Chapter 8.
Conservation Element

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CONSERVATION INTRODUCTION

Purpose

This Element of the General Plan addresses the preservation of conservation of natural resources in Foster City. Foster City is situated along the southwestern coast of San Francisco Bay, east of San Mateo. The city is midway between San Francisco and San Jose, and ten minutes from San Francisco International Airport. Tidal marshes along the bay and rolling hills to the west characterize the region.

As described in the Land Use Element, the City is a master planned community first developed in the early 1960's. Each residential neighborhood originally had its own school, shopping center and park. Almost all Foster City residents have a park within walking distance of their home.

Clarification of Terminology

The difference between parks and open space is that parks generally have landscaping improvements such as grass and trees, and recreational equipment such as play apparatuses, basketball courts and/or sports fields. Open space lands are likely to be unimproved and vacant of structures of any kind.

The advantage of unimproved open space lands is the historical view such lands offer of the original condition of the area before any development occurred. The value of open space lands increases when the property is located adjacent to a scenic resource, such as a lake or stream, because these resources attract people to the site.

The difference between open space and conservation areas is that open space lands might be preserved for recreational or scenic purposes, while conservation areas might be preserved solely because of the presence of a specific resource within the area, not necessarily the land itself. In some cases open space lands could also be conservation areas but the emphasis is on different aspects of the land. For example, open space land may be preserved for its waterfront scenic qualities while a conservation area may be so designated because of the presence of an endangered animal or plant species found near the waterfront.

Park: An improved, primarily unobstructed area with landscaping and recreational equipment such as play apparatuses and/or basketball courts. In some cases this definition includes property with recreation buildings or structures. The purpose of parks is to provide opportunities for outdoor recreation and physical exercise near to residential and employment areas.

Open Space: An open area which is vacant of any structures and is primarily maintained in its natural condition. In some cases this definition includes pathways and landscaping, improvements which are maintained. The provision of open space is intended to offer residents and visitors opportunities for quiet introspection in a location that provides visual relief from buildings, concrete and noise associated with urban life.

Conservation: The preservation and maintenance of a resource for the enjoyment of future generations such as water, air and energy systems. The preservation of these resources is concerned with the quality and quantity of the resource. Conservation areas sustain a rare species and/or natural resource that cannot be restored or replaced. The purpose of conservation areas is to provide a protected location where the properties of a natural resource may be observed and enjoyed without risk of endangering the resource.

Special Note: The Conservation Element was split from the former Parks, Open Space and Conservation Element in September 2009. There were no textual changes to the Element, which will be updated in 2010-2011.

State Law Requirements for Conservation Elements

The legal authority and requirements for Foster City to prepare the General Plan derive from state law (California Government Code, Section 65300 et. seq.). The Conservation Element institutes programs to conserve natural resources such as the lagoon and canal system.

Conservation Element Requirements

A Conservation Element has been required as part of local general plans since 1970. The Conservation Element overlaps those categories of the Open Space Element that deal with "open space for the preservation of natural resources" and "open space for the managed production of resources". Conservation should prevent the wasteful destruction and neglect of Foster City's natural resources, particularly scarce resources. This philosophy is consistent with the intent of the California Environment Quality Act (CEQA) and National Environmental Protection Act (NEPA).

Section 65302(d) of the Government Code specifies the contents of a Conservation Element:

A conservation element shall address the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county of city for which the plan is prepared. The conservation element may also cover:

(1) The reclamation of land and waters

(2) Prevention and control of the pollution of streams and other waters

(3) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan

(4) Prevention, control and correction of the erosion of soils, beaches, and shores

(5) Protection of watersheds

(6) The location, quantity and quality of the rock, sand and gravel resources

(7) Flood control

The Vision of Foster City as Presented in the Conservation Element

The Conservation Element of the Foster City General Plan has three primary concerns:

- *Preserve and Improve the Quality of Life within Existing Neighborhoods.*
  Maintain and improve existing resources, parks and open space for the day-to-day and long-term enjoyment of Foster City residents.

- *Assure the Proper Development of Undeveloped Property.*
  Maintain adequate standards, integrate environmental, parks and open space considerations as the City approaches build-out, and evaluate the impacts and appropriateness of new development with environmental conditions and needs of the City.

- *Assure that Redevelopment of Developed or Underutilized Property Occurs in an Appropriate Manner.* Establish mitigation measures for any changes in land use as are reasonably necessary to assure the protection of environmental resources, parks and open space.

Conservation Background

Purpose

The Conservation section of the Parks, Open Space and Conservation Element concerns the preservation of natural resources such as water, air and energy. Conservation of natural resources is necessary to insure their availability to future generations.

The conservation issues that will be discussed in this document are human life-sustaining elements, wildlife habitat, and recycling of renewable resources. Human life-sustaining elements include air, water and energy. Wildlife habitat refers to areas within the city which provide feeding or resting areas for wildlife such as birds. Recycling of renewable resources includes aluminum cans, glass, paper, newspaper, tin and some plastic.

