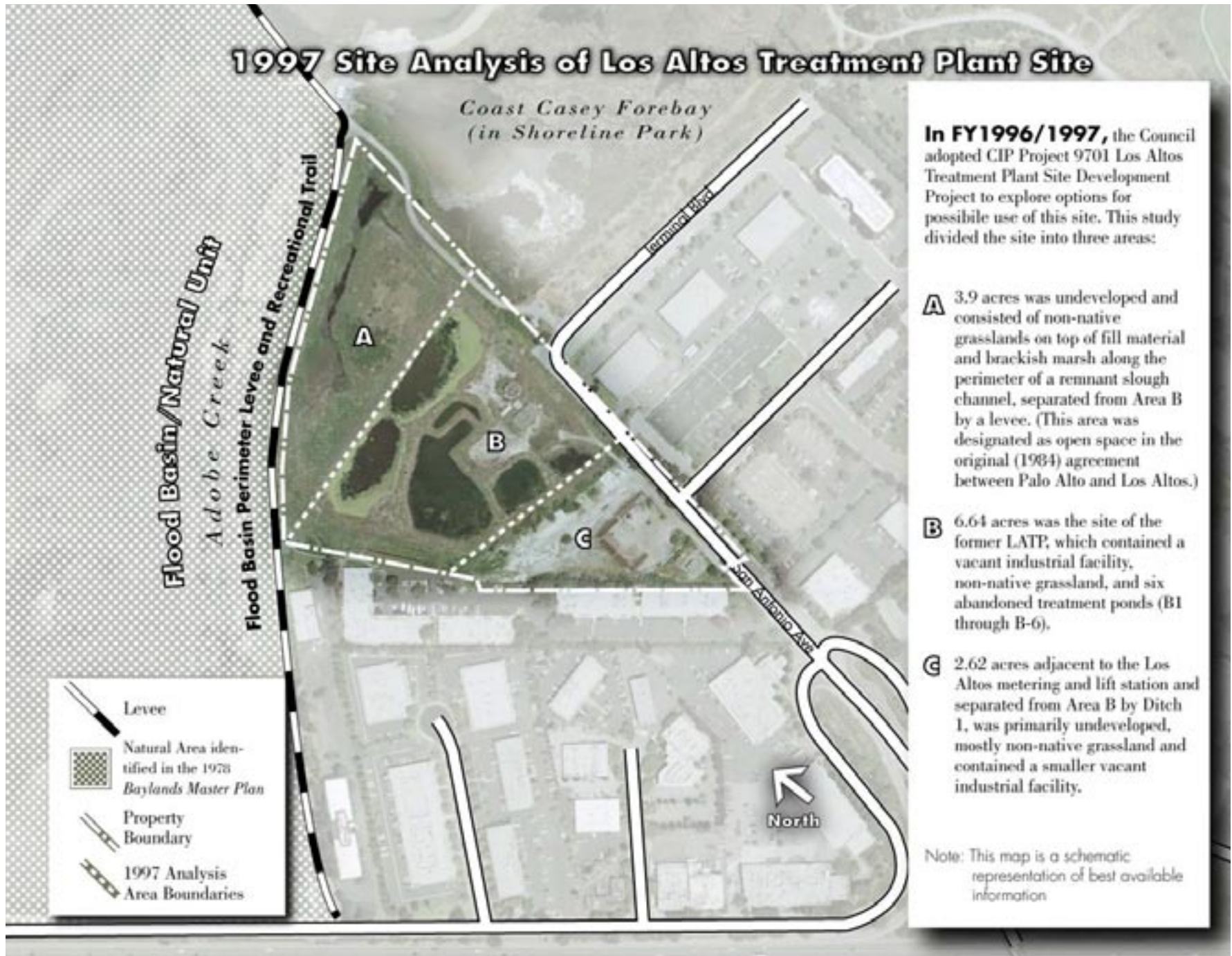
- The site was pre-zoned Public Facilities with a Site and Design combining district overlay.

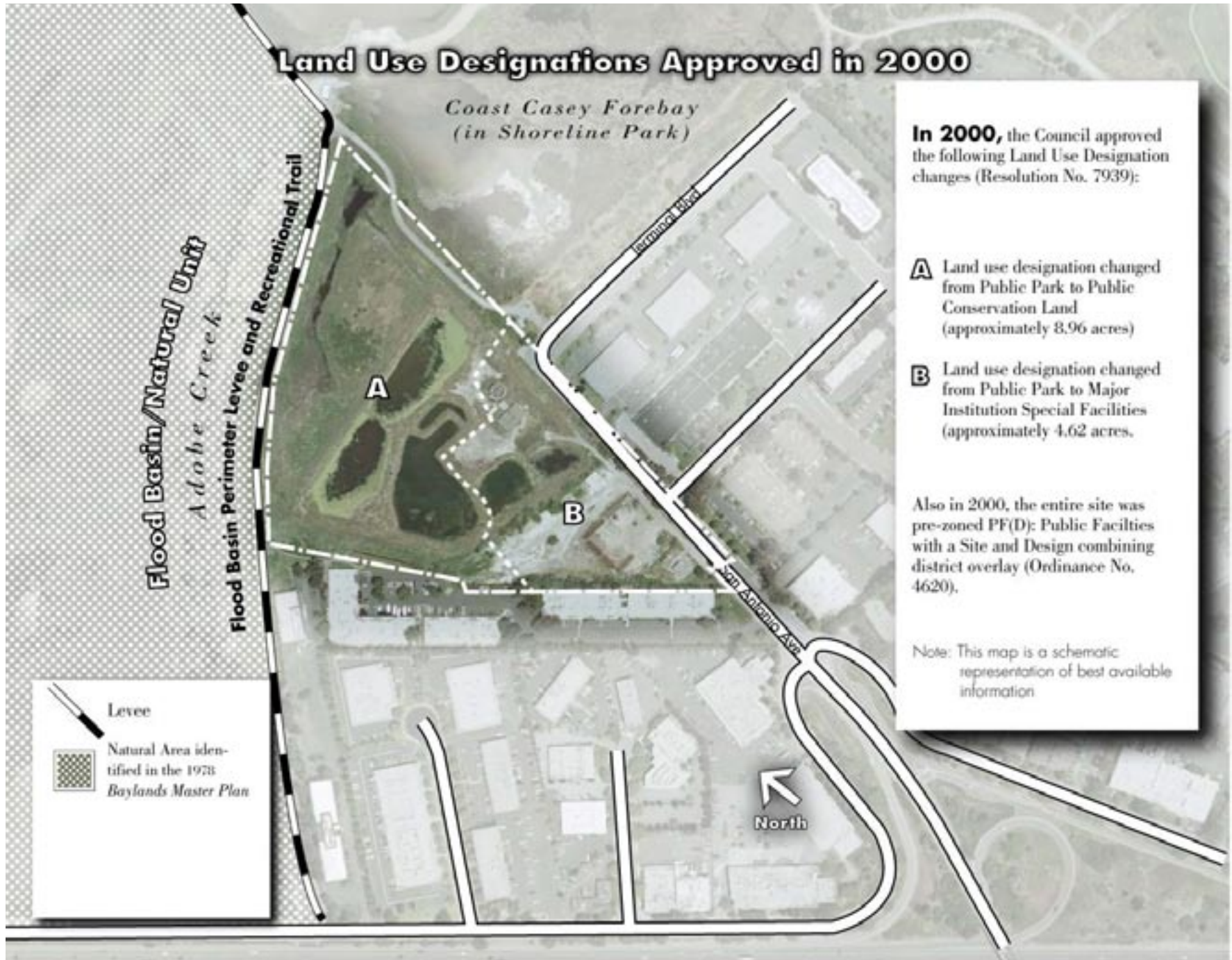
The purchase and annexation did not happen at this time, but Palo Alto continued to negotiate with Los Altos to purchase the entire site.

On April 7, 2006, a City Council Colleagues Memo directed staff to pursue strategies to investigate any and all feasible options for alternate sites for the relocation of Palo Alto’s auto dealers, and the LATP site was one of two sites identified by staff.

In 2007, two Council members were appointed by both Los Altos and Palo Alto to represent each city in negotiations about the site. This resulted in an agreement for the purchase of the site by Palo Alto—the future use of the site would be subject to further public review and environmental analysis. The Council approved the agreement and, on January 4, 2008, Palo Alto became the sole owner of the former LATP site.

As of February 2008, the city is in the process of annexing the land and exploring possible future uses of the site. The City retained Jones & Stokes to assess current waters of the United States (including wetlands) and to update the 1996 Jurisdictional Waters and Wetlands Report for the LATP site. The delineation is being conducted for subsequent site development; however the exact project at this time has not been decided. The delineation is the first step in identifying jurisdictional authorities of the site and identifying subsequent permits that will need to be obtained before development.





## LATP in Context

### Site Profile as of 2007

Zoning: Pre-zoned PF(D)

Land Use Designation: Public Conservation Land and Major Institution/ Special Facilities

Dedicated Parkland: No



## LATP Site Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the LATP Site, activities in this area must also comply with policies stated in the “Overall”, “Flood Control”, and “Access & Circulation” chapters as well as policies stated for the surrounding areas.

In 2000,

- The land use designation was changed from Public Park to a combination of Public Conservation Land for approximately 8.96 acres and Major Institution Special Facilities for approximately 4.62 acres (*Resolution No. 7939*).
- The site was pre-zoned Public Facilities with a Site and Design combining district overlay (*Ordinance No. 4620*).

As of January 4, 2008, Palo Alto is the sole owner of the site. (*Update: On December 3, 2008, the Santa Clara County LAFCO Board will hear the proposed annexation of this site to Palo Alto.*) Future use of the site has yet to be determined.

*Note: the LATP site is not within the Airport Influence Area (AIA).*



The *Comprehensive Plan* describes the “East Bayshore Employment District”, or the Embarcadero Corridor, as an essential part of the local economic base providing relatively low-cost space for a variety of service industries and start-up businesses that could not feasibly locate in the higher cost areas. Above, employees of the “district” take a lunch break.

# 13.

## Privately Owned Lands

### Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

#### Before the Baylands Master Plan

Privately-owned lands in the Baylands area consist of approximately 90 acres of industrial research, office, and commercial uses concentrated along Embarcadero Road and East Bayshore Frontage Road.

#### 1978 • Baylands Master Plan

The only recommendation for this area was that any future development should be consistent with the adopted Comprehensive Plan and should continue to receive extensive design review.

#### 1988 • Baylands Master Plan Amended Summary Report

There were no changes to the policies for this area in 1988.



Photo courtesy of staff

Embarcadero Road is heavily used by pedestrians and bicyclists who work in the area.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

Today, along Embarcadero Road, there are two automobile agencies, a restaurant, and several office or warehouse buildings. The main post office, and the International School of the Peninsula are located on East Bayshore Frontage Road.

### Comprehensive Plan

The Comprehensive Plan identifies the Embarcadero Corridor, in the Baylands, as the “East Bayshore Employment District”.

Goal B-6 cites the desire for, “Thriving Employment Districts at Stanford Research Park, Stanford Medical Center, East Bayshore/San Antonio Road Area and Bayshore Corridor that Complement the City’s Business and Neighborhood Centers.” The supportive text for Goal B-6 goes on to say, “These Districts are an essential part of the local economic base. They provide thousands of jobs, create a customer base for many Palo Alto businesses, and generate revenues to the City through property and sales taxes. Keeping these areas economically healthy and viable will require local policies that recognize market realities and respond to the needs of local businesses.”

Policy B-33 states, “Discourage actions that could increase the cost of business space in the San Antonio and East Bayshore areas.” And supportive text for Policy B-33 says, “The East Bayshore and San Antonio areas serve a special economic role. Its relatively low-cost space provides opportunities for a variety of service industries and start-up businesses that could not feasibly locate in the higher cost areas. This role should be protected in the future.”

Policy L-46 states, “Maintain the East Bayshore and San Antonio Road/Bayshore Corridor areas as diverse businesses and light industrial districts. And supportive text for Policy L-46 says, “These areas provide valuable space for small businesses and support services. The design of new or redeveloped buildings and landscaping, particularly northeast of the Bayshore Freeway, should reflect the area’s location near the Baylands. Connections to the nearby Baylands should be strengthened by taking advantage of views and improving bicycle and pedestrian connections to the open space area.”

### Zoning Districts

Several different zone districts and combining districts apply to the privately owned lands. These zone districts, including recent modifications, are as follows (*Map 13.1*).

### **ROLM(E): Research, Office and Limited Manufacturing Sub district – Embarcadero**

The intent of the ROLM district is to provide for a limited group of office, research and manufacturing uses in a manufacturing/research park environment, where uses requiring larger sites and available natural light and air can locate. Office uses can be accommodated, but should not predominate in the district. The ROLM district is primarily intended for land designated for research and office park use by the Palo Alto Comprehensive Plan and located east of El Camino Real.

In 2005, the zoning code was modified to include a special Embarcadero combining district (E) of the ROLM district. The ROLM(E) sub district modifies the site development regulations of the ROLM research, office and limited manufacturing district to apply to smaller sites in areas with limited access or with environmental sensitivity due to their proximity to the Palo Alto Baylands in the Embarcadero Road area.

### **AD: Automobile Dealership Combining District**

The intent of the AD district is to modify the regulations of the Service Commercial (CS) and General Manufacturing (GM or GM(B)) districts to create and maintain areas accommodating automobile dealerships primarily engaged in new and used automobile sales and service on a citywide and re-



gional basis. Such uses generally require special parking, access, and outdoor display provisions for customer convenience, servicing of vehicles or equipment, loading or unloading, or parking of commercial service vehicles.

In 2005, the zoning code was modified to include an auto dealership combining district (AD) in the LM and ROLM districts on both the east and west sides of Highway 101—near both San Antonio Avenue and Embarcadero Road. The auto dealership uses in the LM and ROLM zones require a Conditional Use Permit (CUP). Furthermore, the ROLM zones on the east side of Highway 101 require an additional CUP finding addressing the zone’s adjacency to the Baylands. The additional finding is as follows: “The design of the proposed improvements and the operation of the proposed use will not be detrimental to the ecological qualities of the Baylands natural areas and will be aesthetically compatible with the character of the Baylands as a regional recreation area and nature preserve.”

In addition to these two recently amended districts, the following districts and combining districts also exist in the Embarcadero Corridor of the Baylands (*See Map 13.1*).

**GM: General Manufacturing District**

The GM general manufacturing district provides for light manufacturing, research, and commercial

service uses. Office uses are very limited in order to maintain the district as a desirable location for manufacturing uses. The GM district is intended for application to land designated for light industrial use in the Palo Alto Comprehensive Plan.

**PF: Public Facilities District**

The PF public facilities district is designed to accommodate governmental, public utility, educational, and community service or recreational facilities.

**PC: Planned Community**

The PC planned community district is intended to accommodate developments for residential, commercial, professional, research, administrative, industrial, or other activities, including combinations of uses appropriately requiring flexibility under controlled conditions not otherwise attainable under other districts. The planned community district is particularly intended for unified, comprehensively planned developments which are of substantial public benefit, and which conform with and enhance the policies and programs of the Palo Alto Comprehensive Plan.

**D: Site and Design Review Combining District**

The site and design review combining district is intended to provide a process for review and approval of development in environmentally and eco-

logically sensitive areas, including established community areas which may be sensitive to negative aesthetic factors, excessive noise, increased traffic or other disruptions, in order to assure that use and development will be harmonious with other uses in the general vicinity, will be compatible with environmental and ecological objectives, and will be in accord with the Palo Alto Comprehensive Plan.

**Site and Design Guidelines**

The *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve* developed in 2005 are intended to be used when designing or reviewing projects located in any part of the Baylands—including projects on privately-owned land. (*For more information see “Overall Environmental Quality” chapter.*)

**Airport CLUP Guidelines**

The entire Baylands—except for the LAMP site—is within the Airport Influence Area of the Comprehensive Land Use Plan (CLUP) adopted by the County’s Airport Land Use Commission (ALUC). All land use and development must be consistent with CLUP guidelines. (*For more information see “Overall Environmental Quality” chapter.*)



Photo courtesy of staff

Examples of the existing commercial buildings in the Embarcadero Corridor of the Palo Alto Baylands

Photo courtesy of staff

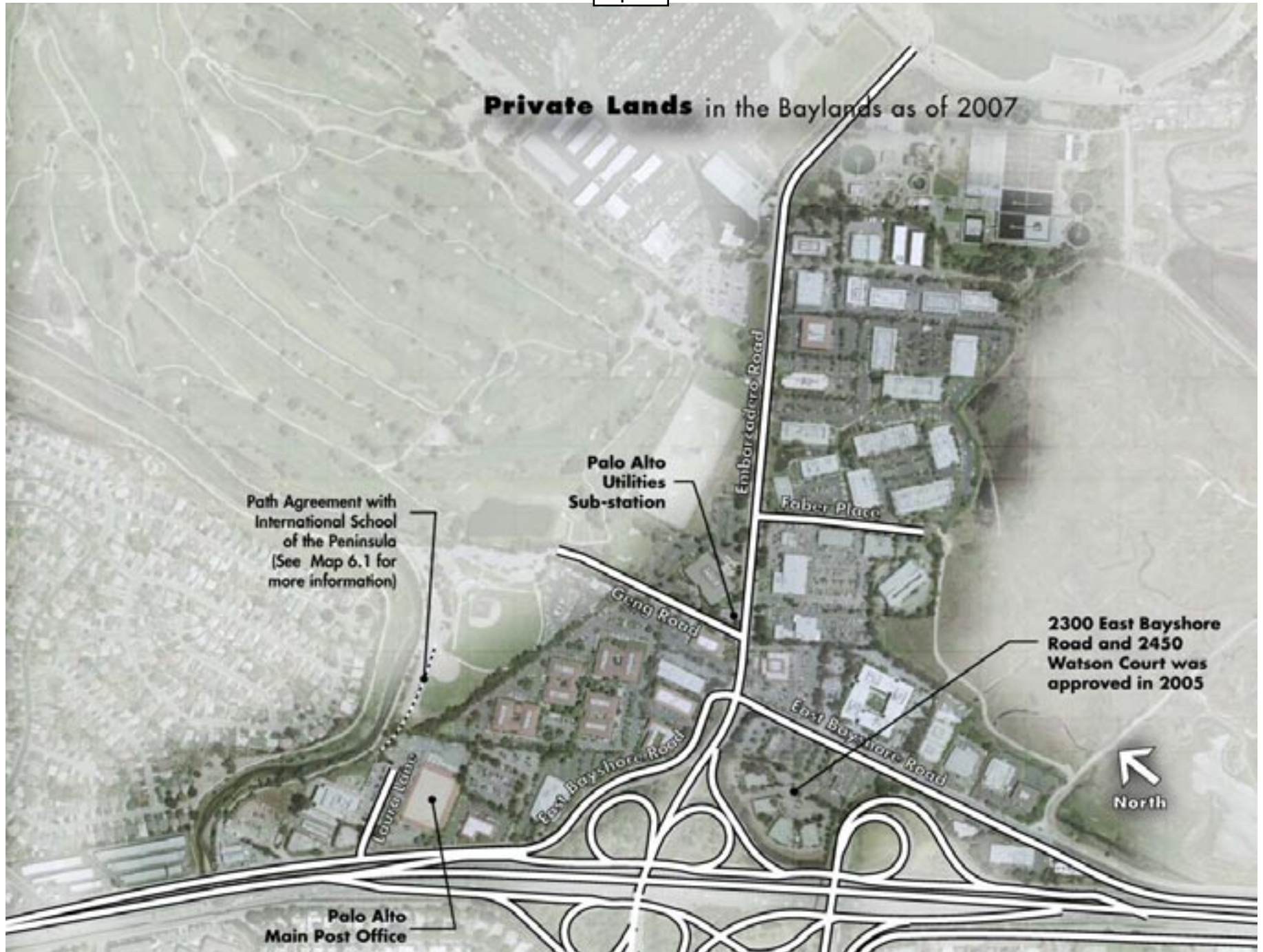


Privately Owned Lands

The project at 2300 East Bayshore Road and 2450 Watson Court was approved in 2005. It was the first major project to be reviewed under the new *Baylands Site and Design Guidelines* criteria and staff worked closely with the developers. The first step was to create a landscape plan suitable the building's location in the Baylands. The landscape plan includes miniature meandering tidal berms, wood bridges with swaying rope rails, pylon timbers for gateway features, waterways, low horizontal grasses and interpretive signs that describe the real Baylands features to which these landscape effort to achieve the project's goal of serving as a "gateway building" to the Baylands and meeting the objectives of the Baylands Master Plan. The Planning and Transportation Commission commented that the site design of the



Map 13.2



Privately Owned Lands

### Private Lands in Context

**Site Profile as of 2007**

Zoning: See Map 12.1

Land Use Designation: See Map A.2

Dedicated Parkland: No



## Private Lands Policies (p 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; in addition to the following policies that are specific to the Privately Owned Lands, activities in this area must also comply with policies stated in the "Overall", "Flood Control", and "Access & Circulation" chapters as well as policies stated for the surrounding areas.

1. Be sure any future development is consistent with the *Comprehensive Plan* and continues to receive extensive design review utilizing the Site and Design Review Process and the Site Assessment and Design Guidelines Palo Alto Nature Preserve.
2. Provide screen planting along the southerly urbanized edge of the private property facing the former ITT property.





# 14.

# Access and Circulation

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

There is not much historical information available that is specific to the development of roads in the Baylands but it probably followed the development of destinations therein. Around 1830, Don Rafael Soto built an embarcadero and early roads would have provided access for wagons with produce being taken to the wharf for shipment to San Francisco. By 1928, the yacht club was open and Harbor Road provided access to the facility on roads suitable for cars towing boats and the general public.

