

INTRODUCTION AND BACKGROUND

The Watsonville Planning Area possesses a rich heritage of open space and natural resources. Farmland, water, wildlife habitat, and air quality are now recognized as limited resources which must be judiciously used and wisely managed to minimize stress on the area's natural resources.

This chapter of *Watsonville 2005* addresses the state planning requirements for conservation and open space. It presents goals and policies for the protection and wise use of the environmental resources found in the Watsonville Planning Area. Additional City policies and actions on the preservation and enhancement of important agricultural soils are found in the Growth and Conservation Strategy chapter (3).

COMMUNITY CONCERNS

In the Watsonville Planning Area community concerns center around air and water quality, lakes, streams, riparian vegetation, prime agricultural soils, and freshwater marshes. Issues of community concern include the following:

1. What precautions can be taken to reduce air pollution and maintain water quality?
2. Can lakes and other waterways be protected for their scenic and wildlife habitat values?
3. Can the wetlands associated with the sloughs be preserved for passive recreation and as wildlife refuges?
4. Can the groundwater recharge areas be protected from urban development?
5. Can urban run-off be prevented from contaminating water resources?



Photo: Courtesy of the Register-Pajaronian

Habitat preservation is an important planning issue in Watsonville, where rivers, sloughs, and agricultural lands are prominent in the landscape.

6. Can open space areas containing rare and endangered plant species be preserved for their scientific value?
7. Can important agricultural soils be preserved and maintained in active production?
8. Can archeological resources be protected and preserved for future generations?

STRATEGY FOR ENVIRONMENTAL MANAGEMENT

The focus of this chapter is protecting and managing natural resources in a way that allows for human use and interaction, while sustaining the resource. This approach to conservation is one of stewardship. For example, conservation of farmland, a managed resource prevalent in the Planning Area, is addressed in many policies and measures throughout the General Plan. Protection of sloughs through measures such as a biological study, acquisition of key areas, establishment of a greenbelt, and careful environmental review of development on adjacent land is an example of the protection of open space.

THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) requires evaluation of the impact projects will have on the environment. The Act specifies the types of projects required to be evaluated and offers guidance with regard to the level of evaluation. The City of Watsonville includes environmental evaluation, in accordance with CEQA, in the approval of both private and public projects.

GEOGRAPHY

The City of Watsonville lies 16 miles southeast of Santa Cruz, 23 miles northeast of Monterey, and about 30 miles southwest of San Jose. The Watsonville Planning Area shares the same geography and climatic conditions as the larger Pajaro Val-

ley. The Pajaro Valley, the floodplain for the Pajaro River and its tributaries, is characterized by rich agricultural soils. The ridges of the Santa Cruz Mountains form the northeast extension of the Pajaro watershed, elevated terraces mark the northern and southern limits, and the Monterey Bay forms the westward extent of the valley.

Elevations in the Pajaro Valley range from sea level to 1,897 feet above sea level at Mount Madonna. Within the Watsonville urbanized area, elevations range between 10 and 160 feet above sea level. Most of the developed area of Watsonville is within a range of 25 to 75 feet above sea level.

CLIMATE

The climate of Watsonville makes it ideal for both growing crops and as a place to live. Temperature extremes are rare, ranging from occasional lows of 28 degrees F. to highs of 95 degrees F. These extremes are experienced for only short durations. The mild Mediterranean climate produces a long crop growing season of about 237 days per year.

Rainfall increases with distance inland from the Bay. Average annual rainfall is about 17 inches at the mouth of the Pajaro River, 21 inches at Watsonville, and as high as 50 inches at the crest of Mount Madonna. Ninety percent of all precipitation occurs between November and April with February being the wettest month. Wind direction is generally from the west off Monterey Bay.

NATURAL RESOURCES

AIR RESOURCES

Watsonville is located within the North Central Coast Air Basin, which includes Monterey, Santa Cruz, and San Benito Counties. The air district generally has excellent air quality, and has qualified and applied for federal attainment status by virtue of meeting federal air quality standards. The district, however, has occasionally exceeded the more stringent state air quality standards for ozone and inhalable particulate matter less than 10 microns in

diameter (PM_{10}). As a result, the area has been classified as a moderate nonattainment area for state purposes.