Human Life-Sustaining Elements

Water Availability

Existing Conditions: The water supply and distribution system must provide sufficient capacity to meet domestic, commercial, and industrial user demands as well as satisfy fire protection requirements. These components of demand are functions of land use, population density and per capita water consumption. Residential water use varies with climate, lot size, system pressure, metering practices, water rates, and the standard of living in the community, as well as other factors.

Water service in Foster City is provided by the Estero Municipal Improvement District (EMID). The California Legislature created EMID in 1960 and granted this public agency most of the governing powers associated with an incorporated municipality, except the powers to zone and approve development and certain police powers. When Foster City was incorporated in April 1971, EMID remained a separate legal entity and continues to provide water and sewer service to Foster City and water service to Mariner's Island.

The City of San Francisco supplies all water for EMID and the City of Foster City. The existing water line from San Francisco enters Foster City along E. Third Avenue. A second emergency water supply line from the Belmont Water District was recently completed to enter Foster City from the south across the Belmont Slough. A third water supply line is proposed to come from Redwood City/Belmont.

Currently Foster City has two water storage tanks for emergencies which hold approximately four-million gallons of water each. Construction of a third, four-million gallon tank is proposed to be completed in the near future. Foster City has no supplemental water supplies such as wells or reclaimed water for use in irrigation.

Table 1 in the Technical Appendix of the Conservation Section demonstrates the amount of water purchased each month from San Francisco between 1977-1989. Foster City receives more water from San Francisco in the summer than in the winter due to increased watering of landscaping and water-recreation in the summer.

Desired Conditions: The recent droughts of 1976-77, 1987-92 and possible future droughts have forced many water agencies throughout the State to undertake stringent conservation measures, and have significantly constrained EMID's water resources. In order to continue to provide water service to Foster City and Mariner's Island, EMID must maintain its commitment to strict conservation measures.

Conservation Techniques: One method of actively conserving the amount of water consumed in a jurisdiction is reducing "unaccounted for" water. "Unaccounted for" water is the difference between water purchased and water sold. Some of the causes for unaccounted water could be:

(1) Water system leakage
(2) Firefighting and firefighting training
(3) Water main flushing (removing sediment from the water system)
(4) Unauthorized water use from hydrants and other unmetered connections
(5) Water meter error
(6) Billing error

On-going efforts such as the following can minimize or significantly reduce these problems:

(1) Water audit - a program involving the regular testing and repair of water meters.

(2) Leak detection survey - a program involving testing and repair of pipe joints, bolts and fittings, and "listening" for underground leaks with mechanical/acoustical devices.

(3) Valve exercising and main flushing program - a program involving regular operation of valves to prevent "freezing up" of the mechanism and main flushing to remove sediment from the system and minimze "dirty" water which may result when a main breaks or high flows are required for fire fighting.

These programs are further described in the Technical Appendix of the Conservation Section, within the "Water Conservation Management Plan" (undated).

Other conservation techniques require personal initiative from property owners with regard to landscaping, (particularly large land owners such as commercial and industrial businesses) and for all citizens with regard to activities within dwelling units. These are listed below:

Utilize drought resistant plant materials - Existing public and private property can be retrofitted with water-conserving landscaping and irrigation techniques, and all new development can be required to install drought resistant plant materials and water-saving irrigation systems. Recommendations for specific materials are provided in the "Foster City Planting and Irrigation Guidelines" within the Conservation Section Appendix.

Limit turf areas to 25% of landscaping - The use of turf grasses and annuals should not exceed 25% of the total landscaped area. (Annuals are considered turf because of their high water use.)

Limit hours of the day for watering - All watering and irrigation should occur between 6:00 P.M. and 10:00 A.M. During daylight hours, the sun evaporates water intended for landscaping purposes and the wind blows water from its intended location.

Retrofit with water-conserving fixtures - All valves, drip and bubbler equipment in fountains and irrigation systems should be replaced with those that maintain a low flow of water and those with pressure regulators, filters and pressure gauges.
Retrofit existing bathrooms and install new bathrooms with low-flow toilets and water-conserving shower heads - Bathroom fixtures can be replaced with valves that limit the flow and amount of water. These fixtures should be combined with reducing the frequency of use and amount of water in showers and toilets.

Water Quality - Drinking Water

Existing and Desired Conditions: The protection of the quality of Foster City drinking water is partially the responsibility of the City of San Francisco (the supplier of drinking water for Foster City), and partially the responsibility of the Regional Water Quality Control Board which must establish and maintain standards for water quality. The desired condition is to maintain the existing quality of Foster City's drinking water.

Conservation Techniques: Continue existing programs to conserve and protect water quality in accordance with accepted standards. Continue to monitor the quality of the City's drinking water by testing the water regularly.

Water Quality - Lagoon System

Existing Conditions: The water in the City's Lagoon and canals tends to be of lower quality than that of the San Francisco Bay because they function as the City's storm drainage system. Urban residues found in the system include herbicides, pesticides, fertilizers, exhaust emissions, duck and animal waste, and oil and tire decomposition products.

Desired Conditions: The protection of the water quality of the lagoon system is of particular importance to Foster City due to the City's reputation as a water-oriented community. High water quality enhances recreational boating on the lagoon system and enhances the scenic qualities of the Lagoon and canals. The City should continue its efforts to ensure high water quality.