By the 1920s and 1930s, the traffic congestion on El Camino Real between San Francisco and San Jose warranted a new route between those cities

and, about this time, both the Bayshore Highway and Dumbarton Bridge opened. In 1945, the Bayshore Highway was rebuilt as the Bayshore Freeway. The new freeway opened in 1962.

### 1978 • Baylands Master Plan

The site analysis for the Baylands Master Plan observed that:

- The Bayshore Freeway constituted a barrier between the Baylands and the rest of Palo Alto.
- The principal entrance, and only vehicular access, was Embarcadero Road.
- There was no public transit into the Baylands.
- Bikeways existed only on the public roadways, along East Bayshore Frontage Road and Embarcadero Road.

- Pedestrian routes followed the bikeways and extended beyond them.

The plan's vision for the Baylands included the following components:

#### Vehicular access and parking

The plan envisioned limiting the role of Embarcadero Road to that of access to the park only and restricting parking to the parking areas.

#### Transit

The plan envisioned that the Baylands would become an important transit destination and that expansion of the system was of high priority.

## Trails

The plan envisioned an on-grade wood pedestrian promenade that began at the parking areas on the north side of the pastoral park and connected to the aquatic park. The promenade was to outline the division between the people-oriented areas of the park and its more sensitive marshlands. It was to follow the water's edge, tie into a complete overall trail system of existing and proposed branches, and provide views of the lagoon, tidal marshlands, and wildlife as a natural background to an open view of the South Bay. The plan also envisioned a bicycle system that would follow the promenade on its west side and be connected at designated points.

## Regional Trail System connections

The plan envisioned a continuous off-road bike path system from Mountain View to Cooley Landing in East Palo Alto.

## Flood Basin access

The Eckbo/Kay document did not address this but when the Planning Commission prepared their recommendations for the Council, they added a section that restricted access to the flood basin in order to protect breeding habitats and preserve flood basin wildlife and vegetation.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* with a multi-component plan for access and circulation. For details, see the Policies section of this chapter.

## 1988 • Baylands Master Plan Amended Summary Report

The goals and policies did not change between 1976 and 1988; in fact, some specific mandates were implemented. The 1988 *Amended Summary* documented the following accomplishments:

### Vehicular

Embarcadero Road was changed from four lanes to three lanes including a turning lane between the airport entrance and Harbor Road. (*Note Policy No. 5 indicates the road was to be rebuilt but it appears that it was only restriped.*)

### Trails

- The Geng Road bikeway was completed in 1983.
- The bikeway on San Francisquito Creek levee, into San Mateo County, was completed in 1985.
- The connection with the Mountain View regional path system to the south and to the north along San Francisquito Creek to the le-

vee between East Palo Alto and the Faber-Laumeister tracts was completed in 1985.

- Matadero Creek Loop trail was paved in 2002.

## Regional Trail Connections

- A paved bike path was completed in 1985.
- An extension of the bridge at Adobe Creek and Matadero Creek was completed in 1982.
- A pedestrian-bike bridge (“Friendship Bridge”) over San Francisquito Creek was completed in 1985.
- The pedestrian bridge over Bayshore Freeway at Embarcadero Road, was completed in 1985.

## 2008 • Baylands Master Plan Information Update

Because of the volume and specificity of the “Access and Circulation” policies, it is advantageous to examine them one by one. Following is the information update from the 2007 review—presented in a numbered list that corresponds to the numbered policies on pages 236–239. Other relevant information from the review is also included.

## Overview

No. 1: Creating a “gateway” feeling at the intersection of Embarcadero Road and the airport access road (Embarcadero Way) remains a goal. In addition, the *Site and Design Guidelines* also recommend signage at the intersection of Embarcadero Road and Harbor Road.

No. 2: The original vision for a natural environment with ample pedestrian and bicycle trails that link to regional trails and a limited role for automobiles has not changed. Both the 1998 *Comprehensive Plan* and the 2003 *Bicycle Transportation Plan* identify barriers to pedestrian/bicycle access across Highway 101. (For more information, see the “Pedestrian/Bicycle Access across Highway 101” section in this chapter. Also see “Trails” and “Transit” sections)

No. 3: Interpretive signs have been added at the Center and along paths. Additional signage remains a goal and the *Site and Design Guidelines* specifically address how this signage should look.

### Vehicular (See Map 14.1 and 14.2)

Nos. 4-8: The segment of Embarcadero Road from the airport access road to the Bay has been restriped to indicate 3 lanes (one a turning lane); however, it has not been rebuilt and new landscaping, park-quality lighting, and underground

utilities remain goals. A traffic study with specific attention to adequate turning lanes, parking needs, and the flow of traffic on Embarcadero Road remains a goal.

Nos. 9 & 10: The Baylands Master Plan showed the entry to the future landfill park via an extended Embarcadero Way, with the existing landfill ac-

cess road (Harbor Road) to be removed. However, in the 1991 Byxbee Park Master Plan by Hargreave’s Associates (adopted in 1989), the Harbor Road was not closed and became the main entry to the landfill park. The new landfill park entry with parking lot and rest rooms was constructed as part of Phase I of the park which opened in 1991.



Photo courtesy of staff

The segment of Embarcadero Road from the airport access road to the Bay has been restriped to indicate 3 lanes (one a turning lane); however, it has not been rebuilt and new landscaping, park-quality lighting, and underground utilities remain goals.

No. 11: Improvements to the public easement between the industrial/research area on the north side of East Bayshore Frontage Road and the Former ITT Property remain a goal. Landscaping, paving and signage improvements should conform to the *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve*”.

No. 12: The policy to “supply about 100 more parking spaces within the Embarcadero Corridor to service the park” may be addressed in the detailed traffic study suggested in No. 4. *(Also note that the 1997 Golf Course Master Improvement Plan, includes an expansion of the parking lot that would add approximately 100 spaces. If implemented, expansion might satisfy Policy 12.)*

No. 13: The parking lot at the Lucy Evans Interpretive Center Parking was redesigned with bioswales, resurfaced and landscaped in 2006.

### Transit (See Map 14.3)

No. 14: An internal transit system has not been developed. *(Note that some roads have a 6,000 lb limit and the shuttle is approximately 10,000 lbs—see map for roads with weight limits.)*

Nos. 15-17: In 1999, the City initiated the Palo Alto Shuttle system which includes the Embarcadero Shuttle that runs from the Caltrain Station to the Harbor Development office park near the corner of Embarcadero Road and Faber Place. Shown above are employees of the Embarcadero Corridor boarding the Shuttle after work.



Photo courtesy of staff

In 1999, the City initiated the Palo Alto Shuttle system which includes the Embarcadero Shuttle that runs from the Caltrain Station to the Harbor Development office park near the corner of Embarcadero Road and Faber Place. Shown above are employees of the Embarcadero Corridor boarding the Shuttle after work.

corner of Embarcadero Road and Faber Place. It is free and currently runs weekdays at commute hours—6:51 am to 9:48 am, 11:45 am to 1:47 pm, and 3:05 pm to 6:51 pm. The frequency of runs is coordinated with the Caltrain schedule. Regarding future expansion of external transit service, it is worth noting that, currently, vehicles over 6,000 lbs. may not travel on Harbor Road past a point that is between the airport and duck pond parking lots, however, the airport parking lot has a loop configuration that may be able to accommodate a bus turnaround, or at least, a shuttle turnaround.

#### **Pedestrian/Bicycle Trails (See Map 14.4)**

No. 18-19, 21, 22 & 24: The pedestrian trail along the Harbor that connects the pastoral park with the aquatic park—“Promenade” in the original Plan—was constructed as part of the Harbor Marsh Restoration Project in 1996/97 with funds from a Bay Trail (ABAG) grant in 1999.

The levees were raised and the trail improved for two segments of the San Francisquito Creek Loop Trail. In 2004, the segment between the Athletic Center and the Friendship Bridge was completed and in 2006, the segment along the edge of the airport was completed. Also, the trail head for the San Francisquito Creek Loop Trail was improved by Santa Clara County as required by their lease agreement with the City.

Because of restrictions from PG&E, there is no longer any public access to the PG&E service boardwalks.

No. 20: Adequate bicycle storage remains a goal.

No. 23: The service roads within the Former ITT Property have not been made into recreational trails.

No. 25: Newly added policy based on information in the Comprehensive Plan adopted in 1998 and the Bicycle Transportation Plan adopted in 2003. (Also see “Pedestrian/Bicycle Access Across Highway 101” section, this chapter.)

No. 26: The policy to continue the existing public access trail between the Former ITT Property and the Private Lands so that it goes all the way to Byxbee Park (Map 3.3) was originally in the Former ITT Property element. It has been relocated to Access and Circulation chapter.

#### **Regional Trail Connections (See Map 14.5)**

Nos. 27 & 28: All of the improvements described in these policies were implemented before the 1988 update. In 1989, the access-prevention fence along the north side of the golf course was completed. Since 1995, the City of Palo Alto has received three grants from the Association of Bay Area Government’s Bay Trail Project, funded by the California Coastal Conservancy, for de-

velopment and improvement of three segments of the regional San Francisco Bay Trail in Palo Alto and on City-owned lands in East Palo Alto. Also, since 1996, Palo Alto has been working with the Midpeninsula Regional Open Space District to develop a continuous pedestrian trail that will allow hikers to trek from the Bayland’s Sailing Station parking lot, through the urban flatlands along North California Avenue and Stanford Avenue, to Skyline Boulevard via the Pearson Arastradero Preserve, Foothills Park, Los Trancos Open Space and the Monte Bello Open Space Preserve. When completed the trail will be approximately 15 miles long. As part of the collaboration, Palo Alto granted limited public access to Foothills Park at two new pedestrian entrance points.

#### **Flood Basin Access**

Nos. 29-31: Some of the concerns described in the policies for this sensitive area are no longer relevant e.g., there is no hunting is allowed within Palo Alto and dog training is no longer conducted near the Flood Basin. The single small trail within the Flood Basin is pedestrian only and off limits to pets from March 15th-June 15th. The Parks and Open Space Division is conducting a Comprehensive Conservation Plan that will establish guidelines for sensitive areas like the Flood Basin.

## Before



Photo courtesy of staff

Looking north on San Francisco Bay Levee Trail towards the Friendship Bridge that was completed in 1985. The Friendship Bridge crosses San Francisquito Creek and connects the Palo Alto segment of the regional trail to segments in San Mateo County. Note that this photo was taken prior to 2004—before the levee trail improvements. Also see the similar photo on the next page that was taken after the trail improvements.

## After



Photo courtesy of Michael Kern

In 2004, the levee between San Francisquito Creek and the Friendship Bridge was raised for better flood control and the trail on top of the levee was replaced with a new asphalt trail.



Photo courtesy of staff

Hikers enjoying the Palo Alto Baylands

In 1978, the Baylands Master Plan analysis noted that recreational opportunities near the Bay were dominated by organized and special requirement activities, such as boating, aircraft, golfing and organized sports at the Athletic Center. It suggested that what was lacking was opportunity for people of all age groups to get near the water to observe and enjoy the unique natural environment and wildlife of the Bay and marshlands.

Today, the extensive trail system provides the exact experience envisioned by the Baylands Master Plan thirty years ago.



Photo courtesy of Michael Kern



Dogs on-leash are welcome on the trails in the Palo Alto Baylands with few exceptions. No pets may enter the bird sanctuary behind the Duck Pond and two breeding areas are off limits for about 3 months of the year. See Map 1.4 in the "Overall Environmental Quality" chapter for the areas of restricted access.

## Pedestrian/Bicycle Access Across Highway 101

### Comprehensive Plan

On July 20, 1998, the Council adopted the Comprehensive Plan including Goal T-3 of the “Transportation” Element. This goal is for, “Facilities, Services, and Programs that Encourage and Promote Walking and Bicycling”. Within this goal are 10 policies and 15 programs to help implement the goal. The supportive text states that,

“...Palo Alto is in a position to significantly increase its proportion of travel by bicycle. Its flat terrain, mild weather, grid street network, and environmentally and health conscious citizenry make cycling a practical option at a minimal cost. Future challenges include more routes for northeast-southwest travel and overcoming physical barriers like the Caltrain tracks and freeways...”

Maps T-5 and T-6 of the *Comprehensive Plan* identified three points where access to the Baylands is prevented by a “barrier [i.e., Highway 101] requiring bridge, under-crossing, or other connection”. The three points are at:

- San Francisquito Creek
- The Freeway cloverleaf at Embarcadero Road
- Matadero Creek (*Note that the map also identifies Matadero Creek as an “opportunity for bikeway segment”.*)



Photo courtesy of Ron Horii

Bicycle and pedestrian access across Highway 101 to the Baylands remains limited. Improving this access is a goal of the *Baylands Master Plan*, the *Comprehensive Plan*, and the *Bicycle Transportation Plan*. Shown above is one of two crossings: the overpass bridge at Embarcadero Road. The other is the Adobe Creek Seasonal Undercrossing shown on the next page. (*Maps 14.4 & 14.6*)

### Palo Alto Bicycle Transportation Plan

On November 24th, 2003, the City adopted the *Palo Alto Bicycle Transportation Plan*, developed by the team of Wilbur Smith Associates, Bicycle Solutions, Siegman & Associates, and Aitney & Associates. In that plan, Figure 6, a map for the plan’s “Recommended Bicycle Network”, recom-

mended improving both the Adobe Creek seasonal underpass and the Matadero Creek underpass. Also, Table C-1, “Assessment of Existing Bikeway Network” indicated that the Adobe Creek underpass should be operational year round. Finally, on the plan’s list of, “Recommended Projects”, No. 64 is the reconstruction of the Adobe Creek/101

Photo courtesy of Ron Horii



The second of two Highway 101 crossings that afford bicycle and pedestrian access to the Baylands is the seasonal undercrossing along Adobe Creek. Because of a flood risk this undercrossing is open only from April 15th to October 15th each year. It is named for Ben Lefkowitz, a strong bicycle advocate. The other crossing is an overpass bridge at Embarcadero Road.

crossing and No 65 is the reconstruction of the existing “Matadero Creek/101 crossing”. The *Palo Alto Bicycle Transportation Plan* also affirms the goal of the *Baylands Master Plan* Policy No. 26 to close the gap between the Embarcadero overpass and Byxbee Park (see *Map 14.6*).

Table 6-3 of the plan prioritizes all the improvement projects identified in the plan for the entire city; priority was given to projects that involved safety concerns or were on school routes. Given that criteria, none of the Baylands projects were “High Priority Projects” in this table.

#### **East Palo Alto Bay Access Master Plan**

In 2007, the City of East Palo Alto Redevelopment Agency published the *Baylands Access Master Plan* to “create a vision for Bay access that will guide East Palo Alto policy makers and the BCDC”. The plan includes a new trail along San Francisquito Creek as well as a pedestrian crossing over Highway 101 near the creek (*Maps 14.4 & 14.6*).

#### **U.S. 101 Auxiliary Lanes Project from Embarcadero Road north to Marsh Road**

The California Department of Transportation is proposing to widen Highway 101 to provide an auxiliary lane in each direction from Embarcadero Road, in Palo Alto, to Marsh Road in Menlo Park. Construction is scheduled to begin in 2011. City staff in conjunction with the San Francisquito Creek Joint Powers Authority (JPA) are reviewing the proposal with regard to flood concerns. An agenda published for the July 22, 2004 JPA meeting stated that, “The Board has expressed a desire to coordinate the efforts of the current...project and future flood protection and habitat restoration projects with the traffic studies being conducted for Highway 101.”

#### **U.S. 101 Auxiliary Lanes Project from Embarcadero Road south to Route 85**

Beginning in 2011, the Valley Transit Authority (VTA) will begin construction of auxiliary lanes in each direction of Highway 101.

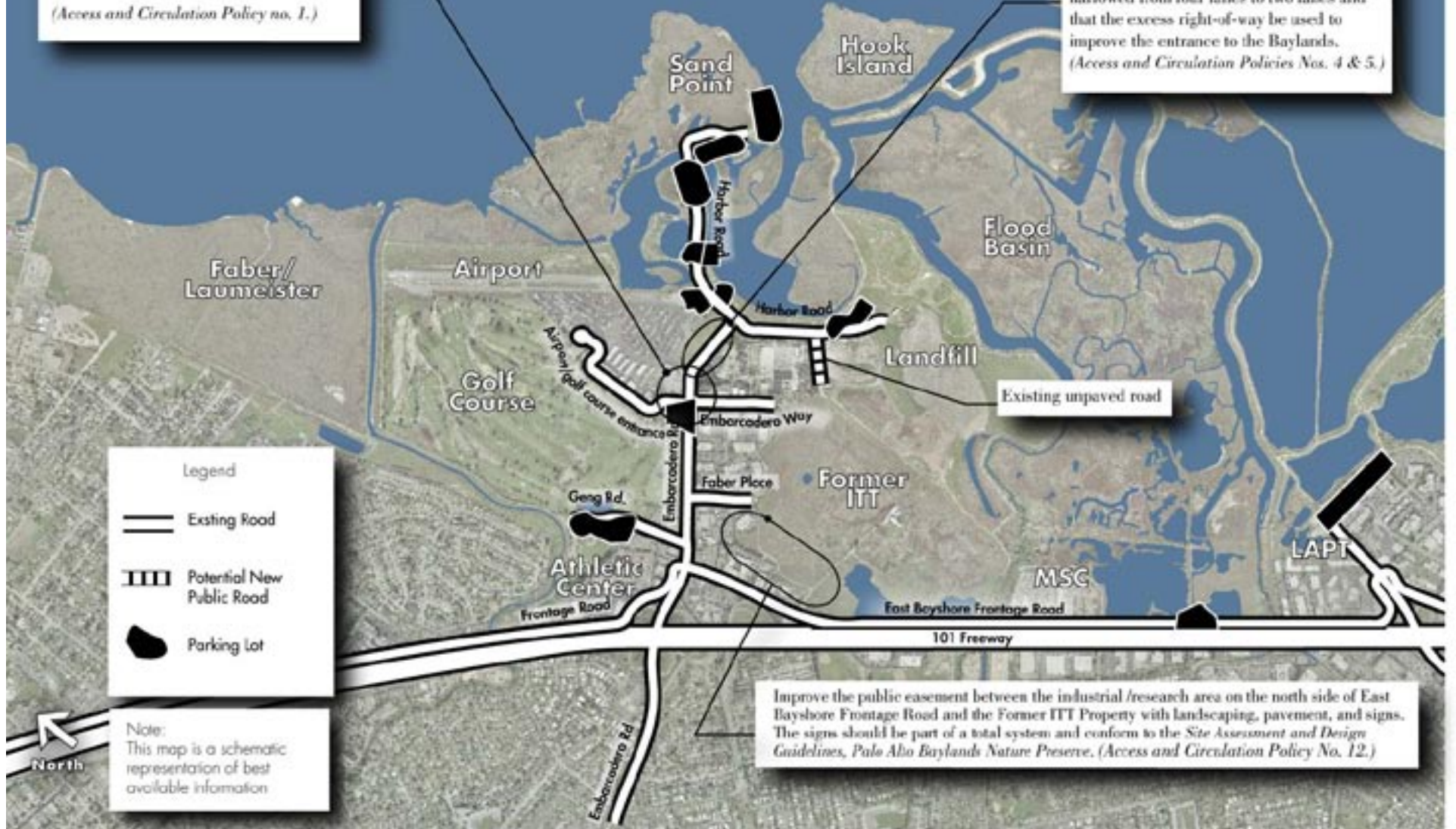
## Vehicular Circulation in the Baylands as of 2007 and Potential Changes

Create a "gateway" feeling for Bysbee Park at the intersection of Embarcadero Road and the airport access road (Embarcadero Way).

(Access and Circulation Policy no. 1.)

The Baylands Master Plan recommends that this segment of Embarcadero Road be narrowed from four lanes to two lanes and that the excess right-of-way be used to improve the entrance to the Baylands.

(Access and Circulation Policies Nos. 4 & 5.)