Ozone is produced by reactions between hydrocarbons and nitrogen oxides (NO_x) in the atmosphere. Ozone is the primary component of "smog." The federal ambient air quality standard for ozone is 0.12 parts per million (ppm) while the stricter state standard is 0.09 parts per million. Monitoring of air quality is conducted by the Monterey Bay Unified Air Pollution Control District (MBUAPCD). The MBUAPCD operates six ambient air monitoring stations in the North Central Coast Air Basin. These stations are located in Carmel Valley, Hollister, Salinas, Santa Cruz, Scotts Valley, and Watsonville. The MBUAPCD has prepared the 1991 *Air Quality Management Plan* to achieve the national ozone standard and more stringent state standard for inhalable particulates and ozone by implementing strategies to control emissions from stationary sources such as factories and from mobile sources such as automobiles.

The 1991 *Air Quality Management Plan* recommends adoption of 20 measures to control emission of reactive organic gases from stationary sources, five measures for stationary sources of oxides of nitrogen emissions and eight transportation control measures. These measures in combination with four measures included in the 1989 *Air Quality Management Plan* are anticipated to bring the basin into compliance with the state ozone standard by 1997. Programs to address particulates are also included in the 1991 *Air Quality Plan*. Those programs are projected to result in a reduction of approximately two tons of PM_{10} emissions by 1994.

The City of Watsonville has included a wide variety of programs in this chapter and the Transportation and Circulation chapter (10) to address air quality. The Land Use chapter (4) plans for increased densities of housing and jobs within the existing city and high density concentrations of housing and jobs in areas proposed to be annexed. This land use pattern strongly supports the use of transit and transportation system management (TSM) programs. Also, the City has adopted a trip reduction ordinance consistent with the Regional Congestion Management Program. New areas will be developed through specific

plans requiring that transit, TSM, and other trip reduction opportunities be aggressively pursued in the designs. As noted in the Transportation and Circulation chapter (10), Watsonville strongly supports the development of a fixed guideway system from Watsonville to Santa Cruz.

WATER RESOURCES

The water resources of the Planning Area are found both above and below the surface. Groundwater conservation is an important planning issue for Watsonville because the aquifers in the Pajaro Valley supply about 85 percent of the city's water. Water quality is monitored by the Public Works Department.

Surface water resources include five small lakes, Corralitos and Salsipuedes Creeks, the Pajaro River, and the Watsonville, Struve, West Branch Struve, Galighan, Hanson, and Harkins sloughs. Freshwater marshes have formed along these sloughs and now provide valuable habitat for water-oriented mammals, birds, reptiles, and amphibians. Five small lakes (Pinto, College, Kelly, Drew and Tynan) also provide wildlife habitat and an important flood protection function during the winter months when their combined area covers nearly 400 acres. College Lake accounts for half of the 400 surface acres but is usually dry during summer months. These lakes are used as resting places by migratory waterfowl. Pinto Lake is also an important regional recreational facility.

Precipitation within the Pajaro Valley watershed reaches the groundwater aquifers through seepage along the tributaries of the Pajaro River and by direct infiltration across a wide band of undeveloped land used for agriculture. When urbanization occurs over groundwater recharge areas, the rate of infiltration is reduced and the rate of surface run-off is increased. The potential for water pollution is also increased by urban run-off which may contain oil and various chemical compounds, and by agricultural fertilizers.

SOIL RESOURCES

Most of the soils found within the Planning Area are alluvial types associated with the drainage pattern of

local creeks and streams. These soil types have high agricultural value and include the Laguna, Soquel, Corralitos, Pajaro, and Botella series.

Land in the Planning Area can be categorized on the basis of topography, drainage, and soil type.

1. Uplands

Uplands are generally defined as the areas east and north of the city, with topography generally unfavorable for row crops. Drainage is good but soils are shallow and of medium texture. Slope tends to make upland soils very susceptible to erosion. These lands are used primarily for animal grazing and pasture.