Conservation Techniques: Continue to conserve and protect lagoon water quality by flushing, testing and patrolling the water in the lagoon system. The adopted Lagoon Management Plan (1992) includes programs for water exchange with the Bay to maintain water quality, control aquatic weeds, and continue testing of water samples. The Department also performs weekly tests of water quality, patrols the waterways weekly to remove trash and control herbicides, and controls the dumping of harmful substances into the waterways. These techniques ensure the health and safety of the lagoon system by removing broken/harmful items and testing the water for chemical, pesticide and algae content.

Conserve and protect the Foster City Lagoon System by maintaining accessibility for views and recreational opportunities - Continue to review development proposals for impacts to the lagoon system and to the views of the lagoon from adjacent properties.

Conserve and protect the Foster City Lagoon System by educating the public about toxic wastes in the storm water system - Send brochures to residents and businesses explaining how Foster City street gutters are connected to the lagoon system and therefore toxic wastes such as motor oil must not be spilled near the street gutters.

Water Quality - Discharge into the Bay

Existing and Desired Conditions: The City of Foster City has an active permit with the Regional Water Quality Control Board to discharge water into the San Francisco Bay after treating it according to Board regulations. The regulations are intended to protect the health and safety of the water that is discharged in the Bay. The desired condition is to maintain the quality of the discharged water in accordance with permit requirements.

Conservation Techniques: Conserve and protect the quality of the water that is discharged into the San Francisco Bay - Continue to treat water for discharge into the Bay according to the regulations established by the Regional Water Quality Control Board.

Further information about water quality programs is provided in the Conservation Section Appendix.

Air Quality

Existing Conditions: Air quality is determined by the amount of pollutants emitted and the ability of the atmosphere to transport and dilute them. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and sunshine.

Foster City is a relatively windy city and therefore protected from air pollution more than other cities on the Peninsula. Foster City receives primarily northwest and northerly winds due to the orientation of the Bay and San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula towards Foster City, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter, pollutants build up for several days during periods of light wind.

Foster City frequently has “temperature inversion” conditions in the summer during morning and afternoon hours, and in the winter during morning hours. This inversion is created by a layer of warm air above cooler air. If there are also terrain barriers, or no wind to blow emissions away, the emissions are confined near the ground. These conditions create a rapid build-up of pollutant concentrations, and in the presence of sunshine form smog. Foster City has some terrain barriers because the City is inland and somewhat sheltered which limits lateral dilution of pollutants.

Therefore Foster City has a moderate atmospheric potential for air pollution given the combined effects of moderate ventilation, frequent inversion conditions and a terrain which restricts lateral dilution of pollutants. Please refer to Table 3 in the Conservation Appendix for a comparison of federal and state standards for ozone, carbon monoxide, etc.

Desired Conditions: Although Foster City enjoys better air quality than other cities on the Peninsula, Foster City would like to mitigate the impact of air quality problems due to stationary and vehicular sources within the City. The desired condition is fewer ambient pollutants to reduce the smog production during inversion conditions.

Conservation Techniques: The purpose of these techniques is to reduce the release of pollutants at the local level from stationary and vehicular sources.

Review proposed projects for their potential to affect air quality conditions - As part of environmental review procedures, determine any projected impacts on air quality and require appropriate mitigation measures for all new projects. Such measures are similar to those required through the Inter-City Transportation System Management Program (described below) and may include preferential car pool parking, providing bicycle storage, bus stop shelters and/or reduced emissions from stationary sources.

Separate air pollution sensitive land uses from sources of air pollution - Require buffer zones to separate sensitive land uses, such as residential, from freeways, arterials, point sources and hazardous material locations.

Enforce the Inter-City Transportation System Management Program - Transportation Systems Management (TSM) involves the promotion of the use, maintenance and expansion of alternative forms of transportation, such as public transit, vanpools, carpools and bicycles, for the purpose of improving the efficiency of existing forms and systems of transportation.

Foster City adopted a TSM ordinance on April 17, 1989. The purpose of the ordinance is to achieve at least a 25% employee participation rate within four years to alternatives to single occupant vehicle commuting during peak traffic hours. Employees are required to complete surveys describing their commute and schedule and will be offered incentives for carpooling or alternate transportation methods such as preferential parking stalls, flexible work schedules, and subsidized public transit fares.

In January 1990, the cities of Belmont, Foster City, Redwood City, Burlingame, San Carlos and San Mateo adopted a TSM ordinance establishing the Inter-City Transportation System Management Program. On June 4, 1990, Foster City approved the San Mateo County Transportation System Management Plan. The program is governed by the Inter-City TSM Authority, which is composed of a representative from each of the participating cities. The responsibility of the Authority is to meet with large employers to encourage participation in the program.

Each city is responsible as an employer to implement the provisions of the TSM plan with regard to city employees. Cities are also required to implement the plan for new businesses through the project review process. The Authority is responsible for educating employers in each city (excluding city governments) about the objectives of the plan. The Authority has the power to enforce the ordinance to ensure that businesses comply with the plan.