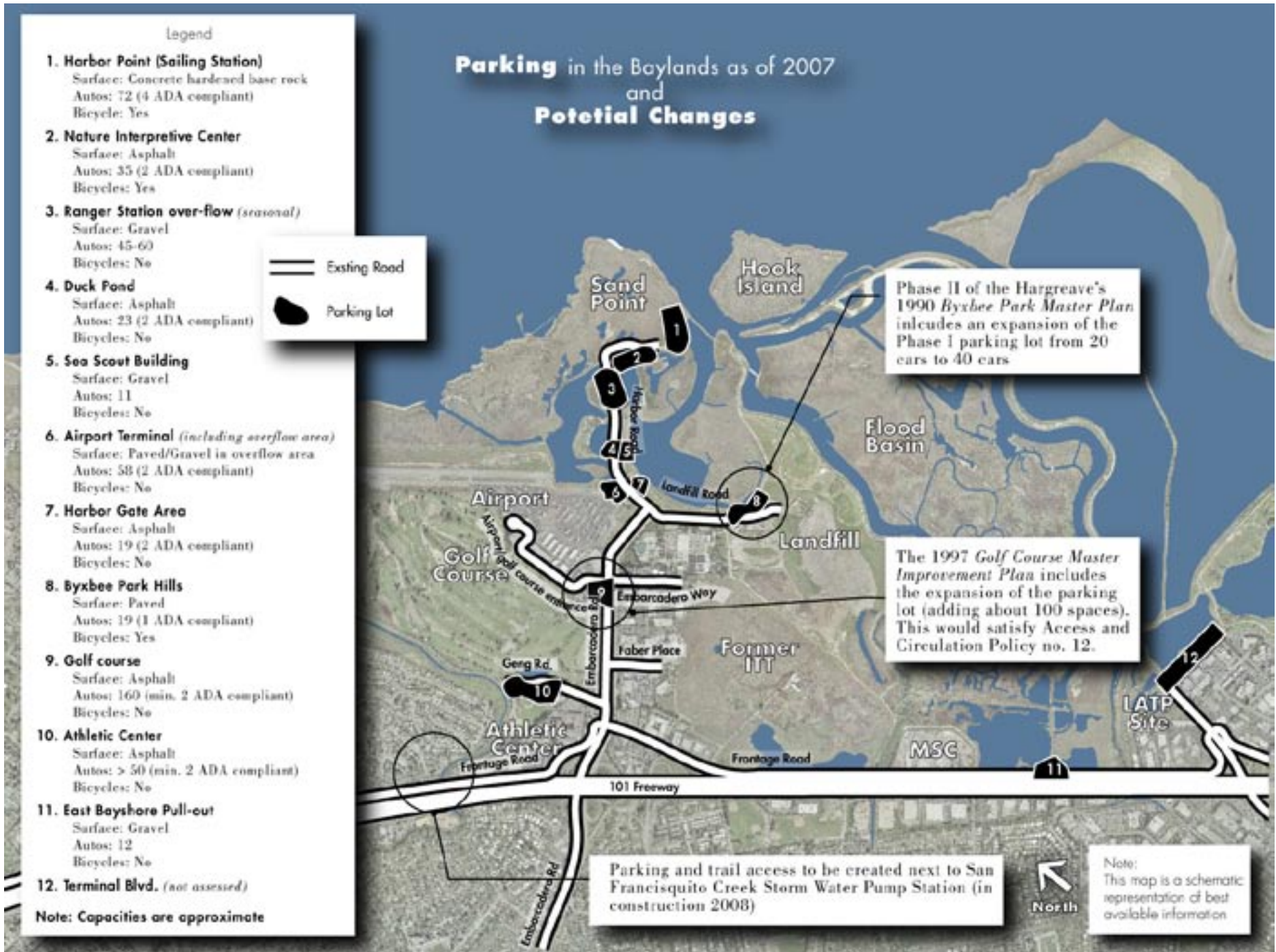


Legend

- Existing Road
- Potential New Public Road
- Parking Lot

Note:  
This map is a schematic representation of best available information

Improve the public easement between the industrial /research area on the north side of East Bayshore Frontage Road and the Former IIT Property with landscaping, pavement, and signs. The signs should be part of a total system and conform to the Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve. (Access and Circulation Policy No. 12.)



Map 14.3

### Transit in the Baylands as of 2007

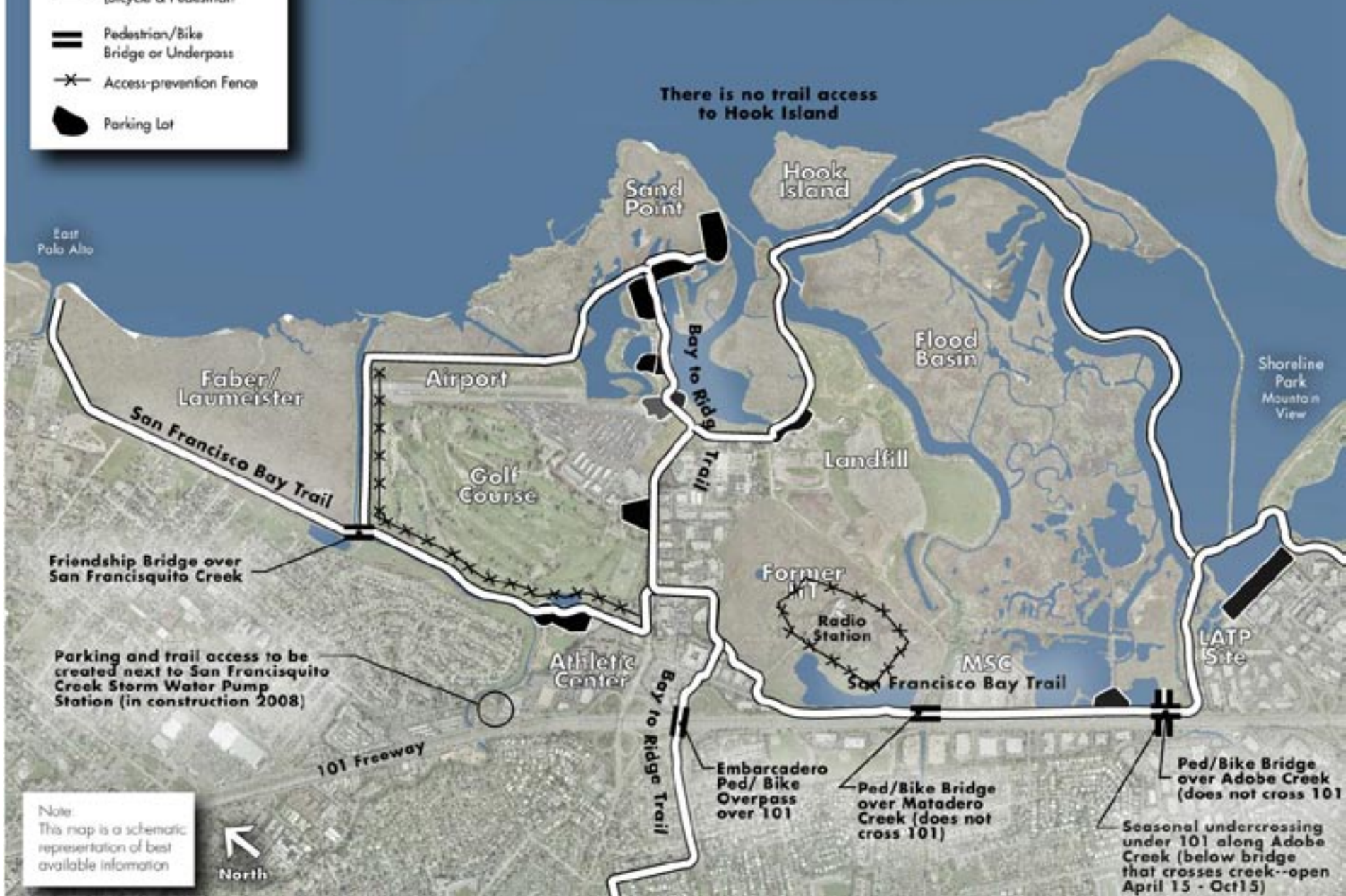


Map 14.4

# Regional Trail Connections in the Baylands as of 2007

**Legend**

-  Regional Trail (Bicycle & Pedestrian)
-  Pedestrian/Bike Bridge or Underpass
-  Access-prevention Fence
-  Parking Lot



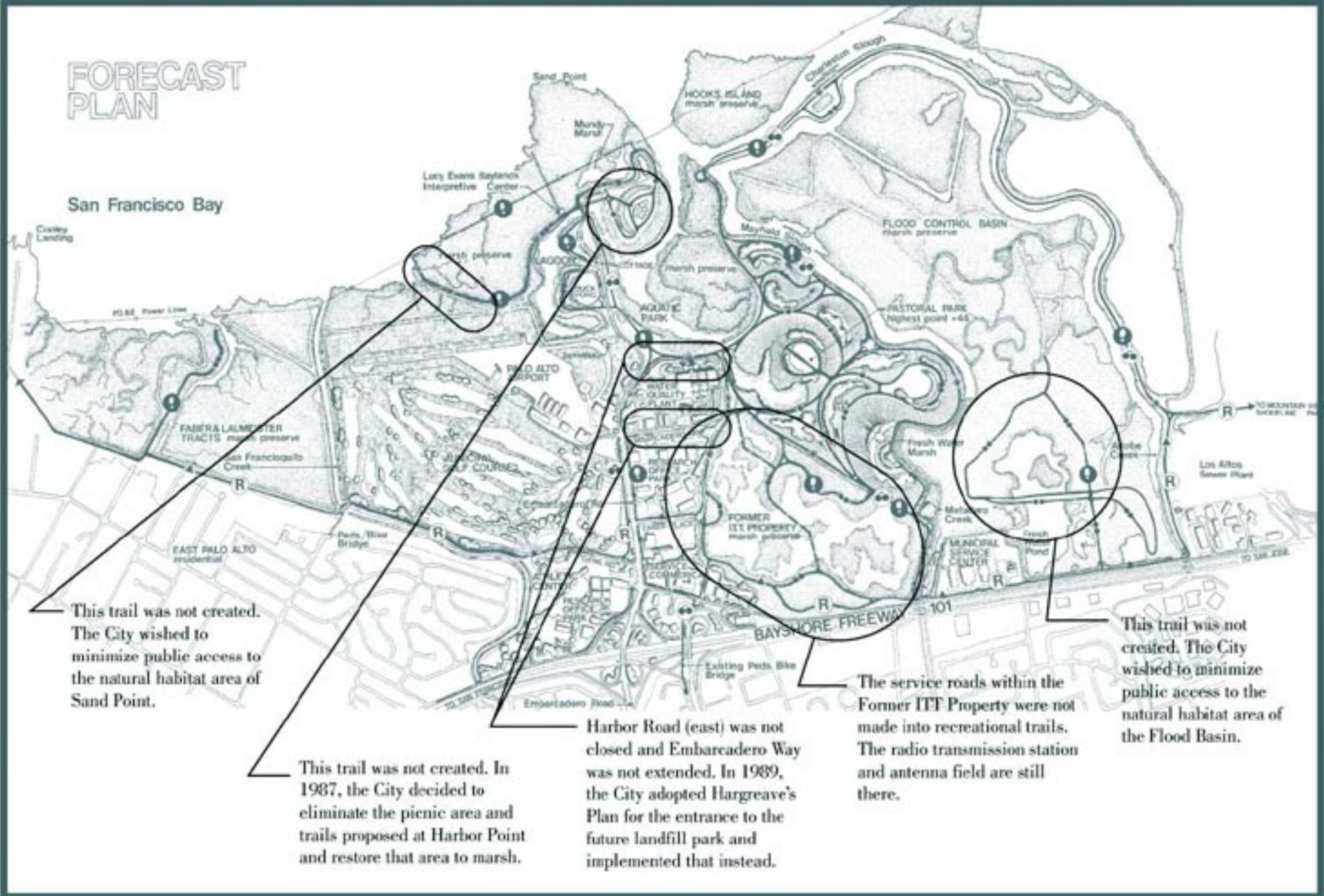
Note:  
This map is a schematic representation of best available information



There is no trail access to Hook Island

Access and Circulation

# 1979 BMP Forecast Plan for Recreational Trails (Detail from original fold-out map)





Map 14.6

# Recreation Trail Circulation for Bicycles and Pedestrians in the Baylands as of 2007 and proposed changes

**Legend**

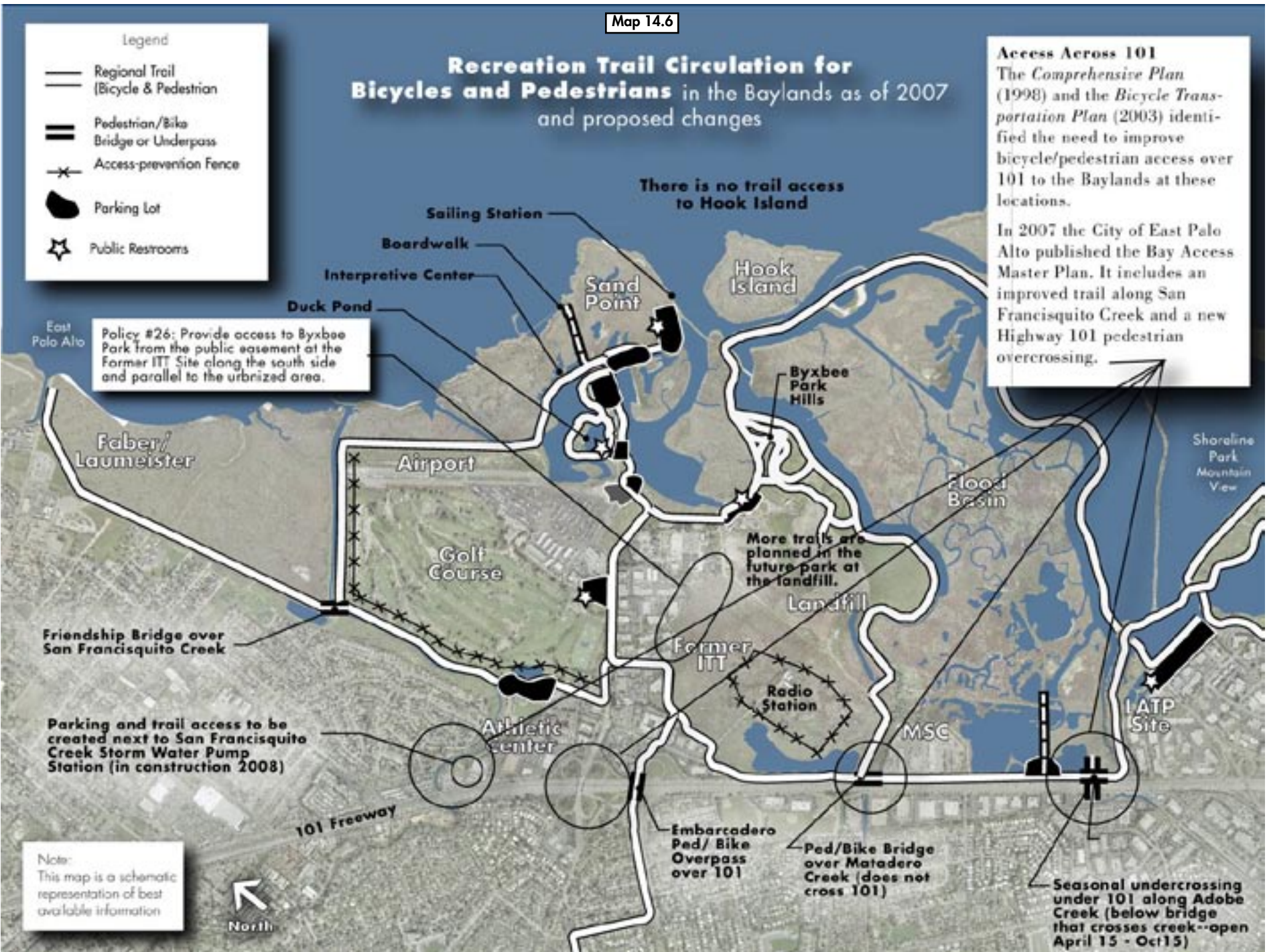
- Regional Trail (Bicycle & Pedestrian)
- Pedestrian/Bike Bridge or Underpass
- Access-prevention Fence
- Parking Lot
- Public Restrooms

**Access Across 101**  
 The *Comprehensive Plan* (1998) and the *Bicycle Transportation Plan* (2003) identified the need to improve bicycle/pedestrian access over 101 to the Baylands at these locations.

In 2007 the City of East Palo Alto published the Bay Access Master Plan. It includes an improved trail along San Francisquito Creek and a new Highway 101 pedestrian overcrossing.

There is no trail access to Hook Island

**Policy #26:** Provide access to Byxbee Park from the public easement at the Former ITT Site along the south side and parallel to the urbanized area.



Note:  
 This map is a schematic representation of best available information



Access and Circulation

## Access and Circulation Policies (page 1 of 4)

The Baylands Master Plan advocates a unification of the Baylands; the following "Access & Circulation" policies as well as those in the "Overall" and "Flood Control" chapters apply to all areas of the Baylands.

### Overview.

1. A "gateway" feeling for Byxbee Park will be created at the intersection of Embarcadero Road and the airport access road (*Embarcadero Way*) (*Map 14.1*).
2. Encourage only limited automobile access and reduce vehicle traffic in the Baylands as far as possible. Expand bicycle and pedestrian activities and make it easier for people to use transit systems.
3. Supply park-quality signs for the interpretive center, duck pond, Byxbee Park, refuse area, and recycling center at the park entrance.

### Vehicular (*Maps 14.1 & 14.2*)

The use of automobiles will be very limited in the Baylands. Byxbee Park visitors may drive their cars to the park, but must leave them in one of the parking lots and travel around the park on foot or on bicycles. Embarcadero Road is the only street that leads to Byxbee Park and the rest of the Baylands. It is a 4-lane divided arterial from the freeway to the airport entrance, where it becomes a

3-lane, then 2-lane road out to the Bay. All the streets beyond the frontage road intersection with Embarcadero Road are dead-end streets.

The present road and trail system hinges on Embarcadero Road. From Embarcadero Road, beyond the Bayshore Freeway, cars can drive about a mile-and-a-quarter to the sailing station/aquatic park. There are ten parking lots that serve the airport terminal, duck pond, Nature Interpretive Center, sailing station, and other facilities.

4. Conduct a detailed traffic study of circulation along Embarcadero Road from the Bayshore Freeway overpass to the intersection of East Bayshore Frontage Road to reduce conflicts between vehicles and non-vehicular traffic and to encourage the separation of pedestrians and bicycles.
5. Consider a two-lane road from the airport entrance toward the Bay when Embarcadero Road is rebuilt. (*This segment was re striped to indicate 3 lanes but it has not been rebuilt as suggested in Policies 6, 7, & 8.*)

6. Use the excess right-of-way along Embarcadero Road for trails and landscaping to improve the entrance to the Baylands. Install park-quality lighting from Embarcadero Way to Harbor Road.
7. Utility lines will be run underground when Embarcadero Road is rebuilt and narrowed from four lanes to two lanes from the intersection of the Airport Road to Harbor Road.
8. Provide adequate turning lanes, no parking areas, and whatever else is appropriate to the continued flow of traffic on Embarcadero Road.

*Note: Policy Nos. 9 & 10 were deleted in 2008.*

*They pertained to the 1980 plan to reroute the entrance to Byxbee Park. However, the 1991 Hargreaves Byxbee Park Master Plan (adopted in 1989) changed the park entry back to Harbor Road. Harbor Road is now the entrance to the Byxbee Park parking lot and rest rooms.*

11. Improve the public easement between the industrial/research area on the north side of East

## Access and Circulation Policies (page 2 of 4)

Bayshore Frontage Road and the Former ITT Property with landscaping, pavement, and signs. The signs should be part of a total system and conform to the *Site Assessment and Design Guidelines, Palo Alto Baylands Nature Preserve*.

12. Supply about 100 more parking spaces within the Embarcadero Corridor to service the park. They should blend into the Baylands without major visual intrusion.
13. Maintain the function and appearance of the Lucy Evans Interpretive Center parking lot. *(Completed in 2006—except that it was determined that it could not be lowered because of soil issues.)*

### Transit (Maps 14.3)

14. Because the 1700-acre park is so large, 500 acres larger than Golden Gate Park in San Francisco, an internal transit system to carry people between major activity centers should be considered, especially between the future parking

lot at the pastoral park and a proposed drop-off spot in front of the Nature Interpretive Center.

15. It is very important that external public transit service be expanded to Byxbee Park, particularly because the number of visitors is sure to increase, the number of parking spaces will be reduced, and automobile circulation will be suppressed. There is limited bus service to the park now—on weekdays during the commute hours, the free Embarcadero-Shuttle loops between the Caltrain Station and an office park on Embarcadero Road at Faber Place.
16. Provide for transit destination points and connect them to existing and future pedestrian and bike systems.
17. Design a circulation plan that includes a transit stop and turnaround. *(Note: The north basin parking lot correlates to the Lucy Evans Interpretive Center parking lot; it is beyond the point on Harbor Road which can currently be traveled by vehicles over 6,000 lbs—Map 14.3.)*

### Pedestrian/Bicycle Trails (Maps 14.4 & 14.5)

18. Maintain, protect, and improve the present nature trails. There are now paved, off-road, Class A bike paths...
    - Along East Bayshore Road at the frontage road between the Baylands and the Bayshore Freeway
    - Along Embarcadero Road
    - Along Geng Road *(completed 1983)*
    - On the levee along San Francisquito Creek into San Mateo County *(completed 1985)*.
    - Along Adobe Creek to Shoreline *(completed in 1983)*
    - Along East Bayshore to Faber Place *(completed in 1983)*
- Pedestrian routes follow the bikeways but extend beyond them:
- A pedestrian-bicycle overpass over Bayshore Freeway south of the Embarcadero Road off-ramp connects indirectly with a

## Access and Circulation Policies (page 3 of 4)

pedestrian-bicycle path through the urbanized area to the former ITT property.

- Walking paths follow the main levees around the duck pond and lagoon, north to the shore of the Bay, and south from the harbor area around the flood basin. This system connects with the Mountain View regional path system to the south and to the north along San Francisquito Creek to the levee between East Palo Alto and the Faber-Laumeister tracts (completed 1985).
- A boardwalk with railing runs east from the Interpretive Center to the shore, crossing the PG&E service boardwalk.

19. Separate pedestrian, bicycle and vehicle routes will be planned for, and these routes will be on land except where it is necessary to span sensitive water areas and to connect them with existing systems.
20. Provide safe bicycle storage at appropriate places in the Baylands.