2. Alluvial Fans and Flood Plains

Alluvial fans and flood plains, the predominant land types within the Planning Area, have the best agricultural soils. Slopes are very gradual and soils tend to run deep and have good water retention.

3. Low Terraces

These lands are found between the alluvial fans and the valley floor. Soil types found here are subject to considerable erosion if not protected.

4. Basin

The basin area is formed at the lower reach of the Pajaro River. The land is very flat with high clay and organic content, resulting in poor drainage. These soils generally lack strength for the support of structures.

AGRICULTURAL LANDS

The agricultural heritage of Watsonville and the Pajaro Valley is an important aspect of Watsonville's character. Agriculture has historically provided an important life-style and employment choice for the residents of the Pajaro Valley. Within the 1990 City limits of Watsonville none of the land shown on the Land Use Diagram accompanying *Watsonville 2005* is designated for agricultural use, although much of the City is located on agricultural land. Beyond the

1990 City limits agriculturally designated and utilized lands virtually surround Watsonville.

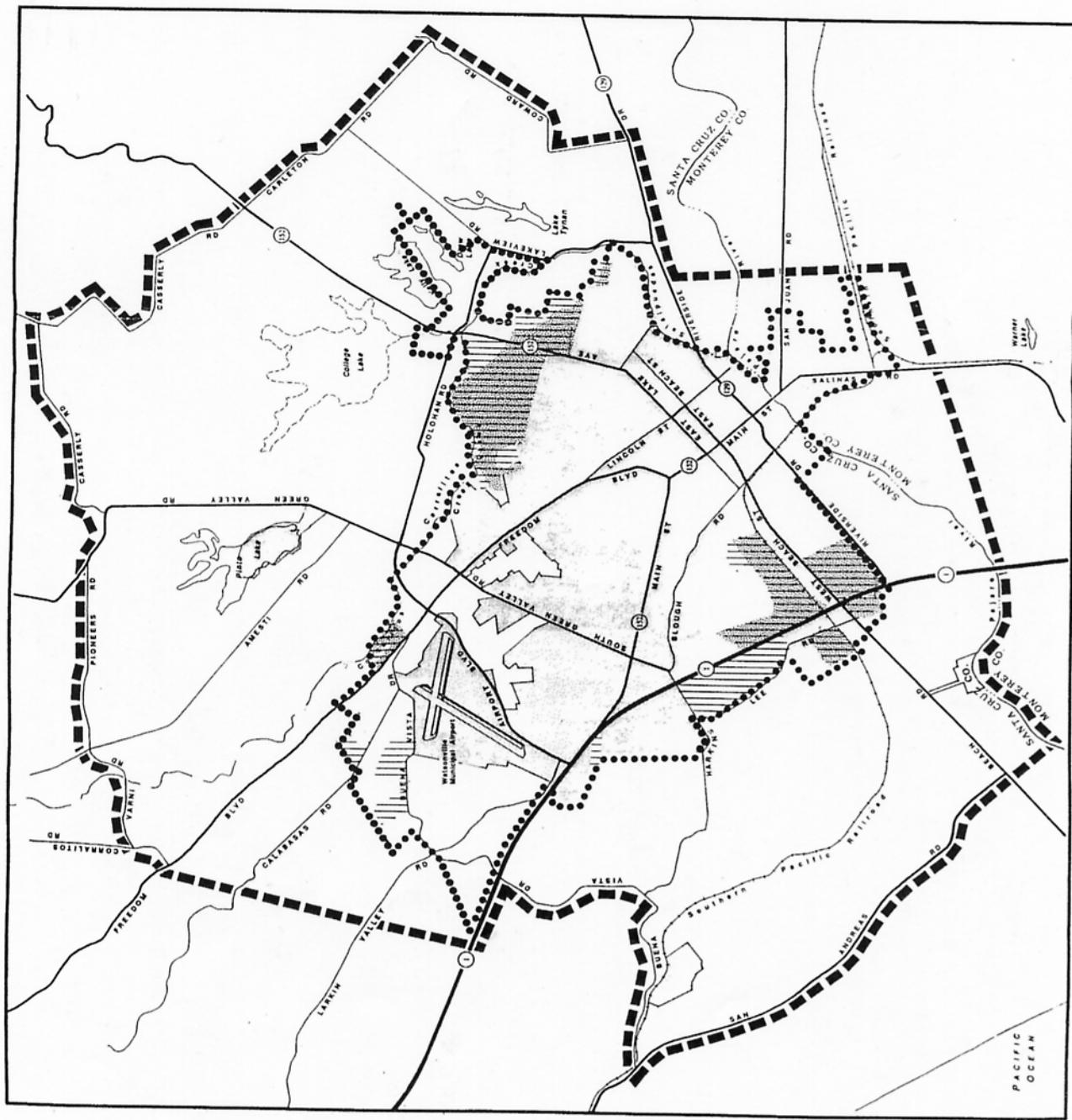
Agricultural lands are classified in several ways. Two prominent classification systems for agricultural lands surrounding Watsonville are: (1) the Soil Conservation Service (SCS) Capability Classification Class I and II lands with a Storie rating of 60-100; and (2) the County of Santa Cruz land use designation Commercial Agriculture (CA). Lands currently under Williamson Act Contracts are also notable. Detailed descriptions of these classification methods and their applicability to the Pajaro Valley are included in Appendix B. Crops produced on these lands include row crops, primarily lettuce and berries, apple orchards, and some greenhouse operations. Lands within the urban limit line with these designations are shown on Figure 9-1.