As often as possible, consolidate and/or eliminate motor vehicle trips to improve air quality - In conjunction with the TSM program, educate Foster City residents and employees about the importance of carpooling to both work and social engagements. Encourage mixed use developments, local retail diversity and a healthy jobs/housing balance to reduce motor vehicle trips.

Coordinate with local, regional and state agencies to improve air quality - Comply with and enforce provisions of the 1991 Bay Area Clean Air Plan and coordinate with the Bay Area Air Quality District regarding emissions from existing and future developments.

Energy

Existing Conditions: The Pacific, Gas and Electric Company (PG&E), supplies energy to Foster City. Energy offered by PG&E is generated in the Southwest, California and Canada. Since the 1970's the United States and many other countries have been facing an energy crisis. The cause of this crisis is two-fold: 1) the United States consumes more energy than it produces, and 2) energy sources that were formerly feasible have been found to create harmful environmental effects, such as coal and fuel oil with a high sulfur content.

Foster City has the opportunity to reduce energy consumption because of two natural advantages:

(1) The winds common to Foster City can cool a building naturally if the windows are open; and

(2) Many buildings are situated or can be situated so as to take advantage of solar heating opportunities.

Desired Conditions: The desired condition is for each resident and employee in Foster City to minimize their use of energy resources. Participation by everyone is integral to reducing consumption of energy. Conservation efforts will ensure that energy is available in the future for basic needs.

Conservation Techniques: The following conservation techniques relate to development review and educational efforts. Additional techniques are listed in the appendix that apply to energy conservation at home or the office.

Construct new buildings and additions to energy efficiency standards according to Title 24 of the Uniform Building Code -Title 24 of the Building Code establishes standards to ensure adequate light and ventilation in buildings, and requires new buildings and additions to be designed for energy conservation and efficiency.

Property owners should retrofit their buildings with weather-stripping and caulking around doors and windows to reduce heat loss. Insulation of attics, exterior walls and water heaters will also contribute to reduction of heat loss. The Building Division shall be available to answer questions about energy efficiency and the Division or P, G & E are available to inspect buildings for energy efficiency. Table 4 in the Technical Appendix offers further energy conservation tips.
Install solar panels for heating and cooling with solar energy - Encourage property owners to install solar panels for heating interior space and cooling with solar energy, and require them for swimming pools and spas.

One of the purposes of the architectural review ordinance adopted by the City of Foster City is to protect solar access to adjacent homes. The City has also adopted solar guidelines that encourage energy conservation while recognizing the necessity for good design. Solar energy can be used to heat water heaters and/or buildings. Solar panels are part of an active solar energy system to collect and store energy in the form of heated air or water.

Encourage property owners to heat all new and existing spas and swimming pools with solar energy - During the architectural review process for pools and spas, the City will encourage and educate property owners about the advantages of and requirements for the installation of solar panels.

Continue to expand and monitor information about energy conservation and establish a public outreach program to inform Foster City residents and businesses about the availability and importance of the information - The City will contact residents and businesses to educate them about the available resources and assist them to determine appropriate conservation techniques to improve efficiency in their buildings.

Recycling of Renewable Resources

Existing Conditions: In 1989 amendments to the Government Code, Health and Safety Code, Revenue and Taxation Code and the Public Resources Code resulted in the requirement that each city and county in California to reduce 25% of the total waste generated by 1995 and 50% by 2000. (Please see Appendix for section references.)

The City of Foster City is already participating in a curbside pick-up program in single-family areas for glass, aluminum cans and newspapers. The advantages of curbside recycling programs include convenience, conservation of raw materials and energy, reduction in the need for solid waste disposal and landfill space, and the creation of jobs.
Several businesses and apartment complexes also have existing recycling programs, including City Hall with a white paper, cardboard and newspaper recycling program (each office employee has a tray for

collection of white paper at their desks). The materials recycled from the above programs include aluminum, glass, white paper, cardboard, computer paper, and newspaper.

The 1986 California Beverage Container Recycling and Litter Reduction Act delineated convenience zones in cities and requires that a certified recycling center be located within these zones by October 1, 1987 or operators within these zones will be fined $100 dollars per day. The act applies to aluminum, plastic, glass and metal beverage containers.

Foster City's recycling centers have been located behind Lucky's Supermarket when the market was located in Marlin Cove Shopping Center, and behind Alpha Beta Supermarket when the market was located in Edgewater Place Shopping Center. A redemption center was recently located behind Lucky's Supermarket at Edgewater Place Shopping Center. Since the centers are privately operated, the City cannot retain the centers when they decide to relocate. All proposals for redemption centers require a use permit which is reviewed by the Planning Commission. This process is intended to protect adjacent property owners from maintenance problems such as refuse left on the site after hours of operation.

Desired Conditions: The desired condition is a 50% reduction of materials to the landfill by the year 2000. This must occur through recycling, source reduction and composting of green materials. Foster City should review options for developing recycling programs for all City residents and workers, including office, multiple-family residential, industrial and retail land uses.

Source reduction refers to eliminating waste before it is generated. For example, making two-sided copies instead of single sided copies reduces by half the amount of paper consumed.