21. Provide separate pedestrian and bike paths away from vehicle traffic wherever possible on Embarcadero Road and within the Embarcadero Corridor, and connect the existing segment of bike paths to the regional bike system.
22. Maintain safe pedestrian and bicycle access around and through the harbor area from the end of Embarcadero Road to the Nature Interpretive Center.
23. Use the maintenance roads on the Former ITT Property area that are for levee maintenance and that lead to the antenna field for pedestrians and bicyclists. (*Injection-well project discontinued and wells capped.*)
24. Maintain the pedestrian promenade that connects the pastoral and aquatic parks. It roughly follows the water's edge and is tied into the overall system of walkways (*Completed in 1996/97, the "Marsh Front Trail" was part of the Harbor Marsh Restoration project.*)

25. Implement the improvements to bicycle circulation in the Baylands described in the *Palo Alto Bicycle Transportation Plan* and the *Comprehensive Plan* including improving pedestrian/bicycle access to the Baylands across Highway 101 e.g., at Adobe Creek, Matadero Creek, San Francisquito Creek, and San Antonio Road. (*Palo Alto Comprehensive Plan adopted on July 20, 1998 and the Palo Alto Bicycle Transportation Plan adopted on Nov. 24, 2003.*)
26. Provide access to Byxbee Park from the public easement at the Former ITT Site along the south side and parallel to the urbanized area. (*Note: In 2008, this policy was moved from the "Former ITT Property" chapter to the "Access and Circulation" chapter.*)

### Regional Trail Connections (Map 14.6)

27. Maintain the four improvements made to the San Francisco Bay Trail regional bike route

that create a continuous off-road bike path system from Mountain View to Cooley Landing:

- A paved bike off-road path along Geng Road (*completed 1985*)
- An extension of the bridges at Adobe and Matadero Creeks on the east side of Bayshore Freeway (*completed 1982*)
- A pedestrian-bike bridge (*Friendship Bridge*) over San Francisquito Creek. (*completed 1985*)
- An access control fence along the north side of the golf course (*completed 1989.*)

28. Maintain access to the regional trail system:

- from the pedestrian bridge over Bayshore Freeway at Embarcadero Road (*completed 1985*)
- from the public easement to Byxbee Park along the south side parallel to the urbanized area.

- along Matadero Creek.
- under Highway 101 at Adobe Creek (*seasonal underpass that connects West Bayshore and East Meadow Circle to trails along East Bayshore Road*).

Also integrate the City's bike paths and trail system with auto and public transit facilities to make free and easy movement possible through the Baylands and to connect with regional systems to the south, west, and north.

### Flood Basin Access

*Note: Policy No. 29 was deleted in 2008. It pertained to dog training in the Flood Basin; however, dog training is no longer permitted in the Flood Basin.*

30. Restrict access to protect breeding species and their habitat and to preserve and enhance flood basin wildlife and vegetation.

31. Use of the flood basin would be compatible if:

- a. access were closed or substantially restricted during the breeding season, approximately March 30 to June 30;
- b. access were limited to existing trails and those above the high-water line with the proposed flood plain mitigation project. A continuing survey should be started to establish the most productive and critical wildlife areas in the flood basin. If necessary, access to trails that cross or are next to sensitive areas should be closed or regulated;
- c. most uses, including bicycle trails, were limited and encouraged only along the perimeter levees of the flood basin;
- d. a portion or portions of the flood basin were closed to unguided access and reserved for occasional educational use under supervision.



Photo courtesy of staff

If a creek full of storm water cannot flow into the Bay because of high tide, the creek might back up and overflow its banks in a populated area. The Flood Basin solves this problem by providing a place into which the creeks can empty—even during high tide. Depending on the season, the water level in the flood basin can be kept artificially low in order to provide storage capacity for inflow from the three creeks during storms. Shown above is the tide gate (also see Map 15.4).

# 15.

# Flood Protection

## Baylands Master Plan Evolution

This section describes the evolution of the Baylands Master Plan and serves as a permanent record of events that have affected policies or are otherwise relevant. The current adopted policies and programs follow at the end of this chapter.

### Before the Baylands Master Plan

Throughout history humans have gravitated to water to form their communities and it is not surprising that portions of most South Bay cities are in a floodplain. In Palo Alto, there are two types of flood risks:

- Fresh water inundation from creeks overtopping
- Tidal flooding from the bay

Early records show that Palo Alto was inundated in 1862 and 1911. These events were probably caused by the overtopping of creeks but due to the sparse development at the time, probably did not cause a lot of property damage.

During the 1920s and 1930s, the areas around the freshwater creeks were developing into residential communities and the areas subject to tidal flooding (Baylands) were being developed with municipal facilities. Around this time—possibly as a major flood-control measure—San Francisquito Creek was rerouted from its original easterly path to its current man-made channel which travels northward into the Bay. It is not clear whether the rerouting of the creek affected the flood risk for the area. It did create a substantial amount of reclaimed land, including a 184-acre expanse for additional municipal facilities.

The potential consequences of flooding grew as more development occurred. By the mid-1950s,

an enormous housing boom was underway and the 1955 “Christmas Flood” caused by the overtopping of San Francisquito Creek became a memorable event due to the extensive property damage.

In the following years, attempts were made to reduce flood risk e.g.,

- The levees along the new San Francisquito Creek channel were raised to their current height.
- The old “farmer’s” levees, built along the outer perimeter of the Baylands to protect areas of cattle grazing etc. from tidal flooding, were also raised to their current height.
- The current flood basin was created by raising the levees around this low area and cutting off

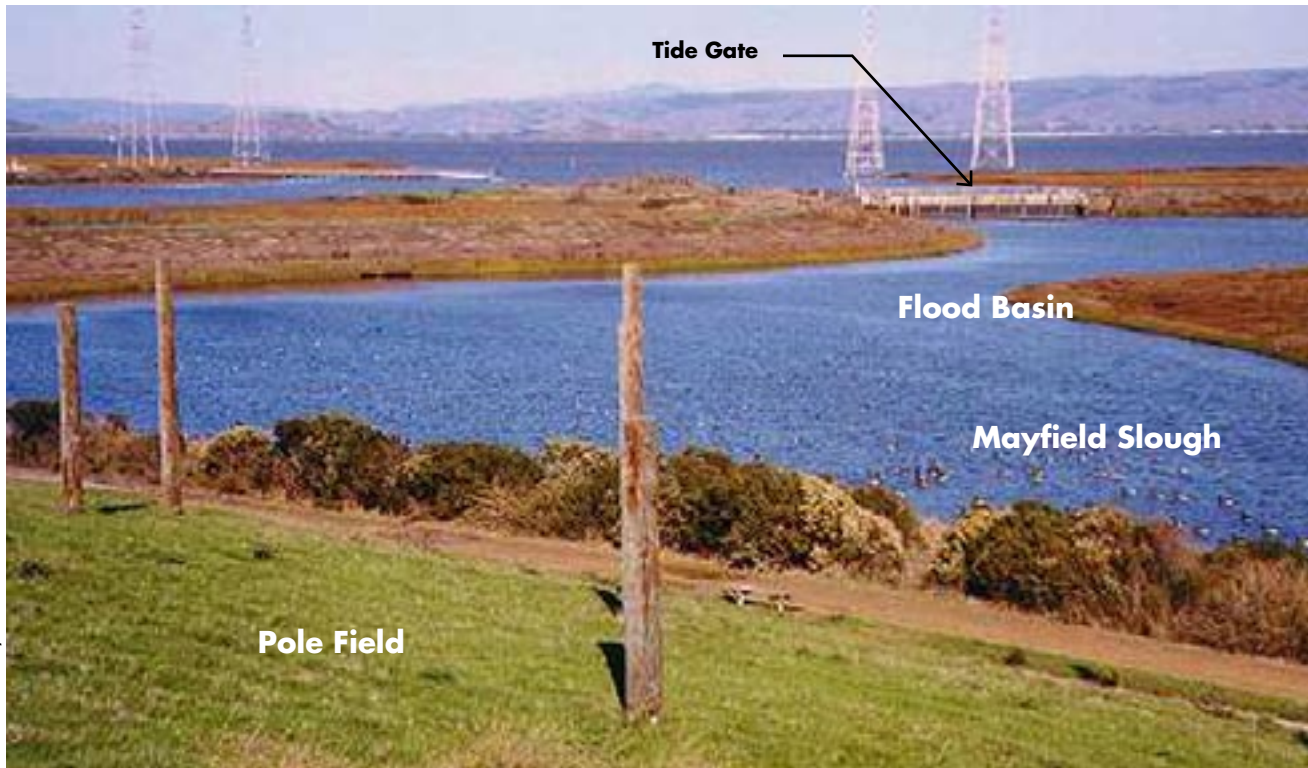
tidal action from the sloughs that drain Matadero, Barron, and Adobe Creeks. These creeks were particularly subject to flooding when high flows from upstream storm runoff combined with high tide levels in the sloughs. A set of one-way tide gates was constructed at one corner of the newly formed flood basin in order to isolate the basin from tidal action. The tide gates allowed water to flow out of the basin into

the Bay but prevented Bay water from flowing into the Flood Basin during high tides. The result was that regardless of the tides, the water level in the flood basin was kept artificially low in order to provide storage capacity for inflow from the three creeks during storms (*Map 15.4*).

In response to a mitigation requirement to improve the marsh conditions in the Flood Basin, in 1977, the tidegate was modified to include a two-

way gate that allows Bay water into the Basin. The tidegate was improved again in 1993 and in 2002 (*Also see Natural Unit element*).

In 1963, the County boundary line was moved to follow the new path of San Francisquito Creek. As a result, the golf course, airport, and Sand Point were completely within Santa Clara County and were annexed by the City.



In response to a mitigation requirement to improve the marsh conditions in the Flood Basin, in 1977, the tidegate was modified to include a two-way gate that allows Bay water into the Basin. The tidegate was improved again in 1993 and in 2002.

Today, the Palo Alto Park Ranger controls the tidegate with three primary objectives:

1. Flood Control which requires adequate space for rain flow down Adobe, Matadero, and Barron Creeks.
2. Vector Management which requires the water level to stay below a specified height (to prevent mosquitoes).
3. Habitat Management which requires a daily flush of tidal water to bring in necessary nutrients and aquatic life.

*(Also see the Natural Unit element)*

Photo courtesy of Ron Horii



## 1978 • Baylands Master Plan

### Proposed Projects at the Time the Plan Was Being Developed

In 1976, the analysis prepared for the *Baylands Master Plan* identified two projects that were underway. The *Plan's* recommendations regarding flood protection are limited to these two projects.

#### SCVWD Flood Basin Project

This Santa Clara Valley Water District (SCVWD) project proposed improvements to the levee around the southern end of the Flood Basin to protect the urbanized area southwest of the Bayshore Freeway from flooding caused by the overtopping of the Flood Basin and its tributary creeks (Adobe, Barron and Matadero).

The *Baylands Master Plan* noted that the proposed two-foot high concrete wall along a 3,500 foot section of the Matadero Creek levee would be a visual impact to pedestrians on the levee or in the pastoral park—but recommended that the flood-control project proceed as proposed.

#### ACOE Saltwater Flood Levee Project

This Army Corps of Engineers (ACOE) project proposed improvements to the entire Bayfront levee system. The *Baylands Master Plan* recognized the concern about tidal flooding; however, it indicated that the proposed improvements (1973 *Baylands*

*Saltwater Flood Control Planning Study*) did not adequately identify the impact nor attempt to mitigate the impact. The *Baylands Master Plan* indicated that the proposed levee system appeared to be higher than necessary and, echoing public sentiment, recommended against the ACOE proposal.

Thus on October 11, 1978, the Council adopted the *Baylands Master Plan* which included four recommendations:

- Allow the SCVWD Flood Basin project to proceed as proposed, subject to final review.
- Take no position on the ACOE Bayfront Levee project until the San Francisco Bay Shoreline Study is reviewed.
- Do not allow new levee construction to intrude on any marsh or wetlands.
- Coordinate flood protection for San Francisco Creek with East Palo Alto and San Mateo County.

## 1988 • Baylands Master Plan Amended Summary Report

### Proposed Projects at the Time the Plan Was Being Developed

#### SCVWD Flood Basin Project

In an effort to minimize the visual impacts of the Flood Basin project, the City hired Lindsey Krae-

ger, a hydraulic consultant, to conduct a technical review of the project. The consultant concluded that the flood barriers did not need to be as high as proposed. As a result of input from the City, the project was built substantially lower than originally proposed. The project was completed in 1986. It is a combination of flood wall and levee along the southern perimeter of the flood basin designed to protect the MSC and the area southwest of the Bayshore Freeway.

No other changes to the Flood Protection policies were documented in 1988.

## 2008 • Baylands Master Plan Information Update

The 2007 review resulted in the following information; this information is the basis for the amendments to the policy text.

### Proposed Projects at the Time the Plan Was Being Developed

#### Saltwater Flood Levee Project

The ACOE project proposed in the 1970s was never implemented. In the late 1980s, the ACOE conducted a similar study and proposed a similar improvement project; however, the ACOE indicated that no federal funding would be available for the implementation—the cost of the project exceeded its potential benefits. The SCVWD urged

the City to join them in pursuing funding; however, as in the 1970s, the City did not concur with the ACOE proposal. The City did not join the SCVWD in pursuit of funding and, again, the project was not implemented.

### FEMA Special Flood Hazard Areas

Most of Palo Alto's flat land is within a Special Flood Hazard Area (SFHA) designated by the Federal Emergency Management Agency (FEMA) on its Flood Insurance Rate Map. Palo Alto's SFHA comprises two types of flood hazard zones.

- **Fluvial (Creek) Flooding Inundation Zones** These zones are subject to fresh water inundation from over banking creeks in a theoretical event called a one percent (100-year) flood. In Palo Alto, flood control projects constructed by the SCVWD have reduced the flood risk for Adobe, Barron, and Matadero Creeks. San Francisquito Creek is the City's one remaining source of fluvial flooding.
- **Tidal Flooding Inundation Zone:** These zones are subject to salt water inundation from overtopping or failure of the Bayfront levees in the event of a one percent (100-year) high tide. In Palo Alto, this large zone is roughly bounded on the north by Embarcadero Road and on the south by the Mountain View City limits

and includes everything easterly from roughly Middlefield, Ross and Louis Roads to San Francisco Bay. Originally, most of this area was tidal marsh and wetlands, but many years ago levees were built in the Baylands to drain the wetlands and allow the development of this area. Because the levees lack required free-board (additional height above the estimated high water level) and were not constructed in accordance with current engineering standards, FEMA does not consider these levees to be adequate protection from a high tide event that has a one percent (100-year) probability of occurring.

The FEMA Flood Insurance Rate Maps assume that the levees will overtop or fail and that salt water will reach 8 ft above sea level in the Tidal Special Flood Hazard Area. As much of the residential area immediately west of the Bayshore Freeway is at only 3 ft above sea level, the described flood event would result in salt water at 5 ft above the ground.

### Palo Alto's Existing Bayfront Levees

The existing levees do not meet the height or construction standards for adequate flood protection established by the FEMA. As a result, homeowners and businesses in the threatened areas—that have outstanding mortgages—are required to buy

flood insurance. To meet FEMA standards, the levees would need to be strengthened and raised several feet (*Map 14.2*).

During the 1990 building boom, FEMA directed the City to improve its enforcement of existing floodplain regulations. The community reacted negatively to this and sought relief from the regulations.

The City approached the Army Corps of Engineers (ACOE) to see what federal funding might be available to improve the levees and thereby relieve the need to implement FEMA regulations. However, the ACOE determined that the levees were adequate and that federal funding would not be available.

Frustrated by the inconsistency between the two federal agencies, the City retained a legislative lobbyist to seek a solution in Washington DC. The effort was unsuccessful, the levees remain unimproved, and the floodplain regulations remain in effect. Currently, the ACOE is conducting a new study of the bayfront levees. (*See Shoreline Study sub-section, this chapter.*)

### San Francisquito Creek Joint Powers Authority (SFCJPA)

In early February 1998, San Francisquito Creek again overtopped its banks. Palo Alto incurred \$28 million in damages and the neighboring cities in San Mateo County were affected as well. As a result, the cities of Palo Alto, East Palo Alto, and

Menlo Park, along with the SCVWD and the San Mateo County Flood Control District, formed the San Francisquito Creek Joint Powers Authority.

The SFCJPA is empowered to protect and maintain the 14-mile San Francisquito Creek and its 45 square-mile watershed and has the following goals:

1. To facilitate and perform bank stabilization, channel clearing, and other Creek maintenance.
2. To plan flood control measures for the San Francisquito Creek watershed.
3. To take actions necessary to preserve and enhance environmental values and stream uses of San Francisquito Creek.
4. To coordinate emergency mitigation and response activities relating to San Francisquito Creek.
5. To make recommendations to Member Entities for funding and alternatives for long-term flood control for Member Entity consideration.

The SFCJPA has partnered with the ACOE to conduct a feasibility study of flood control options for the creek. The study will analyze potential damage reduction and ecosystem restoration project alternatives for the watershed. In addition, the study will identify and analyze options for reducing the risk of tidal flooding from San Francisco Bay, including potential modifications to the Bay-front levees in the Palo Alto Baylands. The study will also determine if federal funding is warranted

for construction of flood control improvements. It is expected that the feasibility study will contain recommendations for projects that involve modifications to San Francisquito Creek and the Bay-front levees in the Baylands. The study is expected to be complete in 2011.

### South Bay Shoreline Study

As mentioned in the “Natural” chapter, the Salt Pond Restoration Project does not include the Palo Alto Baylands. However, because that project intends to restore some diked areas to tidal marsh, that project has the potential to impact existing flood protection provided by those dikes, or levees. Therefore, the ACOE has begun a sister project called the “Shoreline Study” that adds a flood-protection component to the scenario.

The two projects are closely entwined; in fact they are sometimes confused; however, unlike the Salt Pond project, the Shoreline Study includes all Santa Clara County Baylands, including the Palo Alto Baylands.

In 2005, the ACOE, SCVWD, and State Coastal Conservancy kicked off Phase I of the combination project. The goals are:

1. Investigate flood protection for all Santa Clara County Baylands.
2. Examine various flood protection strategies, such as increasing flood capacities of local

creeks by widening the mouths of waterways and reestablishing historical floodplains.

3. Examine tidally-induced flooding in these communities.
4. Incorporate findings from the Salt Pond Restoration Project to restore 15,100 acres of former [Cargil-owned] salt-harvesting ponds.
5. Coordinate ecosystem restoration and flood protection (e.g., as salt-evaporation ponds are breached and opened to the Bay’s tides to create tidal marsh, levees located between newly created tidal marsh and Santa Clara County communities could be replaced or upgraded to provide better flood protection).

City staff are monitoring the status of the Shoreline Study. Staff attends stakeholder meetings and submits periodic reports about the progress to the Council. Staff has confirmed that the Shoreline Study is taking global warming impacts, including the anticipated rise in sea level, into account. In fact, the Salt Pond Restoration Project describes how the potential rise in sea level factors into the study on their website. (*Also see Salt Pond Restoration Project in the “Natural Unit” chapter.*)

### Overlap Between the SFCJPA Creek Feasibility Study and South Bay Shoreline Study

There is some overlap between the scope of these two ongoing studies. Both studies are investigating

potential levee modification projects to eliminate the threat of tidal flooding from the one percent (100-year) high tide event within the City. Information is being shared between the Study teams to ensure that any project proposals from either of these studies will be complementary.

### Matadero Creek Remediation Project (2005)

In the 1990s, the SCVWD determined that the segment of creek between the Highway 101 and the Flood Basin had serious flow constraints that could result in upstream flooding i.e., the developed area on the west side of the highway. The capacity of this segment was reduced by dense vegetation growth and the accumulation of sediment. In order to avoid the environmental impacts of removing natural vegetation and dredging the creek, the SCVWD proposed a high-flow bypass channel between the existing stream and the City's MSC, allowing the natural stream channel to remain intact. The bypass channel, which included a concrete lining so that it could be easily maintained in the future, was designed to convey excess Matadero Creek flows to the Flood Basin during large storm events without causing upstream backups. The project also included extensive native vegetation plantings to mitigate the impacts of the proposed construction. The project was taken through the City's Site and Design Review pro-

cess, with input provided from the public, City staff, Architectural Review Board, Planning and Transportation Commission, and the City Council. As a result of the collective input, the bypass channel was narrowed and the amount of concrete lining was reduced by the SCVWD. The Matadero Creek Remediation Project was completed by the SCVWD in 2005. In accordance with the City's conditions of project approval, the SCVWD will continue to conduct periodic monitoring of the mitigation measures through the year 2012. *(For more information about the project's impact on the MSC landscaping plan, see MSC Chapter.)*

### Golf Course Feasibility Study

In 2005, the City conducted a feasibility study related to a possible redesign of the golf course. Although the redesign concept was dropped, Staff noted that the study contained information that would be useful in helping the City participate more effectively in the flood-control studies now underway.

### Airport Levee Maintenance

Under a three-party agreement dated August 22, 1979 between the County of Santa Clara, the Santa Clara Valley Water District and the City of Palo Alto, the County of Santa Clara was assigned responsibility for maintenance of the Baylands levee parallel and adjacent to the airport runway.