The preservation of agricultural lands is important for a variety of reasons including: food production, employment, economic productivity, open space preservation, and linkage to cultural heritage. Today in the Pajaro Valley these needs must be balanced with the socio-economic realities of the community, the state and the country.

Through the 1950s, 60s and 70s the development of agricultural lands with urban sprawl was a concern of significant magnitude in California. The institution of Local Agency Formation Commissions (LAFCOs) in the State of California was substantially directed at stopping this trend. Recent trends in agricultural production in Santa Cruz County indicate an 18% decrease in the acreage in agricultural production in the County throughout the 1980s (1990 Crop Report). However, strong County policies through the 1980s severely limiting the annexation and development of agricultural lands have been stringently held to by Santa Cruz County and LAFCO. As a result, the 18% decrease in agricultural lands in production over the 1980s can not be attributed to urban sprawl, but to agricultural market factors discouraging agricultural production. These lands are not being converted to urban uses, they lie fallow because of other factors.

Watsonville has contributed significantly over the years to the preservation of the agricultural base of the Pajaro Valley. With the second highest developed

Figure 9-1



density in Santa Cruz County, it has demonstrated its significant commitment to preserving that base. It has solidly supported the agricultural industries that comprise much of its economic base. In addition, Watsonville has worked hard over the years to support agricultural workers and their families by providing an affordable, full service community.

Watsonville's ability to continue to meet that commitment is compromised by a variety of factors today including the County's stringent agricultural land preservation policies.

Watsonville 2005 maximizes preservation of agricultural land in the Pajaro Valley by emphasizing City-centered growth. New housing and jobs are provided by increasing densities in the existing City and through selective expansion of the City into adjacent lands. By focusing growth in and around the City, agricultural lands can be preserved in the outlying unincorporated areas.

Within the urban limit line and beyond the existing City limits, there are approximately 360 acres of land considered prime by the SCS which are not designated as agriculture on the Land Use Diagram. None of this land is in Williamson Act agricultural preserve. Assuming 285 acres are in production, the conversion of these lands to other uses would impact approximately 1.5 percent of the agricultural production lands in Santa Cruz County. This figure is small considering that Watsonville is virtually surrounded by agricultural lands.

Agricultural jobs are important to the labor force of Watsonville. Nonetheless, it is important to keep in perspective the number of jobs an acre of agricultural land creates. There are approximately 20,200 acres of land in the County in agricultural production (1990 Santa Cruz County Crop Report). The State of California Employment Development Division estimates that there were approximately 7,000 permanent agriculturally-related jobs in Santa Cruz County. These include both farm labor jobs and agricultural support industry jobs. This number is also supported by the 1990 Census which identified 7,099 agricultural, fishing and forestry jobs in Santa Cruz County. Assuming also an additional 1,200 peak month seasonal agricultural jobs (Migrant Farm Labor Report, State of California), each acre of land in Santa Cruz County in agricultural production pro-

duces four-tenths of a job. Many of those jobs would be filled by workers with low job skill levels, who are not presently making a living wage. If all of the Class I and II soil within the urban limit line, which is not designated as agriculture, converted from agricultural production, approximately 140 agricultural jobs would be lost.