Composting of green materials involves backyard and/or municipal collection and separation of leaves, grass and food scraps from other waste and stockpiling it under proper conditions to create mulch for gardens and landscaping.

Conservation Techniques: These techniques refer to some of the measures that should be undertaken to reduce the waste stream. The majority of available techniques are described in detail as part of the Foster City Source Reduction and Recycling Element, prepared in compliance with recent amendments to State Law regarding recycling and adopted on July 6, 1992 by the City Council. (The applicable sections of State Law are listed in the Technical Appendix.)

Implement Source Reduction and Recycling Element in accordance with State regulations - This Element is included in the Conservation Section Appendix. The Element includes information from a waste characterization study which serves as a basis for prioritizing the recycling of certain materials from the waste generated. The Element also defines objectives for market development of recycled materials.

Inform all Foster City residents and businesses about recycling opportunities - Although the curbside program is in effect for single family houses, many apartment and condominium dwellers, and businesses do not have on-site recycling collection facilities. As part of the effort to comply with State regulations, the City is in the process of contacting residential and business managers that do not have on-site recycling programs to inform them about the recent State legislation and actively assist them in initiating recycling programs.

Waive fees and simplify the review process for trash enclosures around recycling bins - All trash bins are required to be placed in enclosures that are architecturally compatible with on-site buildings. To encourage property owners to develop recycling programs, the City should simplify the review process by inspecting the site to determine if existing trash enclosures can be converted to recycling bin enclosures.

Prepare a City-wide procurement policy for the purchase of recycled products - In compliance with Assembly Bill 4 (Eastin, 1989) which amends Sections 12150, 12168 and 12169 of the State Contracts Code, the City is required to purchase recycled paper products. The procurement policy should include specifications for buying recycled products and specify percentages of recycled content. (Please refer to the Technical Appendix for more information about AB 4.)

Wildlife Habitat

Existing Conditions: As discussed in the Open Space Background section, several areas within the City provide feeding or resting areas for several types of shorebirds and waterfowl. The discussion in the Open Space Section centered on the passive recreation and scenic opportunities of these areas, whereas this section will concentrate specifically on the natural resources found in these areas.

Wildlife Refuge
In 1974 a 57-acre wildlife sanctuary was set aside in exchange for a permit to fill 382 acres of seasonal wetlands elsewhere in Foster City. The wildlife refuge is roughly bounded by Belmont Slough on the east, Beach Park Boulevard on the west, and between Tarpon Street and Foster City Boulevard (see Map GP-12). The tidal wetlands and mudflats in this area contain feeding and resting habitat for numerous and diverse migratory shorebirds and some species of waterfowl who migrate along the Pacific flyway.

The Environmental Protection Agency's 404(b)(1) guidelines designate wetlands and mudflats, as well as refuges, as special aquatic sites which influence and contribute to the overall environmental health and vitality of the entire ecosystem of a region.
The upland area adjacent to the tidal wetland provides an important buffer area for the adjacent wetlands. It also functions as a refuge area for wildlife species during high tides. Such escape covers, consisting of transitional upland habitats, are limited along the linear marsh. They also have the potential to support introduced populations which would assist in the recovery of declining species.

Other Important Habitat
Bird Island and portions of the adjacent mudflats are within the congressionally authorized boundary for the San Francisco Bay National Wildlife Refuge. Thousands of shorebirds feed on the mudflats adjacent to the Island, which hosts a nesting colony for the endangered California least tern and large numbers of endangered California brown pelicans.

Endangered Species
The California Clapper Rail is classified as an endangered species by the Department of The Interior and the State of California. The bird and its habitat are therefore afforded protection under the Endangered Species Act. This endangered bird inhabits coastal California salt marshes, including those of San Francisco Bay. It depends for its existence upon salt and brackish tidal marshes with an abundant growth of cordgrass and pickleweed. It breeds and forages exclusively within the confines of tidal marshes and has been observed throughout all portions of the subject marsh area. The reason for the endangered status of this bird is attributed to the destruction and degradation of its habitat.

The California Least Tern is another endangered species which has been observed on or near the wildlife refuge. The tern often nests on the eastern portion of Bair Island about two miles south of the refuge, and would probably use the shallow water mudflats of the refuge at mid-to high-tide times for fishing.

The dense pickleweed stands in the tidal wetland provide appropriate habitat for the endangered Salt Marsh Harvest Mouse, which has been found in the pickleweed on and near the Bridge Landing site. The upland grass species in the salt marsh area provides a reuge for the harvest mice during high tide.

Desired Conditions: It is the policy of the City of Foster City that no disturbance will be permitted to the wildlife refuge. The preservation of the refuge is necessary to protect endangered species and to provide an educational resource for the community and region. In this manner the refuge will provide an historical example of the original shoreline conditions prior to filling for development.

Conservation Techniques: Expand public opportunities to learn about wetland areas and endangered species by creating public viewing areas with exhibits - Foster City should consider constructing public interpretive viewing areas with exhibits about characteristics of habitat and species typical for wetland areas. The exhibits could also provide an historical perspective of how Foster City looked before development.