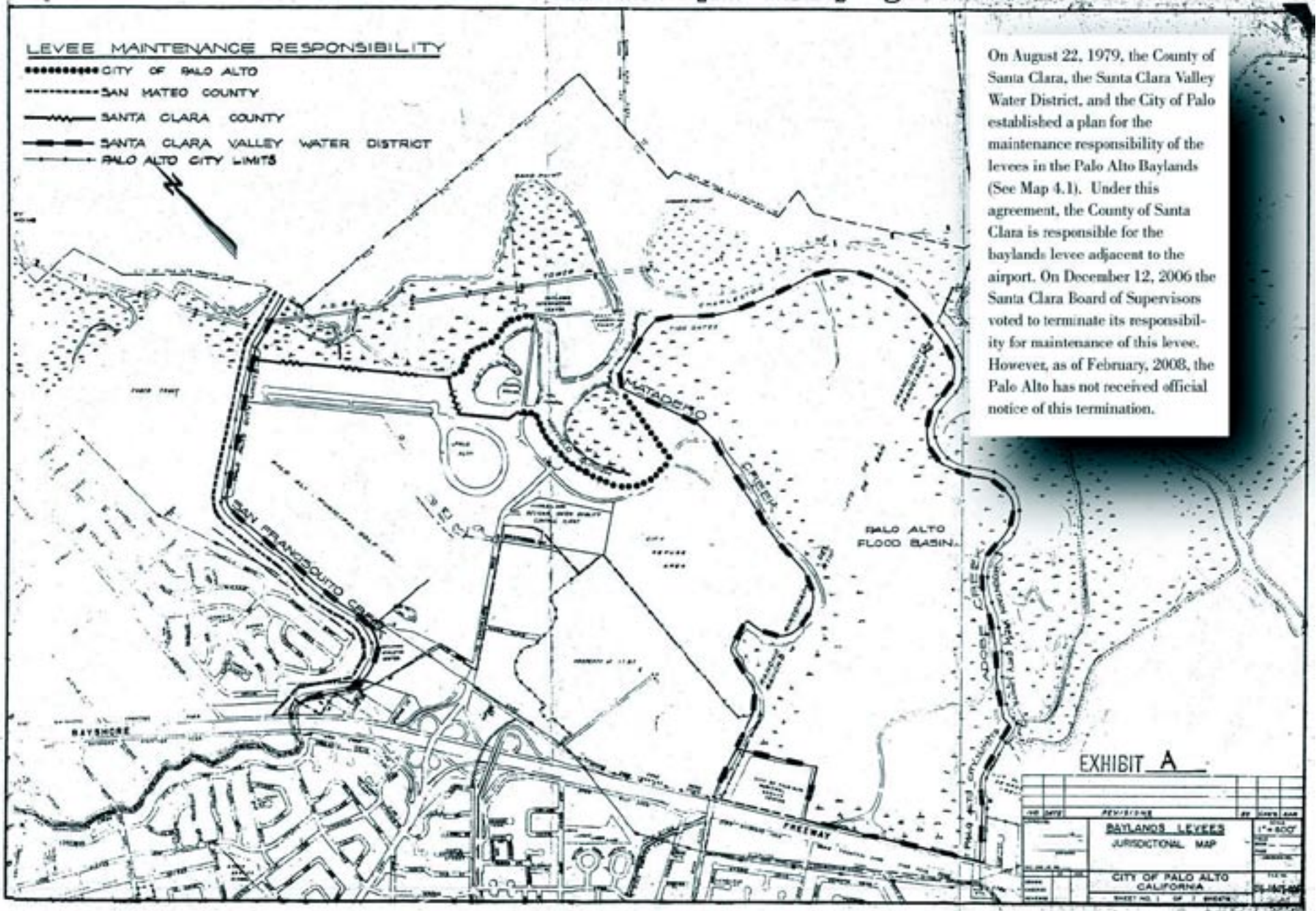
The County conducted a project to raise some low spots in the levee in 2005. On December 12, 2006 the Santa Clara County Board of Supervisors voted to terminate its responsibility for maintenance of this levee. However, as of February, 2008, the City has not received official notice of this termination.

### San Francisquito Creek Storm Water Pump Station

In 2005, property owners approved an increase in the Storm Drainage Fee to fund high priority storm drain improvements throughout the city. The highest priority project was a new storm water pump station along San Francisquito Creek at East Bayshore Road—at the edge of the Baylands on land owned by the Santa Clara Valley District. This facility will improve drainage in a 1,250-acre area of northeastern Palo Alto. The pump station will be operated in a manner so as to not increase the risk of San Francisquito Creek flooding.

As of February 2008, the pump station is under construction.

# 1979 Levee Maintenance Responsibility Agreement



### Matadero Creek Remediation Project by SCVWD - 2005

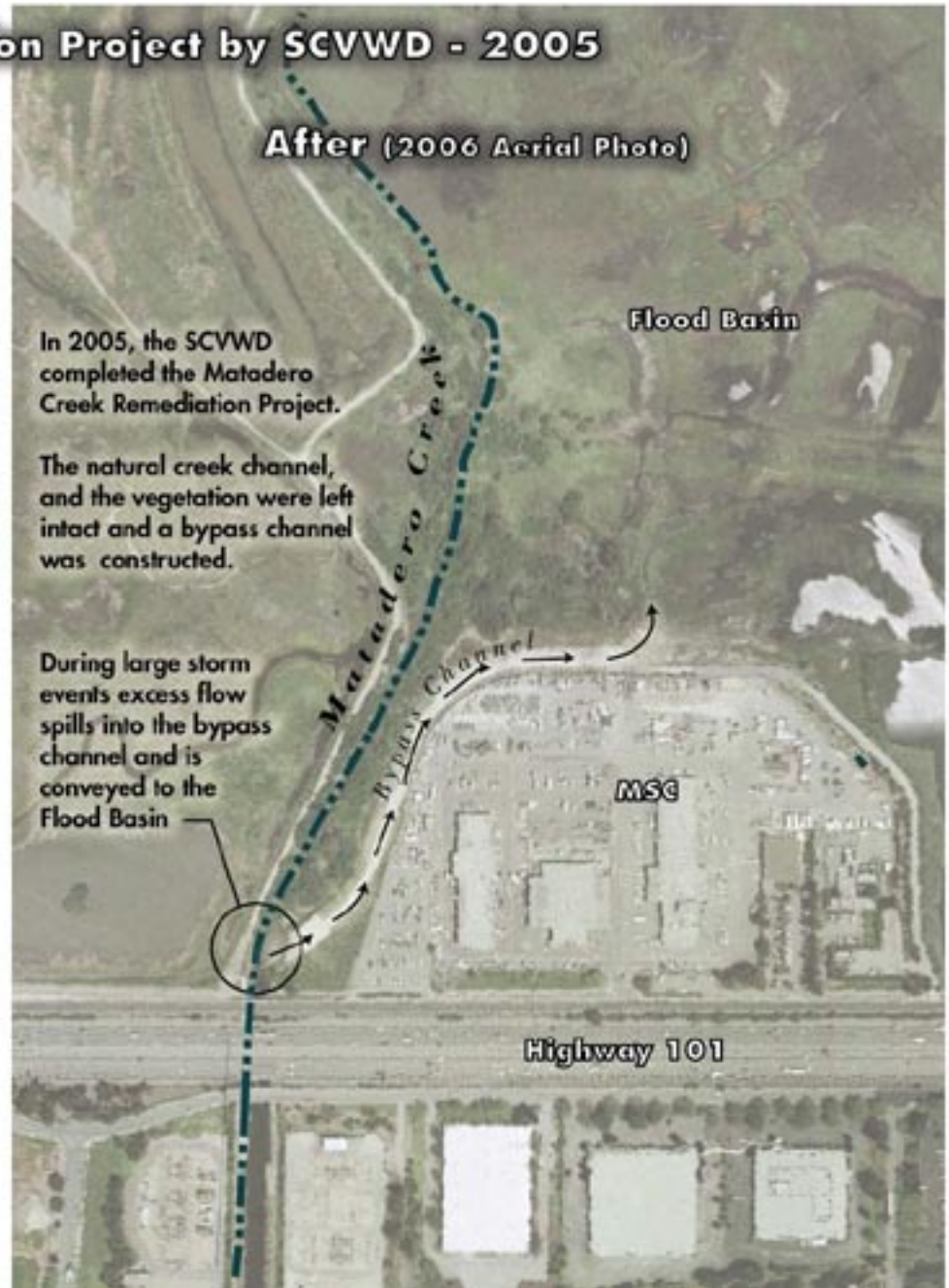
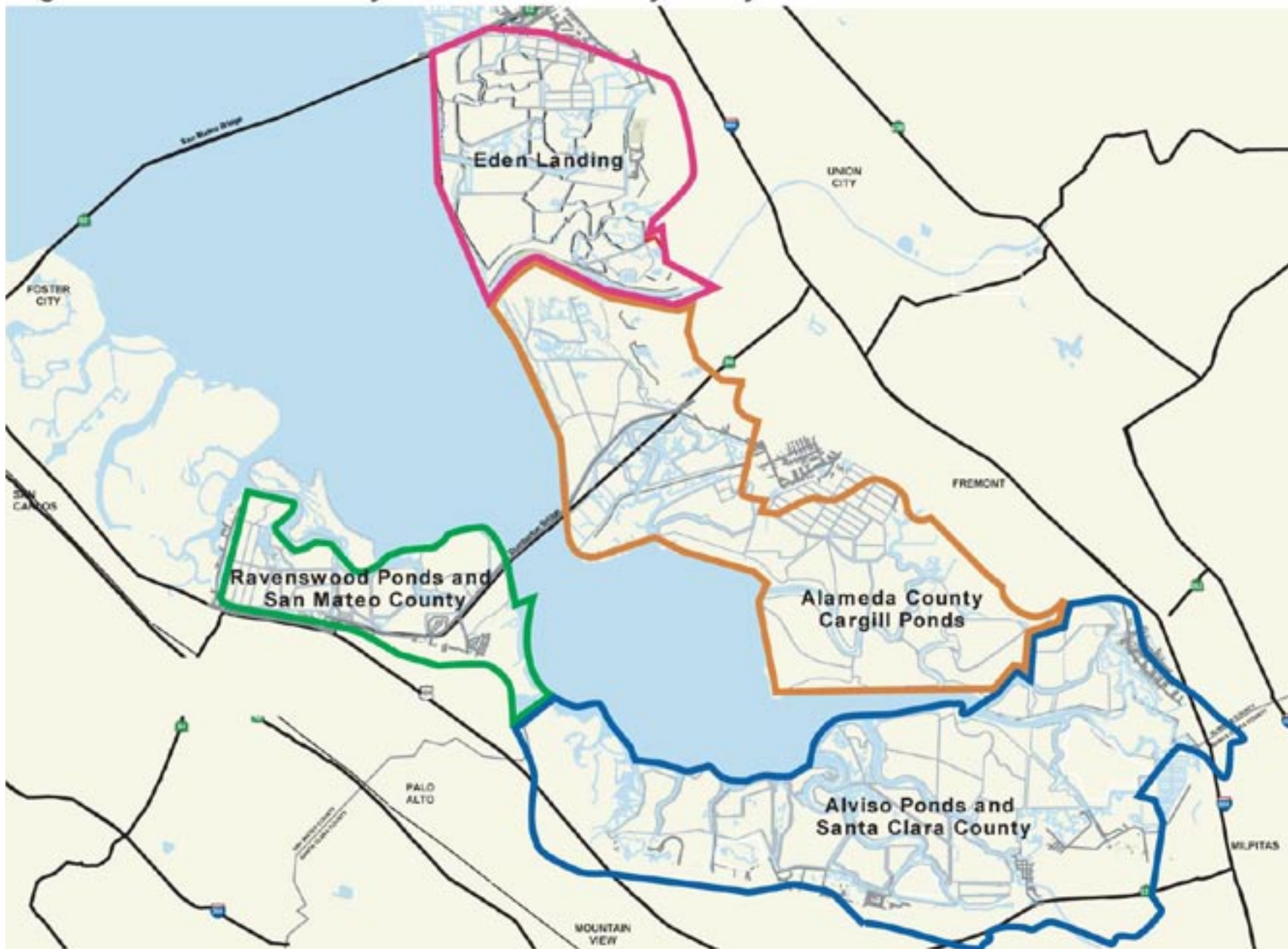


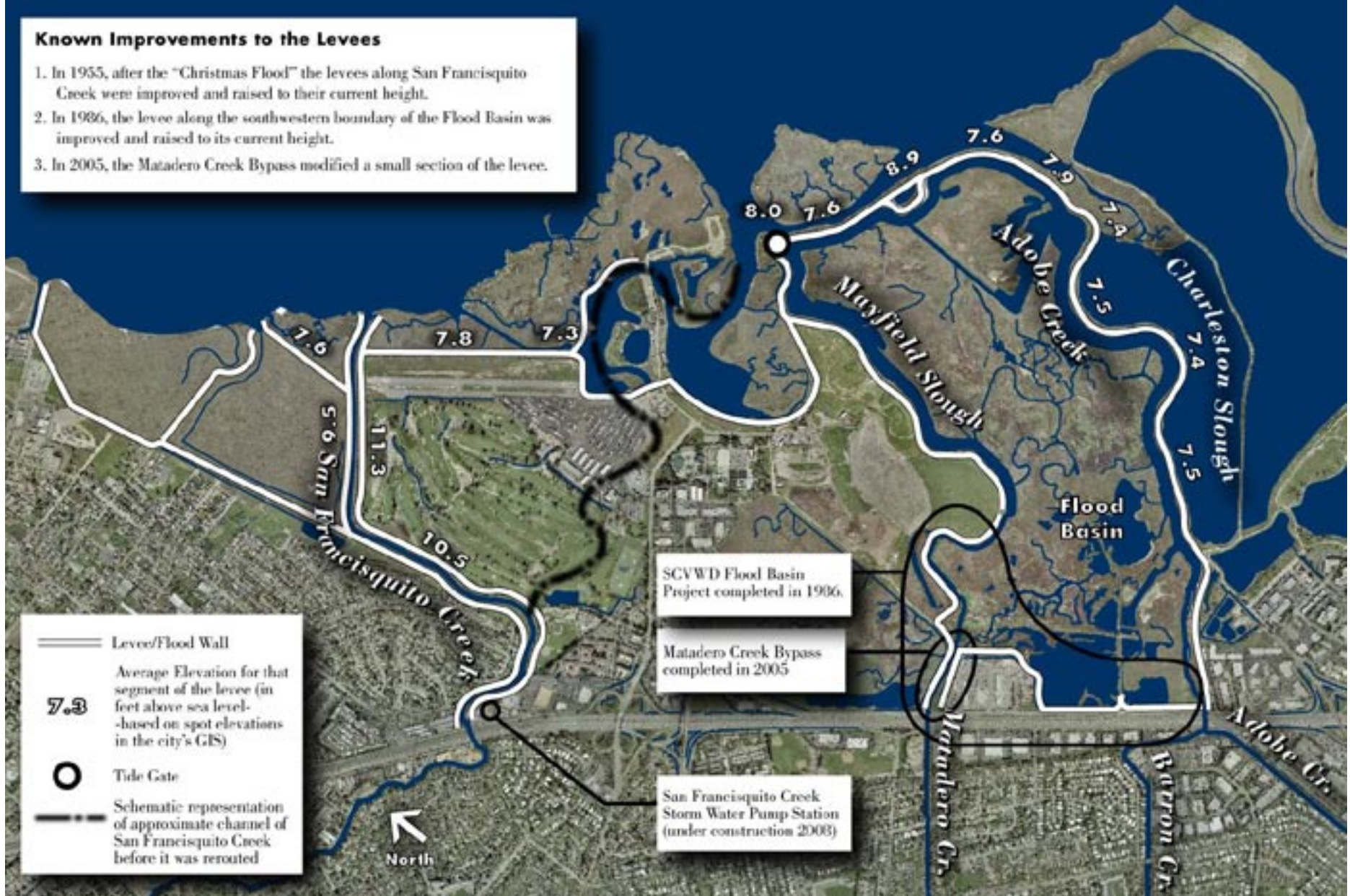
Figure 2. Shoreline Study Interim Feasibility Study Boundaries



## Flood Protection Levee System in the Baylands as of 2007

### Known Improvements to the Levees

1. In 1955, after the "Christmas Flood" the levees along San Francisquito Creek were improved and raised to their current height.
2. In 1986, the levee along the southwestern boundary of the Flood Basin was improved and raised to its current height.
3. In 2005, the Matadero Creek Bypass modified a small section of the levee.





## Flood Protection Policies (page 1 of 1)

The Baylands Master Plan advocates a unification of the Baylands; the following “Flood Control” policies as well as those in the “Overall” and “Access & Circulation” chapters apply to all areas of the Baylands.

### Flood Protection Measures

1. Coordinate any flood protection on San Francisquito Creek with the cities of East Palo Alto and Menlo Park, the Santa Clara Valley Water District, and the San Mateo County Flood Control District by participating in the San Francisquito Creek Joint Powers Authority which was jointly established by these agencies in 1999.
2. Do not allow new levee construction to intrude on any marsh or wetlands without appropriate mitigation.
3. Continue to monitor the status of the South San Francisco Bay Shoreline Study and the

South Bay Salt Pond Restoration Project. Take no position on potential modifications to the Bayfront levees until the South San Francisco Bay Shoreline Study is completed. Any levee modifications should be built to prevent flooding with as low a profile as is possible so that their visual and ecological effects will be reduced. *(Note: This policy was written for a specific project proposed in the 1970s that was dropped and is no longer relevant. However, this adapted version may be appropriate for the current Shoreline Study.)*



Photo courtesy of staff

Artists painting the landscapes of the Baylands.

# Appendix



Left: One environmental constant at the park site is the North-west wind that arrives in the afternoon. The wind wave piece emphasizes the wave nature of the wind and allows people to see that the wind, like the surrounding water, is composed of ripples and waves.



Right: Clustered hillocks or mounds provide habitat for small animals and birds as well as places for people to sit out of the wind. The mounds make direct reference to the shellmounds left by the Ohlone Indians 4,000 - 2,000 years ago. The Ohlone mounds, which varied in size, were the Ohlones' garbage "landfills."



The Chevrons, made from highway barriers, reference the nearby Bayshore Freeway. They also align with the airport runway and from the air, create an aeronautical symbol meaning "don't land here."



Photos courtesy of Ron Horii: rhorii@prodigy.net

The poles accent the landform's point and speak to the dichotomy of what is on either side of the point. On the east side, the poles are evenly spaced and lined up in rows—referencing the controlled flood basin. As the poles move around the tip of the land form to the west, where the harbor is now reverting back to a natural state, the evenness of the spacing seems to gradually disintegrate into randomness as some of the poles disappear into the grade.

# Byxbee Park Documents

Although the Byxbee Park Plan is a component of the *Baylands Master Plan* it is also a major project unto itself. Over the years, several documents have been published that deal specifically with the Park's design and development. This supplement incorporates that information into the *Baylands Master Plan 2008*.

## 1980 • Ekbo/Kay Byxbee Park Plan



The *Baylands Master Plan* mandated a park conversion plan and in 1980, the City engaged Eckbo/Kay Associates to develop a proposal. In 1981,

the team submitted the *Byxbee Landfill Park, Palo Alto Baylands, Park Conversion Plan and Program Phase One: Design Development*. In the case of this document, Phase One referred to the fact that this was a design plan and did not include working drawings etc.

The Eckbo/Kay plan was based on the butterfly-like layout of the “Pastoral Park Conceptual Diagram” and the 15–20 year grading plan developed for the *Baylands Master Plan*. It gracefully accepted the elevated ground generated by the landfill as an asset rather than a liability which enabled “a lyrical and poetic symphony of rolling meadowlands...” (*Map 2.1*). Although this document was not an implementation plan it indicated that the design was to be carried out in stages since it was recognized that land filling operations

would need to continue for at least the next ten years. Staging the project would allow for immediate closure and conversion of a portion of the landfill area while accommodating the continuation of refuse operations in the remaining portions.

**Stage One** included the conversion of sixty-two acres in the northeast section as well as a perimeter walk made of earth berms enclosing the entire landfill area. It also included the restoration of the Mayfield Slough Remnant Marsh.

**Stage Two** included the conversion of thirty-four acres in the northwest section as well as establishing a new entry area at Embarcadero Way.

**Stage Three** was the conversion of the remaining fifty acres in the southern section.

Components of the park design included:

- Closure of eastern section of Harbor Road from Embarcadero Road to the landfill area and development of Embarcadero Way as the access road to the new park.
- 12 ft wide perimeter walkway along existing levee.
- 40-car (turf block) parking lot at the Visitor's Center.
- Realignment of Embarcadero Road to create a rounder transition to the remaining western section of Harbor Road.
- Plantings including grasses, shrubs, feature trees, medium trees, and tall trees.
- Exterior ring of naturalized meadows with strategically located interior meadows to be irrigated for a greener look.
- Relocation of the Recycling Center outside the park.

## Issues that Triggered the Preparation of Hargreave's Byxbee Park Master Plan

The Eckbo/Kay document is widely referred to as the "Original Byxbee Park Plan". Soon after it was published, issues developed that necessitated revisions and by 1989 the Council had approved an updated Byxbee Park Master Plan developed by

Hargreaves Associates. The Hargreave's Byxbee Park Master Plan includes an explanation of the issues that led to the need for the second, or, updated plan. These issues fall into three categories:

### 1. The technical requirements for building a park on landfill were redefined

- The landfill cap requirements were augmented to require another layer of topsoil.
- The maximum allowable slope of the mounds was decreased.
- The park was not to be irrigated (*to minimize leachate and erosion*).
- The planting of trees was not to occur so as to guard against weakening of the impermeable layer do to growing tree roots.
- A permanent flare was required as part of the system of collection of gas emissions as required by new regulations of the Bay Area Quality Management District (BAAQMD).
- A perimeter landfill gas migration monitoring system was required under the regulations of the California Integrated Waste Management Board. (*See Landfill chapter.*)
- A ground-water monitoring system and a leachate collection and removal system were required by the San Francisco Regional Water Quality Control Board. (*See "Leachate" sub-section.*)

### 2. The City Council directed revisions to some park components

To reduce costs, keep the park more in harmony with the Baylands context, and comply with RWQCB regulations, the Council directed the elimination of certain components of the Eckbo/Kay master plan. The eliminated components were:

- the areas of irrigated lawn,
- some of the areas of hard paved surfaces, and
- tall trees.

With the adoption of the Hargreave's plan, the Council also changed the park's entry way from the proposed Embarcadero Way connection to the existing entry off of Embarcadero Road.

### 3. The City Council reorganized the design team to include artists

In 1986, per policy of the City of Palo Alto "Municipal Arts Plan" to "include the Visual Arts Jury in providing input into the planning of parks, public buildings, or study committees with the view of including art in the early stages of the planning process", the City launched a nationwide search for an artist to work with the City and its hired landscape architecture consultants to update the Byxbee Park Plan and to design Phase I for implementation. A panel of art professionals selected Peter Richards and Michael Oppenheimer.



- another alluvial fan series of rippling berms in the valley between phases I and II and completion of the shell trails
- an astronomical viewing station at the site's highest point (the only paved area in the plan)
- parking for an additional 20 cars
- realignment of the entry road to arc instead of making a sharp turn off Harbor Road
- possible incorporation of an area for the Recycling Center adjacent to the Electrical Generation Facility which converts the landfill gasses into electricity.