The conversion of these lands would allow for the production of additional housing units and thousands of jobs at development densities exceeding those current high development densities and intensities present in Watsonville today. Many of those jobs would be filled by workers with low job skill levels, who are not presently making a living wage. Job skill training and commercial and manufacturing jobs would be emphasized to support these efforts. Without these lands, Watsonville will not be able to maintain its commitment to agriculture, agricultural workers and the agricultural heritage of the Pajaro Valley.

BIOLOGICAL RESOURCES ¹

Important biological resources in Watsonville and vicinity are largely associated with water resources including marshes, creeks, rivers, lakes and sloughs. Wetland habitat preservation is an important planning issue, particularly when the natural setting provides protective cover for endangered or threatened species. In addition, these areas: function as life support for a variety of non-endangered species, provide open space and passive recreational areas, and offer valuable opportunities for research and education.

Farming and animal grazing over the last one hundred years has altered or removed many of the habitat areas for plants and native animals. Within the Planning Area the most significant remaining

1. Information for this portion of the General Plan was derived from: the California Department of Fish and Game (CDFG) Natural Diversity Data Base (NDDB), the 1975 Conservation Element of the General Plan, the Final Environmental Impact Report for the Villages, October 1990, prepared by CH2M Hill, and Draft Subsequent Environmental Impact Report for the Franich Annexation, September 7, 1989 and the Final Subsequent Environmental Impact report for the Franich Annexation, May 1991, both prepared by Jones & Stokes Associates, Inc.

biological resource is the network of slough and marsh habitat. The South County Slough System is a wetland/upland complex which includes Watsonville Slough, Struve Slough, West Struve Slough, Galighan Slough, Hanson Slough and Harkins Slough. It is the largest and most significant wetland habitat between Pescadero Marsh to the northwest and Elkhorn Slough to the south. The South County Slough System is designated as an Area of Significant Biological Importance by the California Department of Fish and Game and is identified as a Significant Biotic Resource in the County's Growth Management Plan. This slough system is especially important as a refuge and resting area for resident, winter, and migrating fowl, and supports the largest concentration of migrant and wintering raptors in Santa Cruz County.

A large portion of West Struve Slough, located west of Highway 1, is managed by CDFG as a wildlife refuge (CH2M Hill Final Environmental Impact Report for The Villages, October 1990). Additional biological resources include those in the vicinity of the Pajaro River, Salsipuedes Creek and Corralitos Creek.

The City of Watsonville and the County of Santa Cruz have joined efforts¹ to complete a biologic study to inventory the plant and animal resources included in the slough areas. The funding of this study is intended to be achieved as a result of the efforts of non-profit and for-profit organizations. Once the inventory is complete, a variety of protection measures are intended to be designed and implemented. These measures may include, but are not limited to, the designation of areas to be preserved, setbacks, urban run-off control, erosion control and the development of plans for interpretive facilities and trails. The preparation of the inventory and the implementation of follow-up protection methods is supported by Watsonville 2005.

Watsonville and its vicinity are fortunate to contain valuable habitat that supports members of species which are known to be diminishing throughout all or part of their natural ranges. Special status species include California fully protected species, California

species of special concern, state threatened and endangered species, federal candidates (Category 1 and 2) for threatened or endangered species status, and federal threatened and endangered species. Figure 9-2 lists the special status species that may exist within the urban limit line. A brief description of each of these species is included in Appendix C.