Protect wetland habitat from human disturbance - Discourage human disturbance by posting signs prohibiting trespassing on vegetation typical of wetland areas, such as pickleweed that would not survive trampling.

Prohibit development within 57 acre wildlife refuge - The preservation of the refuge is essential for the protection of endangered species, and as one of the few remaining examples in the region of undeveloped San Francisco Bay wetland areas. Foster City shall ensure that all new development proposals do not encroach on the refuge.

100-Foot BCDC Regulated Shoreline Band

Existing Conditions: The Bay Conservation and Development Commission (BCDC) has planning and permit authority over areas 100 feet landward of the line of highest tidal action of the San Francisco Bay ("the shoreline band") and certain other lands that are suitable for Bay-related uses (see map). These include salt ponds, managed wetlands and some waterways that empty into the Bay. In Foster City BCDC's jurisdiction extends along the Bay side of the levee, parallel to East Third Avenue and Beach Park Boulevard between Highway 92 and south of Foster City Boulevard.

Development proposals within this band must be submitted to BCDC for review and approval with regard to consistency to the policies of the San Francisco Bay Plan. Policies of the plan require public access by fee or easement from public highways to shoreland. The main objectives of the Plan are to protect the Bay as a natural resource for the benefit of present and future generations, and to develop the Bay and shoreline to their highest potential with a minimum of Bay filling.

In Foster City, the shoreline band is adjacent to one of the most popular adult recreation opportunites in the region: the pedestrian/bicycle trail (or pedway). The pedway provides public access to the shoreline band in a manner that is not typical of communities along the San Francisco Bay. This public access to the open space assets of the shoreline band is representative of the Foster City lifestyle and emphasis on water resources.

Desired Conditions: The shoreline band should remain accessible to the public and as undeveloped as possible. Any development proposed within the shoreline band will be strictly scrutinized and evaluated against appropriate BCDC standards, and impacts to adjacent properties, wetlands, the wildlife refuge and the pedway.

Conservation Techniques:

Improve public access to the 100 foot shoreline band - The City plans to improve public access to the shoreline. The existing pathway will be widened to facilitate concurrent use by pedestrians and bicyclists. The City has also proposed installing ramps and sloped pathways for the handicapped and others to reach the pedway (refer to Parks Section).

Foster City will continue its past practice of improving public access to the shoreline in conjunction with development proposals and as part of the 5 year Capital Improvement Program. For example, developments located adjacent to the pedway have been required to provide public access and public parking to the pedway within the subject project. Recently approved projects such as Bayfront Court Townhomes have also been required to provide seating areas, picnic areas, a landscape and irrigation system and four public access signs. The Lantern Cove project was required to provide pathways, an exercise par course and a picnic area.

Strictly control development proposals in the vicinity of the shoreline band - Any development proposed within the shoreline band must be consistent with BCDC standards, and must not significantly impact adjacent properties, wetlands, the wildlife refuge and/or the pedway.

Foster City Lagoon System

Existing Conditions: The Foster City lagoon system is a unique water resource that affords many recreational and scenic opportunities. The lagoon system also supports biologic species such as marine organisms and serves as resting and feeding sites for waterfowl and as hunting territory for diving birds such as the Caspian tern.

An attached form of chlorophyte algae is found along rocky portions of the southern and central portions of the lagoon. The majority of invertebrate organisms sighted were found only along rock areas of the lagoon system. The lagoon system was also found to support a dense population of striped bass, probably a result of the lagoon's high rate of plankton productivity. Young striped bass are fed upon by several bird types.

A minimum of fifteen species of birds, ranging from the species normally associated with saltmarsh habitats to those normally associated with grassland habitats, inhabit the terrestrial and slough areas in the immediate area.

Desired Conditions: Since the Foster City lifestyle is distinctly associated with the lagoon system, the City has resolved to protect the biologic function of the lagoon as a feeding and resting area for waterfowl and as habitat for marine life, and the recreational and scenic resources of the lagoon.

Conservation Techniques:
Protect the water quality of the lagoon system - Continue to test and monitor the water in the lagoon system, according to the standard and techniques previously mentioned in the Conservation Section.

Protect and conserve the recreational and scenic qualities of the lagoon system - Development proposals are carefully analyzed for potential view or recreational impacts.

Inform City residents and workers about the relationship between the storm water system and the lagoon - The City will prepare and distribute informational brochures to inform people about the multiple functions performed by the lagoon system and what not to dispose of in the system.

AIR POLLUTION

The ingredients of smog (ozone) are sunshine, nitrogen, oxides and hydrocarbons. Altogether, vehicles contribute 31% of the Bay Area's daily dose of man-made hydrocarbon emissions. Much of the damage to air quality occurs in the first few minutes of any trip in which the car is starting and operating cold. Once

the car is on the road, a 10-mile trip taking 30 minutes produces 250 percent more emissions than the same trip in 11 minutes. Smog-producing emissions on a 20-mile trip stack up approximately as follows: 3 grams per person for a bus; 6 for a three-person door-to-door carpool; 13 for a train/auto combination; and 16 for a single-occupant vehicle.