Phase II was expected to be completed in the summer of 2003.

#### Key design changes resulting from the adoption of Hargreave's 1991 Byxbee Park Master Plan

- A softer, more natural, and lower maintenance landscaping.
- Incorporation of the elevation increases adopted by the Council in 1986.
- Exclusion of the "meadow bowls" in the contouring
- Abandonment of the proposal to extend Embarcadero Way as the park entrance and establishment of the land-fill entry road (Harbor Road) as the park entry.
- Provision for possible incorporation of an area for the Recycling Center adjacent to the Electrical Generation Facility which converts the landfill gasses into electricity.



## 2007 • Hargreaves Grading Review for Phase II



After the Phase I and Phase IIA & B areas had been closed, only Phase IIC (approximately 50 acres) remained open for active waste management operations (*Map 2.5*).

In 2006, the City asked Hargreaves Associates to review the grading plan developed by Mark Thomas and Company for conformance to their City-adopted 1991 Byxbee Park Master Plan concept for the Phase II area.

In 2007, Hargreaves submitted the *Byxbee Park, Palo Alto Landfill Closure Grading Landscape Design Consultation*. The review of the grading plan divided the landfill into two parts (*Map 2.6*).

**Part B:** Hargreave's review found the grading in this area to be in conformance with the 1991 conceptual plan.

**Part A:** Hargreaves made the following recommendations for changes to the landfill grading plan this area:

1. The [more] sinuous ridge form at the north end of Phase II was found to be acceptable and will provide more opportunities for refuge when the Master Plan design principles are implemented on this more complex land form.
2. Smooth the south west corner and create a fuller distinct tapered shape to match the original intent of the Master Plan. Move topsoil and near surface trash to smooth south west landform to resemble the Master Plan.
3. Smoothly integrate the valley between Phase I and II into the remaining Phase II final grading. Monitor the grading quality because of the prominence of this area at the park entry. Smooth the north slope to resemble the Master Plan.
4. Smooth slope transitions throughout so that the brow of the hill matches the gentler transitions of the Master Plan.

As of February, 2008, the grading plan has been revised per Hargreaves Associates review (*Map 2.3*).

## Design Elements from Hargreave's 1991 Byxbee Park Master Plan (page 1 of 4)

### Statement

The proposed master plan for Byxbee Park is an attempt to place the park in a proper context in relation to the Bay, the City of Palo Alto and the San Francisco Bay Region. The park plan also addresses the unique characteristics of the site itself -- the garbage and its inherent site development restrictions, the specific landforms as an "outgrowth of the landfill, the slough, the marsh, the wind and sky. The elements of the park seek to tie the site to its surroundings and express its own characteristics in a metaphorical and sometimes informational way.

### Design Concept

The public gave the design team the strong sense that exploration and discovery are important to the experience of walking the site. The team's own observations told them that refuge was also an important part of experiencing the site. The proposed elements of the park function to heighten the excitement or pleasure of personal discovery, with each aspect providing the opportunity for making physical or cultural observations about the place and the surrounding area, and in some cases, provide places of refuge for people and wildlife.

### Landfill Characteristics

Underlying the park design concept are the technical considerations of closing the landfill. The trail system for the entire park provides prospect and refuge. The low perimeter walk keeps the visitor somewhat out of the wind and allows one to move through and connect to the entire area's trail system. The trail to the viewing platforms at the slough's edge

takes one to areas of refuge (for people and wildlife), and the trails to the "top" of the site and the viewing point provide the exhilaration of long views, the feeling of being at the top, and all that prospect embodies .

The trails are to be made of crushed oyster shells which will provide a texture consistent with the goals of a soft, passive, even contemplative environment.

### Shell Band

A narrow 6" shell band rims the entire east and south edges of the park in Phases I and II. This narrow shell band lines the edge of the maintenance access road atop the levee. Along this band, benches are placed as stopping off points for rest and viewing. The narrow crushed oyster shell band invites pedestrians to use the levee as a promenade around the base of the landfill. When the levee's elevation is raised, as ultimately planned, the band should be replaced with a full trail width of crushed oyster shells.

### Chevrons

The Palo Alto Airport can be observed from the ridge top at the northern end of Phase I. The chevrons extend the line of the airstrip through the park itself making a direct visual connection. This line is established by concrete highway barriers placed in pairs at right angles to each other creating a series of chevrons that travel from the top of the ridge down across the park entry path. The use of the highway barriers also makes reference to the Bayshore Freeway just to the west. The chevrons will be visible from the air and are an aeronautical symbol

## Design Elements from Hargreave's 1991 Byxbee Park Master Plan (page 2 of 4)

meaning “don't land here.” As an arbitrary line, it suggests again that the place is man-made and that the hand of man has controlled almost every aspect of its existence.

### **Land Gate**

When walking east from the parking lot, the first feature will be the entry point created by the chevrons moving down the hill. Just beyond this entry a trail forks to the right, leading upward along the side of the hill. This trail will lead into a drainage swale between two landforms. This draw, or swale, is further constricted by two landforms that extend from each side, allowing only enough room for the foot path. This passage-way marks an abrupt change from the openness and exposed north slope to areas of refuge, special plantings and observation stations that provide vistas to the east. At the north end of Phase I the landforms come to a point. To the east of this point is Mayfield Slough which is part of the flood control basin, and to the west is the marsh that was once part of the yacht basin and is now tidal and quickly reverting back to a natural state. To draw attention to, and accent this dichotomy between man-made and controlled, to natural and self regulated, a series of poles are planted around the northern tip of the landform. On the flood basin side, the poles are evenly spaced and lined up in rows. As the poles move around the tip of the land form to the west, the evenness of the spacing seems to gradually disintegrate into randomness as some of the poles disappear into the grade. The tops of the poles will all be cut to form a single plane that slants westward toward the marsh, drawing the eye from the east to the west.

### **Hillocks**

The higher areas of the park—exposed to wind—are somewhat flat and uninteresting, but do provide wonderful panoramic views of the whole South Bay region. Small hillocks or mounds clustered in large groups will provide places at high elevations for people to sit out of the wind, while at the same time providing visual texture to the broad expanses of the high areas. They also will provide habitat for small animals and birds and opportunities for special planting of grass and flowers. The mounds themselves make direct reference to the shellmounds left in the area by the Ohlone Indians 2,000 - 4,000 years ago. These mounds, which varied in size, were the Ohlones' garbage “landfills.” The hillocks are thus appropriately sited upon a modern day shellmound.

### **Weirs**

The weirs are designed to control erosion along the bottom of the swale in Phase I. They also act as accent points along the trail that leads from the ridge down to the water. A moisture retaining mixture in the soil behind each weir traps enough moisture to allow for the evolution of a landscape that contrasts with surrounding grasses. These small meadows are visible from the hills above and act as an invitation to draw people down to them.

### **Hedgerows**

Although the majority of the park is non-irrigated grasses and wildflowers (a mandate of the landfill operation), two hedgerows are proposed. One hedgerow partially exists along the marsh edge and would be augmented. This hedgerow is seen from the vehicular and pedes-

## Design Elements from Hargreave's 1991 Byxbee Park Master Plan (page 3 of 4)

trian entrance to the site, across the marsh, with the Phase I landform as a backdrop. The hedgerow gives scale to the landforms beyond and frames the view. The other proposed hedgerow is located on the crest of the slope along the trail with weirs. This hedgerow will add to the wind shelter already created by the landform. The hedgerows are composed of large and small shrubs and will provide a vertical landscape element to the site, as well as refuge for people and wildlife.

### **Keyhole**

The flare which burns off excess methane gas is located in a hollow on the south slope of the ridge and just below the series of weirs. It is a jarring note; but appropriate because it brings one back to the physical realities of landfill technology.

The mysterious flare, invisible during the day, casts shadows on the ground at night, which move across the surface in a liquid, stream-like fashion. This effect will be heightened by providing a bed of white gravel for the shadows to flow over. The gravel and flare compound will take on a keyhole shape providing a conceptual window for disclosing the secrets of the landform's interior.

### **Wind Wave Piece**

One environmental constant at the park site is the afternoon Northwest wind. The wind wave piece 'emphasizes the wave nature of the wind. This piece will allow people to see that the wind, like the surrounding water, is composed of ripples and waves. The piece will consist of two vertical poles; suspended and spaced evenly between these poles will be 20 to 30 vertical ropes that will terminate above reach. This piece has been

prototyped and proven to show the graceful waves of an ordinary summer's wind. The location of this piece will be placed at the conceptual "headwaters" of the Alluvial Berms.

### **The Arc (Alluvial) Berms**

Just south of the flare and "the weirs" is an opening in the hills that creates a natural west to east drainage swale. Beyond this drainage swale is another swale that will ultimately drain the south and east sides of a large hill in Phase II. To control erosion in these two areas a series of landforms, which look like alluvial fans from the air are added. Visually, and conceptually, they would enhance the notions of the collection of water from the hillsides to create streams that turn to rivers that turn to oceans. In a sculptural and poetic sense they make visual reference to the delta region of the Sacramento River; and in a geological sense, refer to a natural phenomena that can occur in any drainage system.

### **Viewing Platforms**

Just to the east of the keyhole is the edge of Mayfield Slough. An access road runs parallel to the slough but is set back from the water's edge a distance that ranges from 50 to 100 feet. The area between is host to a variety of plant life that thrives on that moist environment, providing habitats for bird and animal life. It is also the most protected from the northwest winds and it is a pleasant place to be. Therefore, a series of platforms are to be placed along the shoreline to provide comfortable places for people to sit protected from the wind, enjoy the view, and observe the great populations of birds that move seasonally

## Design Elements from Hargreave's 1991 Byxbee Park Master Plan (page 4 of 4)

through the adjacent wetlands. Seen from the hilltops just to the west, the triangular shape of the platforms provides an aggressive sculptured form that point to the water and to the movement of the waves that travel from north to south down to the slough. The aggressive shapes of the platforms will be softened by the existing shrubs on the windward sides. The viewing platforms extend along the slough's edge in Phase I but do not extend into Phase II where the orientation changes and the quality of views is less desirable.

### Viewing Point

The highest and most secluded point in the park, located in Phase II, is proposed as the site of a viewing point. This special paved platform will be the only paving in the park and will "point" directly north to south. The cardinal points: North, South, East and West will be marked in the paving.

### Restrooms

The restrooms for the entire park are located near the parking lot and are to be built with the Phase I park development. The design of the restrooms is consistent with the design of the viewing platforms and benches -- all of a triangular format primarily of wood. The translucent top will provide light without electricity during park hours (daylight). The gap between the roof and walls will provide ventilation.

### Parking

The parking lot is located at the end of the park via an access road adjacent to the marsh. In Phase I the parking will be gravel and will accommodate 20 cars. With the completion of the park, the lot size will

be expanded to provide spaces for 40 cars. Handicap spaces are provided closest to the restrooms. Bike racks are provided at the east end of the parking lot.

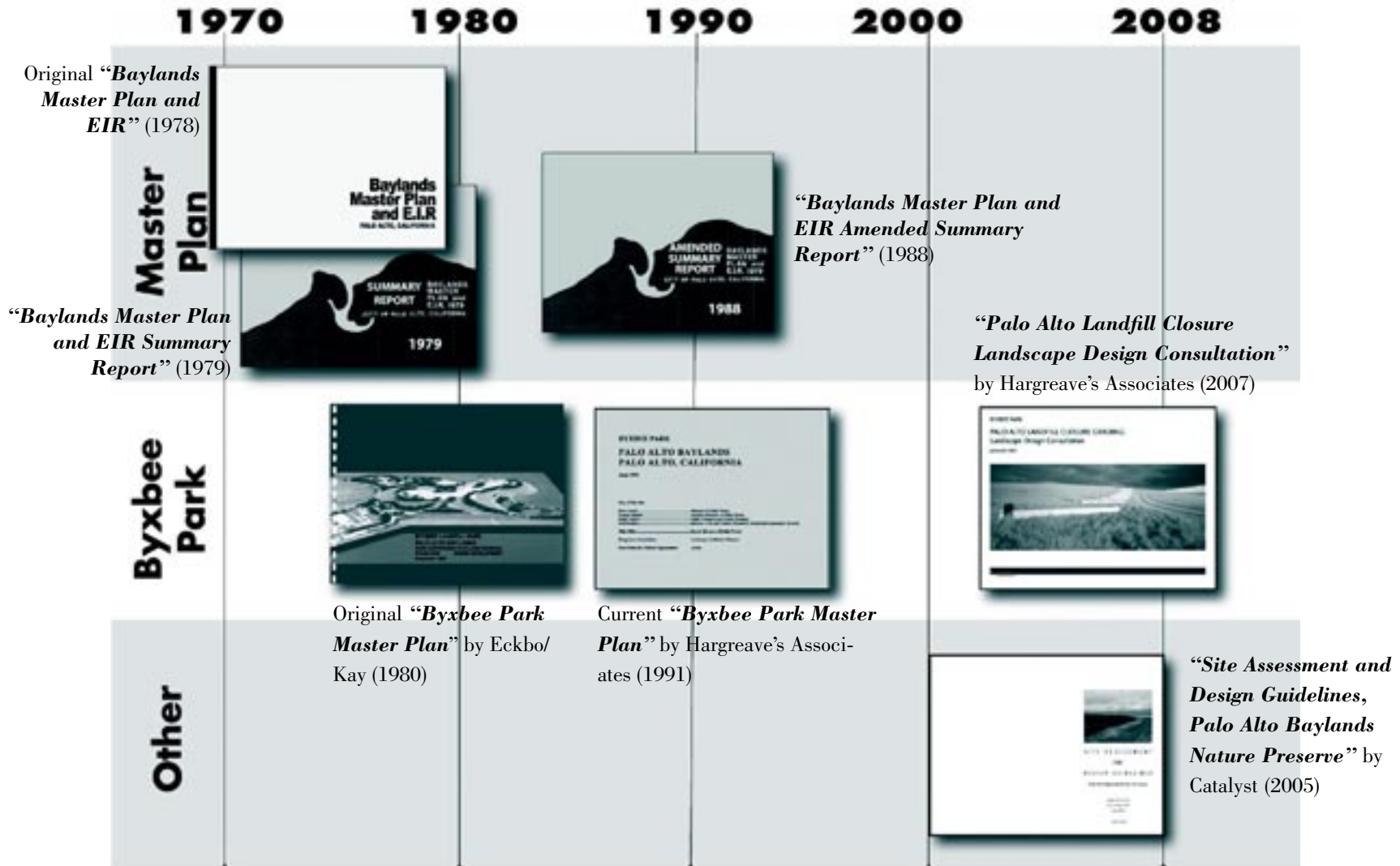
### Signage

Three types of signage will exist in the park: an entry sign, an interpretive sign, and directional signs. The entry sign will be built in Phase I at the park's entrance. The interpretive sign will include a map of the park and description of the elements and will be permanently placed on the west restroom wall. This sign will be built in Phase I. Throughout the entire park small directional signs will point the way to the various elements described by the map. The first set of these will be built in Phase I.

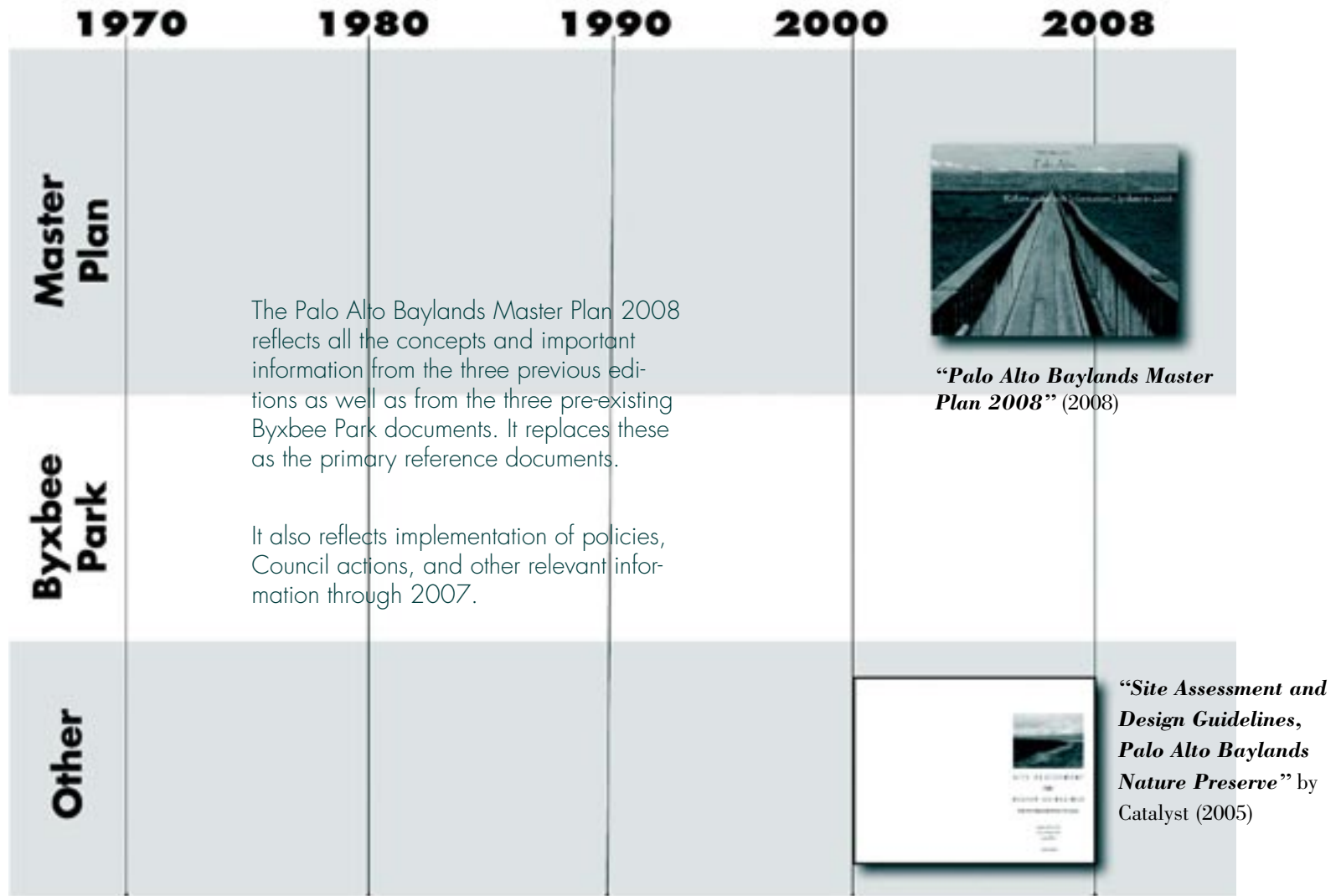
# Baylands Reference Documents

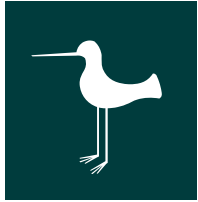
Before the 2008 Update

Before the 2008 update, these were the Baylands reference documents.



# After the 2008 Update





# Parks and Open Space in the Baylands

1965: City Charter Chapter VIII establishes rules for the acquisition, transfer and disposal of “park land.”  
1965: Ordinance 22.08.020 (#2252) dedicates “Byxbee Park and the city-owned Baylands”  
1968: Council changed the name to “John Fletcher Byxbee Recreational Area” on March 4, 1968  
1969: Ordinance 22.08.001 to 22.08.007 implements provisions of the City Charter Section VIII.

## Chronology of Parkland Dedications

In 1965, the City dedicated all of its parkland and once dedicated, land can only be removed from dedication by a two-thirds majority vote of the citizens (Article VIII of the City’s Charter ). Such votes have occurred and there have been both subtractions from and additions to the parkland since 1965. Following is a chronology of those events (*Also see Map A.1*).

### 1965 • The original dedication included:

- A. Municipal Golf Course; and
- B. Palo Alto Yacht Harbor as defined by the county lease that existed at the time; and
- C. All other City-Owned Lands Northeast of the Bayshore Freeway except:
  1. The Airport as defined by the concurrent lease with the county—before the proposed expansion.
  2. Sewage Treatment Plant (before the, larger, Regional Plant was established.
  3. Service Center
  4. Geng Road Gas Metering Station
  5. Area leased to Palo Alto Sanitation Service—before its expansion in the 1970s.
  6. The land not within the City’s limits i.e., what we now call the Faber Laumeister Tracts in unincorporated San Mateo County land.

**Note:** The Former LATP site was not owned by the City at this time and is not included in this dedication.





On the boat dock, a student collects salt water for an aquarium project.

**1968 • Subtractions (by vote) included:**

- X. Additional area for construction of the new multi-jurisdictional Regional Water Quality Control Plant
- Y. Additional area for the proposed expansion to the airport (was not implemented).

**Note:** When the PASCO lease area expanded, no land was subtracted from parkland—the expansion is on parkland.

Also in 1968, the name for the massive park (described in “C”) officially became John Fletcher Byxbee Recreation Area.

**1982 • Addition included:**

- D. John Fletcher Byxbee Recreation Area Addition. The addition is a portion of the Former ITT Property purchased by the city in 1977. All of the property was dedicated except the approximately 36-acre portion in the center which was, and is, used by a ship-to-shore radio transmission station by an easement. (*For more information about the radio station, see the Former ITT chapter.*)

**1985 • Subtraction (by vote) included:**

- Z. A City-owned parcel of land in the Embarcadero Corridor and adjacent to the Geng Road gas-metering station was exchanged for a privately-owned parcel at 3005-3009 Middlefield Road. Each parcel was 3.74 acres. As a result of the trade the City took ownership of the Winter Lodge Ice Skating Rink/ Chuck Thompson Swim and Tennis Club and the new owners built an office building at the Geng Road site.

## Chronology of Park Dedications in the Baylands as of 2007

### 1965: Original Parkland Dedication

- A** Municipal Golf Course
- B** Palo Alto Yacht Harbor
- C** All Other City Owned Lands North-east of 101 Except the Following\*:

- 1** Airport Master Plan Stage 1
- 2** Sewage Treatment Plant
- 3** Service Center
- 4** Geng Road Metering Station
- 5** Lease to Palo Alto Sanitation Service (PASCO)

### 1968: Areas Removed From Parkland By Vote

- X** For Regional Water Quality Control Plant
- Y** For Phase II Airport Expansion (not implemented)

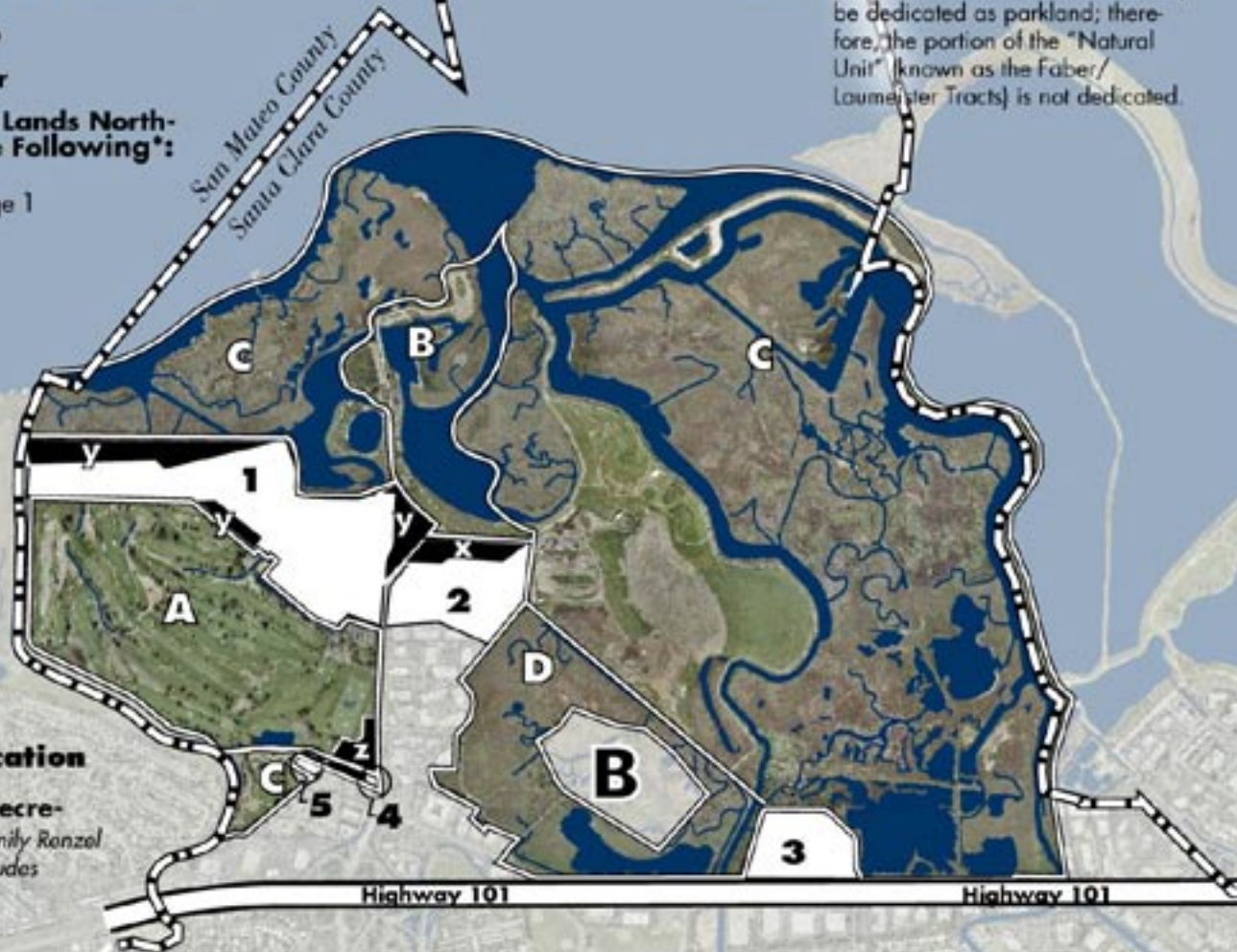
### 1982: Additional Dedication

- D** John Fletcher Byxbee Recreation Area Addition *(Emily Ronzel Wetlands-note dedication excludes radio-station easement area)*

### 1985: Areas Removed From Parkland By Vote

- Z** Highway parcel on Geng Road swapped with privately-owned land and recreational facilities on Middlefield Road

**Note:** Only land within the City limits may be dedicated as parkland; therefore, the portion of the "Natural Unit" (known as the Faber/Loumeister Tracts) is not dedicated.



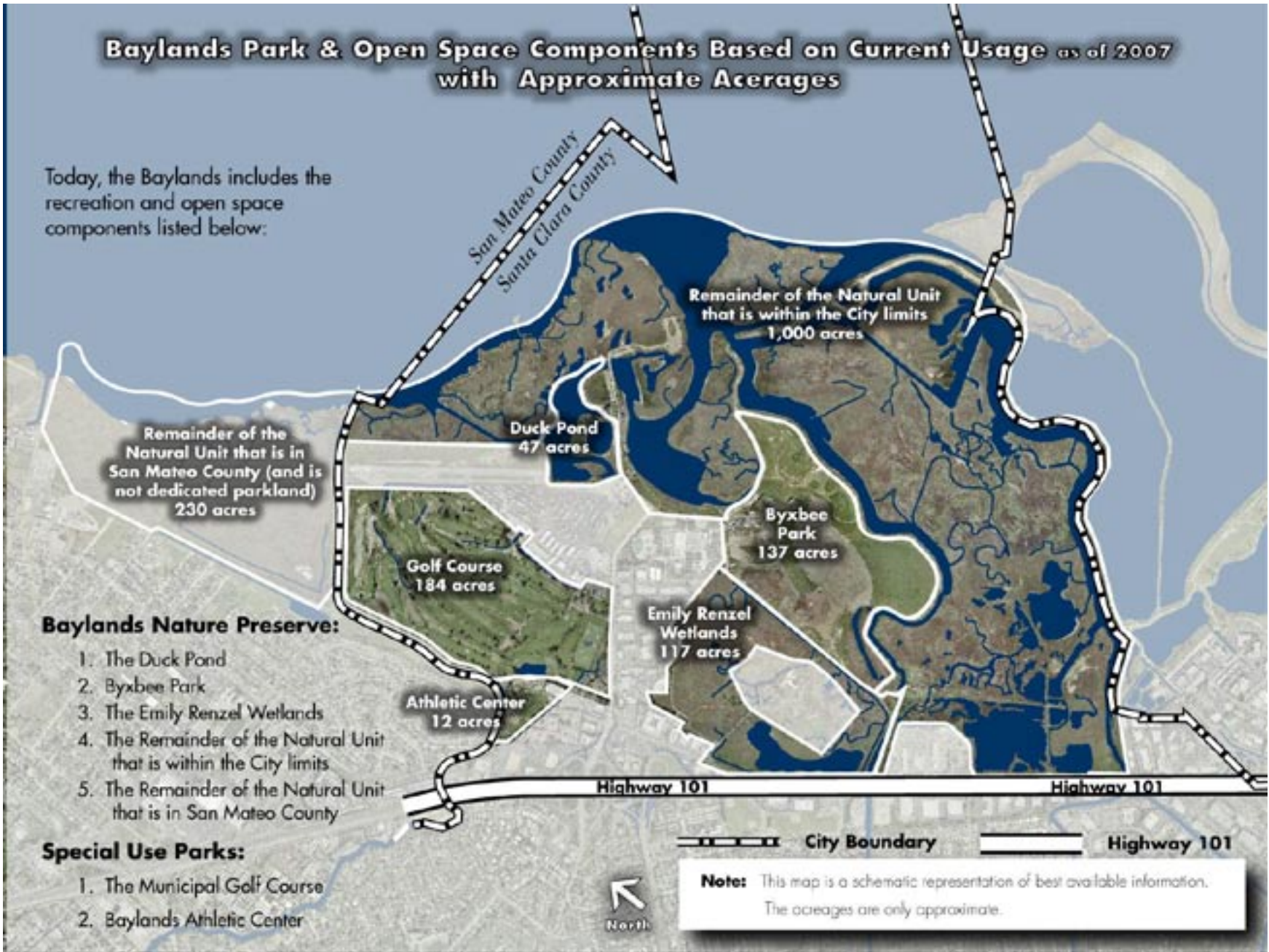
City Boundary Highway 101

Note: This map is a schematic representation of best available information. City staff are working on improving the definition of dedicated parkland in the GIS. In the meantime, the map (left) shows the general area that is dedicated.

Map A.1b

## Baylands Park & Open Space Components Based on Current Usage as of 2007 with Approximate Acreages

Today, the Baylands includes the recreation and open space components listed below:



### Baylands Nature Preserve:

1. The Duck Pond
2. Byxbee Park
3. The Emily Renzel Wetlands
4. The Remainder of the Natural Unit that is within the City limits
5. The Remainder of the Natural Unit that is in San Mateo County

### Special Use Parks:

1. The Municipal Golf Course
2. Baylands Athletic Center

**Note:** This map is a schematic representation of best available information. The acreages are only approximate.

Map A.1c

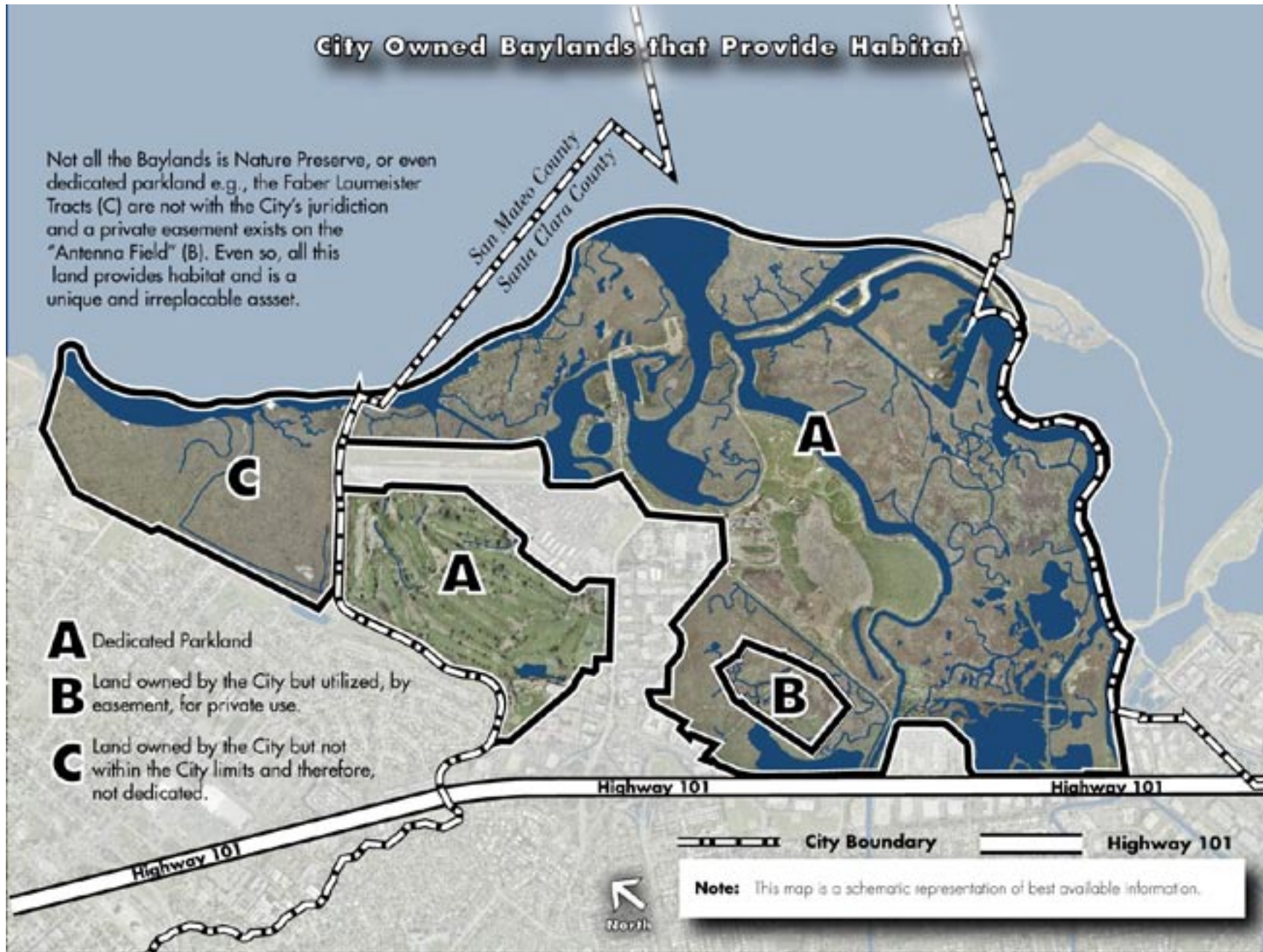


Photo courtesy of staff



Although the Antenna Field (surrounding the white building visible in the photo) with the Former ITT Property is not dedicated parkland it still provides habitat.



# Comprehensive Plan Relationship

## Relationship between the Documents

The adopted 1978 *Baylands Master Plan* and EIR were incorporated into the City's *Comprehensive Plan* by Resolution 5675, April 2, 1979. When the 1998 *Comprehensive Plan* was prepared, a different approach was followed. The 1998 *Comprehensive Plan* recognizes the *Baylands Master Plan* as the adopted planning policy document for the area east of the Bayshore Freeway, reaffirms the City policy of protecting the Baylands, and includes many goals, policies, and programs throughout the *Comprehensive Plan* that reference the Baylands and are consistent with and support the policies of the *Baylands Master Plan*.

In November, 2004, Staff developed “A comparison of key policies in the Baylands Master Plan with related goals, policies and programs found in the 1998 *Comprehensive Plan*” and presented it to the Council (CMR:472:04). Following are updated versions of both the narrative comparison and the comparison matrix from that report.

## Comparison of the Policies (Narrative Version)

### Land Use

The primary land use policy of the *Baylands Master Plan* is that the development already in place east of Highway 101 when the Plan was adopted may continue but will not be expanded, and the remaining undeveloped Baylands will be conserved as open space and restored where it has been degraded.

The *Baylands Master Plan* includes specific restoration policies for converting the Landfill to a pastoral park and restoring the Harbor Area, and Former ITT Property to marsh, thereby changing its land use to open space.

The 1998 *Comprehensive Plan* reaffirms these principles, recognizing the *Baylands Master Plan* as the adopted planning policy document for the area east of Highway 101 and stating that the Baylands will continue to be conserved as open space

over the term of the *Comprehensive Plan*. In fact, the *Comprehensive Plan* treats the city's Urban Service Area as an urban growth boundary and states that future urban development will be limited to property within the urban service area.

The *Comprehensive Plan* includes specific policies that support the continuance of the airport and the “East Bayshore” and “San Antonio Road/Bayshore Corridor” employment districts—without allowing them to further intrude into the open space.

### Parks

The *Baylands Master Plan* identifies two kinds of recreation. The first type is the more intensive recreational activities such as team sports and special requirement activities such as golf and recreational flying. The second type is passive recreation such as biking and hiking. The *Baylands Master Plan* observed that the pre-existing, intensive activities were limited to the Embarcadero Corridor and accommodated their continuance. However,

the Baylands Master Plan repeatedly states that the recreational activities in the open space areas, including the future landfill park should be more passive and compatible with the goal of conserving and protecting the natural environment.

The *Comprehensive Plan* describes the City’s focus to be maintaining and rehabilitating existing facilities, given that as a “built-out” community there will be little opportunity to acquire new parkland.

The *Comprehensive Plan* provides that the Baylands will continue to be conserved as open space and that the City will seek out new opportunities for more open space in the Baylands.

The *Comprehensive Plan* addresses the possibility that there may be proposals to locate infrastructure improvements in public open space and provides that this should be done only when such improvements are consistent with goals to protect and conserve the natural environment. Provision for possible location of the recycling center in

Byxbee Park changed since the 1987-88 update of the *Baylands Master Plan*. The original *Baylands Master Plan* and the 1987-88 update provided that the recycling center would be removed from Byxbee Park when the landfill was completed. The revised *Byxbee Landfill Park Master Plan* adopted in 1989 states that a location for the recycling center may be provided in Phase III (later Phase IIc) of Byxbee Park, and identifies an area about one or two acres in size adjacent to the Electrical Generation Facility for that purpose.

#### **Natural Environment**

The *Comprehensive Plan* goals and policies in the Natural Environment element recognize the significance of the Baylands as a high value ecosystem, provide for the preservation and protection of the natural areas, and the conservation and preservation of the Baylands as open space.

The *Baylands Master Plan* includes more specific recommendations that would help to implement the *Comprehensive Plan* goals and policies.

Both plans include a specific recommendations for a “management plan”.

#### **Views, Scenic Routes and Gateways**

In the *Baylands Master Plan*, a major design concept for the landfill park is the introduction of a high place in an otherwise horizontal landscape that will provide panoramic views of the surrounding marshes and beyond to the hills ringing the south Bay. The *Baylands Master Plan* also includes several recommendations to enhance the park quality of Embarcadero Road as the entrance to the Baylands and to create a gateway experience for visitors to the park. This is consistent with *Comprehensive Plan* identification of Embarcadero Road as a scenic route and as a gateway to the Baylands at East Bayshore Road.

The *Comprehensive Plan* recognizes the importance of dramatic views from the Baylands, and acknowledges the importance of visual connections in defining the character of the community. Map L-4 showing Community Design Features

identifies major view corridors in all directions from within the Baylands.

### **Los Altos Treatment Plant Site**

In 1978, the *Baylands Master Plan* recommended that the Los Altos Sewer Plant site retain its land use designation of Park. However, the 1987-88 update referred to Council direction that staff explore the possibility of locating a solid waste transfer station at the site.

Although the City decided not to locate a solid waste transfer station at the site, in 2000, the Council changed the land use designation from Park to a combination of Public Conservation Land and Major Institution/Special Facilities.

### **East Bayshore Employment District**

The *Baylands Master Plan* recognizes the urbanized Embarcadero Road corridor but mandates that the urbanized area should not intrude further into the open space and recreation areas. It also mandates that future development be consistent with the *Comprehensive Plan* and continues to receive extensive design review utilizing the Site and Design Review Process and the Site Assessment and Design Guidelines Palo Alto Nature Preserve.

The *Comprehensive Plan* identifies the Embarcadero Corridor—in the Baylands—as the “East Bay-

shore Employment District” and that it is an essential part of the local economic base. It stresses both the value of the relatively low-cost spaces to service industries and start-up businesses and the need for development of these properties to reflect the area’s location in the Baylands.

### **Airport**

The *Baylands Master Plan* limits the airport to a single runway with not more than two fixed base operators and only minor expansion and improvements to the facilities—that do not significantly increase the intensity of the use or intrude into open space and recreation areas.

The *Comprehensive Plan* states that the airport is a much-needed business and recreational facility and calls for support of its continued vitality and effectiveness, but reaffirms the airport policies that were adopted in the *Baylands Master Plan* i.e., limiting the airport to a single runway, not more than two fixed base operators, and only improvements that do not significantly increase its intensity or intrude into open space.

### **Access and Circulation**

The over arching concepts in the *Baylands Master Plan* are to reduce automobile use in the park as much as possible, facilitate alternative ways to get to the park and to move around in the park, and to

locate and design parking lots in a way that will minimize their visual impacts in the Baylands.

The objectives of the *Comprehensive Plan* policies and programs for bicycle and pedestrian access are to provide a system that is integrated with local and regional networks, and to maintain bicycle and pedestrian facilities that are safe and easy to use. The Transportation Element includes policies regarding completion of the Bay Trail and evaluating a Bay-to-Foothills trail. The recommendations in the *Baylands Master Plan* are consistent with these policies and programs.

### **Park Enhancements**

The *Baylands Master Plan* includes specific proposals for park improvements such as landscape screening in strategic locations, park quality signs, the under grounding of telephone and electric lines, and reduction of glare from night lighting.

There are no *Comprehensive Plan* programs that specifically address park improvements in the Baylands, but there is a general policy to maintain and enhance existing park facilities.



## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### **Land Use: Overall Environmental Protection of the Baylands**

#### **Baylands Master Plan .**

##### **Overall Environmental Quality Policies:**

1. Ensure that the landfill area ultimately becomes an environmental asset and a continuation of the natural green space.
2. Recognize and maintain the relationship between the urbanized Embarcadero Road corridor in the northwest and the remaining recreation-oriented three-quarters of the Baylands. Allow no more urban intrusion.
5. Keep marshes open to the Bay along the entire shoreline.
6. Control access to environmentally sensitive marshland and upland meadow habitat.\*
7. Restore the diversity of plants and animals to disturbed upland sites.\*
8. Ensure there is sufficient native food and cover for wildlife.\*
9. Protect the duck-breeding area with a vegetation buffer and control the high-tide bird refuge in the flood basin.\*
10. Allow access to the flood basin only in certain seasons to protect the waterfowl and shorebird refuge area.\*

\* *(The Open Space and Parks Division is currently working with ESA consultants to develop a Comprehensive Conservation Plan for the natural unit of the Baylands. It is anticipated that this document will include specific programs for implementing these policies. )*

#### **Comprehensive Plan**

Goal N-1 Text: “Palo Alto’s foothills and Baylands will continue to be conserved as open space over the term of this plan. The City will seek out new opportunities for permanent open space in both areas.”

Goal L-1 Text: “In a community survey conducted during the *Comprehensive Plan* process, the community overwhelmingly reaffirmed its commitment to the protection of the Baylands and foothills.”