Source: Metropolitan Transportation Commission, 1989 Annual Report, page 5.

CONSERVATION GOALS, POLICIES AND PROGRAMS

Introduction

The background sections of this element described Foster City's natural resources. This section of the element draws upon the background information to establish goals and policies regarding the management of natural resources with specific implementation measures or programs. The programs are actions to be performed by the City in order to implement the Conservation Element.

The time period envisioned for the goals, policies, and implementation measures is 15 years. This time period should include build-out and some expansion of the City's open space and recreation areas.

Conservation Goals

Protect and Conserve Natural Resources

C-A Protect and conserve wildlife habitat, energy resources, land resources, air quality, and the quality and quantity of water resources.

Conservation Policies

Protect and Conserve Natural Resources

C-1 **Water Resources.** Conserve water resources in existing and new development.

C-2 **Water Quality Monitoring.** Continue to monitor the water quality of the lagoon.

C-3 **Air Quality.** Reduce the impact of development on local air quality.

C-4 **Energy Conservation.** Promote energy conservation in new and existing development (see Housing Element).

C-5 **Solid Waste.** Reduce the generation of solid waste through recycling and other methods.

C-6 **Wildlife Habitat.** Protect the wildlife habitat located in the wildlife refuge, 100-foot regulated shoreline band, wetland areas and the Foster City Lagoon System.

Conservation Programs

C-a **Water Saving Landscaping and Irrigation.** Promote the use of low-water-use landscaping and irrigation devices in parks, and during review of new projects and modifications to existing developments.

Responsibility: Community Development Department, Parks and Recreation Department.
Timeline: Current and ongoing

C-b **Property Owner Water Saving Techniques.** Encourage all property owners to implement the following conservation techniques: utilize drought tolerant plant materials, limit turf areas to 25% of landscaping, limit hours of the day for watering, retrofit with water-conserving fixtures, retrofit existing bathrooms and install new bathrooms with ultra low-flow toilets and water-conserving shower heads.

Responsibility: Community Development Department, Public Works Department.
Timeline: During Plan Review/prepare brochure following adoption of this Element

C-c **Water Emergencies.** Declare a state of water emergency when mandatory water conservation and/or water rationing is necessary and prepare newsletter articles and brochures to educate customers about water conservation.

Responsibility: District Board, City Manager's Department, Public Works Department.
Timeline: As needed

C-d **Water Conservation Plan.** Update the City's Water Conservation Plan. This plan describes water system deficiencies, and water supply and demand within the District service area.

Responsibility: Public Works Department.
Timeline: 1993

C-e **Water Quality.** Continue existing programs to conserve and protect water quality in accordance with accepted standards.

Responsibility: Public Works Department.
Timeline: Current and ongoing

C-f **Lagoon Water Quality.** Continue to implement the Lagoon Management Plan in order to conserve and protect lagoon water quality by exchanging water with the Bay, testing and monitoring the water quality in the lagoon system.

Responsibility: Public Works Department.
Timeline: Current and ongoing

C-g **Lagoon Views and Recreational Opportunities.** Conserve and protect the Foster City Lagoon System by maintaining accessibility for views and recreational opportunities.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-h **Public Information.** Conserve and protect the Foster City Lagoon System by educating the public about problems caused by disposal of toxic wastes into the storm water system and the problems which result from feeding waterfowl.

Responsibility: Public Works Department, Community Development Department.
Timeline: Prepare brochure following adoption of this Element

C-i **Water Quality Discharge.** Conserve and protect the quality of the water that is discharged into the San Francisco Bay through implementation of the Lagoon Management Plan.

Responsibility: Public Works Department.
Timeline: Current and ongoing

C-j **Air Quality Impacts.** Review proposed projects for their potential to affect air quality conditions.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-k **Air Pollution Sensitive Land Uses.** To the extent feasible, separate air pollution sensitive land uses from sources of air pollution.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-l **TSM Ordinance Enforcement.** Enforce the City's Transportation Systems Management (TSM) Ordinance for existing and proposed businesses with more than 25 employees to promote use of SamTrans, vanpools, carpools and flextime working hours for employees.

Responsibility: Community Development Department.
Timeline: Current and ongoing

C-m **Reduction in Automobile Trips.** Encourage Foster City residents and employees to consolidate and/or eliminate motor vehicle trips as often as possible.

Responsibility: Community Development Agency, Planning Division.
Timeline: Prepare brochure following adoption of this Element

C-n **Coordination with Other Agencies in Air Quality Improvements.** Coordinate review of large projects with local, regional and state agencies to improve air quality.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-o **Title 24.** Construct new buildings and additions to energy efficiency standards according to Title 24 of the California State Model Code.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-p **Solar Heating and Cooling.** Encourage installation of solar panels for heating and cooling with solar energy.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-q **Solar Heating for Pools.** Encourage property owners to heat all new and existing spas and swimming pools with solar energy.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-r **Energy Information and Outreach.** Continue to expand and monitor information about energy conservation and establish a public outreach program to inform Foster City residents and businesses about the availability and importance of the information.