Glossary. “*Baylands Master Plan* (1987). City Council adopted Palo Alto planning policy document for areas east of Highway 101.”

**Matrix Comparison:**  
**Baylands Master Plan and Comprehensive Plan Policies**

**Land Use: The Urban Service Area**

**Baylands Master Plan**

**Overall Environmental Quality Policies:**

1. Ensure that the landfill area ultimately becomes an environmental asset and a continuation of the natural green space.
2. Recognize and maintain the relationship between the urbanized Embarcadero Road corridor in the northwest and the remaining recreation-oriented three-quarters of the Baylands. Allow no more urban intrusion.

**Comprehensive Plan**

Map L-2. Urban Service Area. Baylands areas identified as outside the urban service area include the landfill, the aquatic park, nature preserves, golf course, and athletic fields.

Policy L-1 Text: “The City’s Urban Service Area boundary identifies areas that may be developed during the term of this Plan.”

Policy L-1. “Continue current City policy limiting future urban development to currently developed lands within the urban service area. The boundary of the urban service area is otherwise known as the urban growth boundary.... Retain undeveloped Baylands northeast of Highway 101 as open space.”

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### **Parks: Byxbee Landfill Park**

#### **Baylands Master Plan**

##### **Landfill Area Policies:**

1. The conversion of the landfill into a rolling pastoral park is one of the major changes for the Baylands. Seeing that the landfill ultimately becomes an environmental asset and a continuation of the natural open space is one of the most important aspects of the overall environmental quality plan for the Baylands.
4. When the landfill is completed, it will create a park with hills that will blend with the textures and colors of the surrounding marshland...The park will be the main high-ground landmark in the flatness of the Baylands... The hill-and-valley concept will present a sequence of unique spatial experiences for people passing through the area...
5. The design for Byxbee Park (Phase I and II) is provided in the 1991 Byxbee Park Master Plan by Hargreaves Associates, amended to include the four changes to grading recommended by Hargreaves Associates in January 2007.

Phase I, as designed by the team of Hargreaves Associates and artists, Peter Richards and Michael Oppenheimer, was completed in 1991 and opened to the public. Park design for the remaining area will undergo Site and Design review at a future date. As portions of the pastoral park are finished, they will be opened as parkland.

#### **Comprehensive Plan**

Page C-4, Text: “The City also owns and operates several large open space preserves such as Byxbee Park .... Because of the “built-out” nature of the community, it is unlikely that many new parks will be created in Palo Alto. Maintenance and rehabilitation of existing facilities will be the City’s primary concern relating to parks.”

Goal N-1 Text: “Palo Alto’s foothills and Baylands will continue to be conserved as open space over the term of this Plan. The City will seek out new opportunities for permanent open space in both areas.”

Policy C-25. “Make infrastructure improvements on public open space only when these improvements are consistent with the goals of protecting and conserving the natural environment.”

*Comprehensive Plan* Land Use Map. The land use designation for the landfill area is Public Park.

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### Parks : Former ITT Property

#### Baylands Master Plan

##### Former ITT Property Policies:

The future of the former ITT property goes beyond conservation into rehabilitation, and fits perfectly with the overall goal of the *Baylands Master Plan*—to preserve and enhance unique and irreplaceable resources.

1. Maintain both the salt water and freshwater marshes that have been created
2. Clean up all areas outside the antenna field.
3. Use earth forms and vegetation that can serve as food for wildlife to soften the geometric form of the flood wall on the south side along Matadero Creek.
4. Keep the rest of the site the way it is, except where otherwise recommended.
5. Remove the antenna field, replace with marshland and incorporate this area into Byxbee Park. *(In 1993 the City and KFS entered into an agreement wherein the City will buy the easement from KFS once a new site has been constructed and approved by the FCC. However, a proposal to demolish the radio station buildings may not be desirable as they have been determined eligible for the National Register of Historic Places.)*

##### Access and Circulation Policy:

5. Provide access to Byxbee Park from the public easement at the Former ITT Site along the south side and parallel to the urbanized area.

#### Comprehensive Plan

Page N-1. Natural Environment Vision Statement. “Elements of the natural environment will be conserved where they remain intact and restored where they have been degraded by past development.”

Goal N-1 Text: “Palo Alto’s foothills and Baylands will continue to be conserved as open space over the term of this Plan. The City will seek out new opportunities for permanent open space in both areas.”

*Comprehensive Plan* Land Use Map. Land Use designation for this site is Publicly Owned Conservation Land, except the 37 acres in the center of the site where the antenna field is still operating, which is designated Open Space/Controlled Development.

# Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

## Natural Environment: Conservation and Restoration

### Baylands Master Plan

#### Natural Unit-Marsh Preserve Policies:

In 1976, the Natural Unit comprised the Faber and Laumeister Tracts, the Sand Point area, Hooks Island, the Inner Harbor Marsh, and the Flood Basin. Since then three areas have been restored and may be considered to be part of the natural unit. They are Harbor Point, the harbor itself, and the Emily Renzel Wetlands. Because of the high biological value of these areas, only a few changes are proposed. They include:

1. Maintain the trails described in the Access and Circulation section.
2. Complete the management plan for these areas as well as the entire Baylands that is currently underway. (*The Open Space and Parks Division is currently working with ESA consultants to develop a comprehensive conservation plan for the natural unit of the Baylands.*)
3. Prohibit access to Hooks Island.
4. Lucy Evans Nature Interpretive Center to continue present operations.

### Comprehensive Plan

Page N-1. Natural Environment Vision Statement. “Elements of the natural environment will be conserved where they remain intact and restored where they have been degraded by past development.”

Goal N-1. “A citywide open space system that protects and conserves Palo Alto’s natural resources and provides a source of beauty and enjoyment for Palo Alto residents.”

Goal N-1 Text: “Along the San Francisco Bay shoreline, open space is contained in what is generally called the Palo Alto Baylands. ... Most of the area consists of passive open space,... and some of the most extensive salt marsh and mud flat habitats remaining in the Bay Area. ... Palo Alto’s foothills and Baylands will continue to be conserved as open space over the term of this Plan.”

Policy N-8. “Preserve and protect the Bay, marshlands, salt ponds, sloughs, creeks, and other natural water or wetland areas as open space.”

Policy N-8 Text: “The 1987 *Baylands Master Plan* identified the Baylands as a special resource warranting conservation and preservation as open space.”

Policy T-52. “Participate in seeking a regional solution to improved roadway connections between highway 101 and the Dumbarton Bridge without construction of a southern connection across environmentally sensitive Baylands.”

# Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

## Natural Environment: Management

### Baylands Master Plan

#### Natural Unit-Marsh Preserve Policies:

2. Complete the management plan for these areas as well as the entire Baylands that is currently underway. *(The Open Space and Parks Division is currently working with ESA consultants to develop a comprehensive conservation plan for the natural unit of the Baylands.)*

Also, following is a list of applicable policies; the full text is too voluminous to reprint in this matrix:

- Overall Environmental Quality Policy Nos. 6-10.
- Access and Circulation Policy Nos. 30 & 31.

### Comprehensive Plan

Policy N-1. “Manage existing public open space areas ... in a manner that meets habitat protection goals, public safety concerns, and low impact recreation needs.”

Program N-2. “Examine and improve management practices for natural habitat and open space areas,....”

Program N-3. “Review the need for access controls in environmentally sensitive areas, including the Baylands, foothills, and riparian corridors.”

Program N-3 Text: “While the City recognizes the need to provide adequate access to open space for fire protection and utility maintenance, it should not be provided at the expense of natural resources.”

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### **Views, Scenic Routes, Gateways, and Landscaping**

#### **Baylands Master Plan**

The *Baylands Master Plan* observed that the essential character of the Baylands (open, spacious, horizontal, with little or nothing between the planes of ground and water and the sky) was established by the tideland marsh areas. *(Overall text)*

Here is a list of applicable policies; the full text is too voluminous to reprint in this matrix:

- Overall Environmental Quality Policy No. 11
- Landfill Area Policy No. 4
- Former ITT Property Policy No. 3
- Harbor Area Policy Nos. 3 and 4
- Duck Pond and Lagoon Policy No. 2
- Municipal Airport Policy Nos. 3 and 4
- RWQCP Policy No. 1
- MSC/Animal Services Policy No. 2
- Private Lands Policy No. 2
- Access and Circulation Policy Nos. 1, 6, 7, 11, 12, and 13
- Flood Protection Policy Nos. 2 and 3

#### **Comprehensive Plan**

**Views:** Policy L-3, Text: “Palo Alto’s backdrop of forested hills to the southwest and San Francisco Bay to the northeast is a character-defining element of the City. ... Views from the Baylands are equally striking, taking in the Bay, the East Bay hills, and the Santa Cruz Mountains. These visual connections are part of what makes Palo Alto attractive. The design and siting of new buildings should take into account impact on views, and should frame existing views of the hills, where possible.”

Map L-4. Community Design Features. This map identifies major view corridors within the Baylands.

**Scenic Routes and Gateways.** Program L-71. “Recognize Sand Hill Road, University Avenue, Embarcadero Road, ... as scenic routes.”

Program T-57. “Provide a planting strip and bicycle/pedestrian path adjacent to Embarcadero Road that is consistent with the open space character of the Baylands.”

Map L-4. Community Design Features. This map identifies Embarcadero Road east to Harbor Road as a scenic route, and identifies Embarcadero Road at East Bayshore as a gateway

Matrix Comparison:  
Baylands Master Plan and Comprehensive Plan Policies

**Los Altos Sewer Plant site**

**Baylands Master Plan**

**LATP Site Policies:**

In 2000,

- The land use designation was changed from Public Park to a combination of Public Conservation Land for approximately 8.96 acres and Major Institution Special Facilities for approximately 4.62 acres (Resolution No. 7939).
- The site was pre-zoned Public Facilities with a Site and Design combining district overlay (Ordinance No. 4620).

As of January 4, 2008, Palo Alto is the sole owner of the site. *(Update: On December 3, 2008, the Santa Clara County LAFCO Board will hear the proposed annexation of this site to Palo Alto.)* Future use of the site has yet to be determined.

**Comprehensive Plan**

As of 2000, the *Comprehensive Plan* Land Use Designation is a combination of Public Conservation Land and Major Institution/Special Facility. *(Note that the Land Use Designation Map is out-of-date and still reflects the land use designation of Park.)*



# Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

## East Bayshore Employment District

### Baylands Master Plan

#### Privately Owned Lands Policies:

1. Be sure any future development is consistent with the *Comprehensive Plan* and continues to receive extensive design review utilizing the Site and Design Review Process and the *Site Assessment and Design Guidelines Palo Alto Nature Preserve*.
2. Provide screen planting along the southerly urbanized edge of the private property facing the former ITT property.

Here is a list of applicable policies; the full text is too voluminous to reprint in this matrix:

- Access and Circulation Policy Nos. 1, 2, 4, 5, 6, 7, 8, 11, 12, 14, 15, 16, 19, 20, 21, and 22.

### Comprehensive Plan

Policy L-46. Maintain the East Bayshore and San Antonio Road/Bayshore Corridor areas as diverse businesses and light industrial districts.

Policy L-46 Text: “These areas provide valuable space for small businesses and support services. The design of new or redeveloped buildings and landscaping, particularly northeast of the Bayshore Freeway, should reflect the area’s location near the Baylands. Connections to the nearby Baylands should be strengthened by taking advantage of views and improving bicycle and pedestrian connections to the open space area.

Policy B-33. Discourage actions that could increase the cost of business space in the San Antonio and East Bayshore areas.

Policy B-33 Text: “The East Bayshore and San Antonio areas serve a special economic role. Its relatively low-cost space provides opportunities for a variety of service industries and start-up businesses that could not feasibly locate in the higher cost areas. This role should be protected in the future.

*Note: The Comprehensive Plan map that describes the East Bayshore Employment District includes the Regional Water Quality Control Plant and the Airport. Also, the San Antonio Road/Bayshore Corridor Employment District includes the Municipal Services Center and surrounding area.*

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### Airport

#### Baylands Master Plan

##### Airport Policies:

There are five policies in the Airport Element but the full text is too voluminous to reprint in this matrix;. The policies fall into three categories:

- Capacity and Activity
- Improvements/Development of Facilities
- County Lease

#### Comprehensive Plan

Goal T-10 Text: “The Airport provides a much-needed business and recreational facility for northern Santa Clara County, handling...”

Policy T-57 Text: “Palo Alto will allow for improvement and only minor expansion of existing Airport facilities. In the sensitive Baylands area, and immediately adjacent to homes in East Palo Alto, traffic and aircraft noise should be minimized.”

Policy T-57. “Support the continued vitality and effectiveness of the Palo Alto Airport without significantly increasing its intensity or intruding into open space areas. The airport should remain limited to a single runway and two fixed base operators.”

Program T-58. “Encourage Santa Clara county to relocate the terminal building away from the Runway 31 clear zone, allowing for construction of a new terminal.”

*Note: The Comprehensive Plan map that describes the East Bayshore Employment District includes the Regional Water Quality Control Plant and the Airport.*

Matrix Comparison:  
Baylands Master Plan and Comprehensive Plan Policies

**Access and Circulation: Autos and Parking**

**Baylands Master Plan**

The full text of applicable policies is too voluminous to reprint in this matrix; The applicable policies are...

Access and Circulation Policy Nos. 1 through 17.

**Comprehensive Plan**

Policy T-3. "Support the development and expansion of comprehensive, effective programs to reduce auto use at both local and regional levels."

Policy T-75. "Minimize the negative physical impacts of parking lots...."

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### Access and Circulation: Bicycles and Pedestrians

#### Baylands Master Plan

The full text of applicable policies is too voluminous to reprint in this matrix; The applicable policies are...

- Overall Environmental Quality Policy Nos. 1 and 3.
- Access and Circulation Policy Nos. 1, 2, 4, 5, 6, 7, 11, 16, and 18 —31.

#### Comprehensive Plan

Policy T-14. “Improve pedestrian and bicycle access to and between local destinations, including public facilities, ...parks, open space, employment districts,....”

Policy T-20. “Improve maintenance of bicycle and pedestrian infrastructure.”

Policy T-19. “Improve and add secure bicycle parking...”

Program T-25. “Evaluate the design of a Bay-to-Foothills path.”

Program T-26. “Complete development of the Bay Trail and Ridge Trail in Palo Alto.”

Maps T-5 and T-6. Primary bicycle and pedestrian paths in the Baylands are identified on these maps. Also, the maps identify Highway 101 as a barrier and identify four areas where crossings need to be improved or created. The map specifically identifies Matadero Creek as an opportunity to create a path and under crossing.

## Matrix Comparison: Baylands Master Plan and Comprehensive Plan Policies

### Park Enhancements

#### Baylands Master Plan

The full text of applicable policies is too voluminous to reprint in this matrix; The applicable policies are...

- Overall Environmental Quality Policy No. 1, 3, and 11
- Landfill Area Policy Nos. 1—7
- Harbor Area Policy Nos. 1, 3 and 4
- Duck Pond and Lagoon Policy Nos. 1, 2, and 3
- Natural Unit Policy Nos. 1 and 4
- Athletic Center Policy Nos. 1 and 2
- Golf Course Policy Nos. 1 and 2
- Municipal Airport Policy No. 3
- RWQCP Policy No. 1
- MSC/Animal Services Policy No. 2
- Private Lands Policy No. 2
- All Access and Circulation Policies

#### Comprehensive Plan

Policy C-26. “Maintain and enhance existing park facilities. “

## Land Use Designations in the Baylands

It is valuable to note that not all the dedicated parkland has a “Public Park” land use designation. Three *Comprehensive Plan* land use designations apply to the dedicated parkland. (See *Map A.2a-g*). These three land use designations are:

**Public Park:** Open lands whose primary purpose is active recreation and whose character is essentially urban. These areas have been planted with non-indigenous landscaping and require a concerted effort to maintain recreational facilities and landscaping (*Map A.2a*).

**Public Conservation Land:** Open lands whose primary purpose is the preservation and enhancement of the natural state of the land and its plants and animals. Only compatible resource management, recreation, and educational activities are allowed (*Map A.2b*).

**Note:** There appears to be a mistake on the Comprehensive Land Use Designation Map. The two land use designations for the Former ITT Property appear to be reversed.

Map A.2a

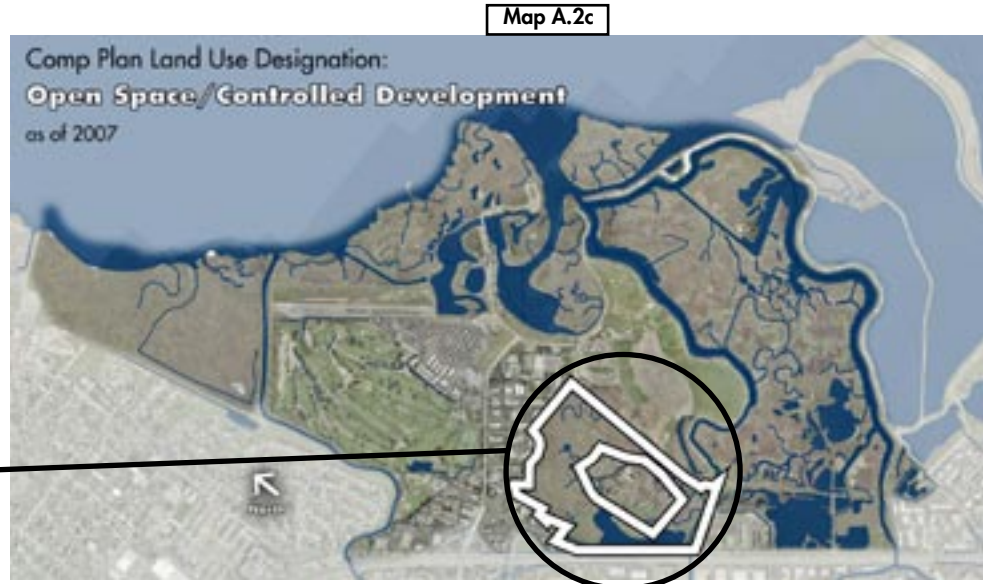


Map A.2b



**Open Space Controlled Development:** Land having all the characteristics of open space but upon which some development may be allowed. Open space amenities must be retained in these areas. Residential densities range from 0.1 to 1 dwelling unit/acre but may rise to a maximum of 2 units/acre where second units are allowed. Population densities range from 1 to 4 persons/acre (*Map A.2c*).

**Note:** There appears to be a mistake on the Comprehensive Land Use Designation Map. The two land use designations for the Former ITT Property appear to be reversed.



Other land use designations for non parkland in the Baylands are as follows (*Also see Map A.2*):

**Major Institution/Special Facilities:** Institutional, academic, governmental, and community service uses and lands that are either publicly owned or operated as non-profit organizations. Examples are hospitals and City facilities (*Map A.2d*).

**Service Commercial:** Facilities providing citywide and regional services and relying on customers arriving by car. These uses do not necessarily benefit from being in high volume pedestrian areas such as shopping centers or Downtown. Typical uses include auto services and dealerships, motels, lumberyards, appliance stores, and restaurants, including fast service types. In almost all cases, these uses require good automobile and service access so that customers can safely load and unload without impeding traffic. In some locations, residential and mixed use projects may be appropriate in this land use category. Examples of Service Commercial areas include San Antonio Road, El Camino Real, and Embarcadero Road northeast of the Bayshore Freeway. Non-residential floor area ratios will range up to 0.4 (*Map A.2e*).

**Light Industrial:** Wholesale and storage warehouses and the manufacturing, processing, repairing, and packaging of goods. Emission of fumes, noise, smoke, or other pollutants is strictly controlled. Examples include portions of the area south of Oregon Avenue between El Camino Real and Alma Street that historically have included these land uses, and the San Antonio Road industrial area. Compatible residential and mixed use projects may also be located in this category. Floor area ratio will range up to 0.5 (*Map A.2f*).

Map A.2e



Map A.2f





**Research/Office Park:** Office, research, and manufacturing establishments whose operations are buffered from adjacent residential uses. Stanford Research Park is an example. Other uses that may be included are educational institutions and child care facilities. Compatible commercial service uses such as banks and restaurants, and residential or mixed uses that would benefit from the proximity to employment centers, will also be allowed. Additional uses, including retail services, restaurants, commercial recreation, churches, and private clubs may also be located in Research/Office Park areas, but only if they are found to be compatible with the surrounding area through the conditional use permit process. Maximum allowable floor area ratio ranges from 0.3 to 0.5, depending on site conditions (*Map A.2g*).



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Document

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All chapters	
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<b>Staff:</b> Phil Bobel, Bill Fellman, Joe Teresi, and Greg Betts	
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<b>Staff:</b> Gary Weinreich, Joe Teresi, Matt Raschke, Bill Fellman, Greg Betts, Daren Anderaon, and Annette Coleman	
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<b>7. Athletic Center/PASCO Site</b>	
<b>Staff:</b> Matt Raschke, Bill Fellman, Greg Betts, and Clare Campbell	

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<b>Staff:</b> Joe Vallaire, Bill Fellman, and Greg Betts	
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<b>Staff:</b> Bill Fellman and Greg Betts	
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<b>Staff:</b> Phil Bobel, Jamie Allen, Matt Raschke, Jamie Allen, Joe Teresi, Greg Betts, and Daren Anderson	
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<b>Staff:</b> Joe Teresi, Matt Raschke, Elizabeth Ames, Karen Bengard, Holly Boyd, Clare Campbell, and Bill Fellman	
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<b>Staff:</b> Matt Raschke, Bill Fellman, and Daren Anderson	
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<b>Staff:</b> Clare Campbell, Amy French, and Bill Fellman	
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<b>Staff:</b> Gayle Likens, Joe Teresi, Bill Fellman, Daren Anderson, and Greg Betts	
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