Responsibility: Community Development Department.
Timeline: Prepare brochure following adoption of this Element

C-s **Citywide Recycling Program.** Continue the citywide residential recycling program for glass, aluminum and newspaper and establish a citywide commercial recycling program for white paper and cardboard.

Responsibility: City Manager's Department, Community Development Department.
Timeline: Current and ongoing

C-t **Source Reduction and Recycling Element.** Implement Source Reduction and Recycling Element in accordance with State regulations.

Responsibility: Community Development Department, City Manager's Department.
Timeline: Current and ongoing

C-u **Recycling Information.** Inform all Foster City residents and businesses about recycling opportunities.

Responsibility: Community Development Department.
Timeline: Current and ongoing

C-v **Recycling Bins Incentives.** Waive fees and simplify the review process for trash enclosures around recycling bins.

Responsibility: Community Development Department.
Timeline: Current and ongoing

C-w **City Procurement.** Prepare a City-wide procurement policy for the purchase of recycled products.

Responsibility: City Manager's Department.
Timeline: December 1993

C-x **Public Viewing Areas.** Expand public opportunities to learn about wetland areas and endangered species by creating public viewing areas with exhibits.

Responsibility: Community Development Department.
Timeline: Within three years following Element Adoption

C-y **Wetland Habitat.** Protect wetland habitat from human disturbance by posting signs prohibiting trespassing on vegetation typical of wetland areas.

Responsibility: Community Development Department, Parks and Recreation Department.
Timeline: Within one year following Element Adoption

C-z **57 Acre Wildlife Refuge.** Prohibit development within 57 acre wildlife refuge.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-aa **Projects in the Vicinity of Shoreline Band.** Strictly control development proposals in the vicinity of the shoreline band.

Responsibility: Community Development Department.
Timeline: During Plan Review

C-bb **National Pollution Discharge Elimination System (NPDES) Stormwater Management Plan.** Continue working with the county-wide task force to develop and implement a stormwater management plan to satisfy NPDES requirements.

Responsibility: Public Works Department.
Timeline: Current and ongoing

Conservation Program Summary

		Agency Responsible								
Conservation Program		***CC***	***PC***	***CDA***	***CD***	***CE***	***P/R***	***PW***	***Other***	***Time Frame***
C-a	Water Saving Land and Irrigation				**		**			Ongoing
C-b	Water Saving Techniques				**			**		Ongoing
C-c	Water Emergencies	**						**	CM/Dist	Plan review; after
C-d	Water Conservation Plan							**		1993
C-e	Water Quality							**		Ongoing
C-f	Lagoon Water Quality							**		Ongoing
C-g	Lagoon Views and Rec Opp.				**					During Plan review
C-h	Public Information				**			**		Following adoption
C-i	Water Quality Discharge							**		Ongoing
C-j	Air Quality Impacts				**					During Plan review
C-k	Air Pollution Sensitive Land Uses				**					During Plan review
C-l	TSM Ordinance Enforcement	**		**						Ongoing
C-m	Reduction in Automobile Trips				**					After adoption
C-n	Coordination with Other Agencies				**					During Plan review
C-o	Title 24				**					During Plan review
C-p	Solar Heating and Cooling				**					During Plan review
C-q	Solar Hearting for Pools				**					During Plan review
C-r	Energy Information and Outreach				**					After adoption
C-s	Citywide Recycling Program				**				CM	Ongoing
C-t	Source Reduc and Recycling Element				**				CM	Ongoing
C-u	Recycling Information				**					Ongoing
C-v	Recycling Bins Incentives				**					Ongoing
C-w	City Procurement								CM	Dec-93
C-x	Public Viewing Areas				**					Within 3 years
C-y	Wetland Habitat				**		**			Within 1 year
C-z	57 Acre Wildlife Refuge				**					During Plan review
C-aa	Proj in Vicinity of Shoreline Band				**					During Plan review
C-bb	NPDES Stormwater Management Plan							**		Ongoing

KEY

CC	City Council	CE	Code Enforcement
PC	Planning Commission	P/R	Parks and Recreation
CDA	Community Development Agency	PW	Public Works
CD	Community Development		

Appendices

Water Conservation Management Plan, KCA Engineers (undated)

Table 2: Amount of Purchased Water

Table 3: Water Conservation Guidelines

Foster City Planting and Irrigation Guidelines, Foster City Public Works Department (1991)

Table 4: State and Federal Ambient Air Quality Standards

*"Bay Area 1991 Clean Air Plan", ABAG, Bay Area Air Quality Management District and Metropolitan Transportation Commission. **

Table 5: Energy Conservation Tips for the Home and Office

The Meter Minders' Guidebook, Pacific Gas and Electric Company (undated)

Foster City Source Reduction and Recycling Element (July, 1992) +

Government Code Section Affected by AB 939

Summary of AB 4 Requirements (Sections 12150, 12168, 12169 of the Government Code)

Permit Number 74-0-22 to fill 382 acres of seasonal wetlands (Special condition 9318-49) including map of Wildlife Refuge Area

**Those documents available in the Foster City Public Library*

+Administrative draft on file with the Community Development Department