MINERAL RESOURCES

The State Board of Mining and Geology has adopted special regulations to protect lands classified MRZ-2 (lands where adequate information indicates that significant stone, sand, and/or gravel deposits are present, or where it is judged that a high likelihood for their presence exists; and lands otherwise designated as areas of statewide or regional significance relative to mineral resources). Mapping conducted in 1982 and Special Report 146, Parts I and IV, *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area*, 1986 and 1987, prepared by the State Division of Mines and Geology, in accordance with the Surface Mining and Reclamation Act, do not indicate any MRZ-2 designated resources or resources of statewide or regional significance within the Watsonville Planning Area. This report further indicates that the stone, sand, and gravel needs of Monterey Bay Region through the year 2030 can be more than met by the MRZ-2 reserves already identified (over twice the estimated consumption amount is available in existing MRZ-2 reserves).

One existing quarry, the O'Connell Quarry, is operating within the Planning Area. This existing facility, while not meeting State-identified criteria, has been identified as significant by the State, within Report No. 7, *Designation of Regionally Significant Construction Aggregate Resources Areas in the South San Francisco Bay, North San Francisco Bay, Monterey Bay Production-Consumption Regions*, January 1987, related to its current use as a supply of construction related aggregate in an urbanizing area. This quarry is located along the south side of Buena Vista Drive, southwest of Harkins Slough Road. O'Connell is owned by Santa Cruz County and is operated as part of its Buena Vista solid waste landfill operation. A cooperative agreement with Granite Construction Company allows the extraction of sand and gravel in accordance with a designated

1. In conjunction with AMBAG a water quality study was initiated in 1993.

Figure 9-2 Special Status Species that may exist within the Urban Limit Line

Species	Legal Status	Preferred Habitat
Plants		
Gairdners Yampah	FC ²	Grassland
Santa Cruz Tarplant	FC ¹ , SE	Grassland
Wildlife		
California Tiger Salamander	FC ² , SSC	Wetland, grassland
Santa Cruz Long-Toed Salamander	FE, SE	Wetland, riparian, oak woodland
Western Pond Turtle	FC ² , SSC	Wetland, riparian, oak woodland
Red-Legged Frog	FC ² , SSC	Wetland
Black-Crowned Night-Heron	SA	Wetland, riparian
Black-Shouldered Kite	CP	Wetland, grassland
Burrowing Owl	SSC	Grassland
California Horned Lark	FC ²	Grassland
Ferruginous Hawk	FC ² , SSC	Grassland
Golden Eagle	SSC	Grassland
Loggerhead Shrike	FC ²	Grassland
Merlin	SSC	Grassland, wetland
Northern Harrier	SSC	Wetland, grassland
Peregrine Falcon	FE, SE	Wetland, grassland
Short-Eared Owl	SSC	Wetland, grassland
Tricolored Blackbird	FC ² , SSC	Wetland, grassland, riparian
Yellow Warbler	SSC	Riparian
Steelhead	SA	Streams

Status explanations:

FE = Federally listed endangered

FC = Federal candidate

¹ Category 1² Category 2

SE = State listed as endangered

SSC = State species of special concern

CP = California fully protected

SA = Special Animal (Species listed by CNDDDB as Special Animals, but not designated as protected under other categories listed above)

Source: The California Department of Fish and Game (CDFG) Natural Diversity Data Base (NDDDB), the 1975 Conservation Element of the General Plan, the Final Environmental Impact Report for the Villages, October 1990, prepared by CH2M Hill, and Draft Subsequent Environmental Impact Report for the Franich Annexation, September 7, 1989 and the Final Subsequent Environmental Impact report for the Franich Annexation, May 1991, both prepared by Jones & Stokes Associates, Inc., the Final Environmental Impact Report for the Watsonville 2005 General Plan Update and Sphere of Influence Amendment, June 1993, prepared by CH2M Hill.

schedule. The pit created by the extraction operation is then used for landfill. Quarrying and landfill are anticipated to continue at this site through at least 2005. Improved solid waste reduction and recycling programs may prolong the life of this operation. The reclamation plan for this site ultimately calls for the landfill to be covered over and planted for open space.

The O'Connell Quarry is located well beyond the city's urban limit line. *Watsonville 2005* does not project urbanization in the vicinity of this quarry. The County retains land use control of this area, with the City requesting the opportunity to comment on any plans or proposals for the area. It is the intention of the City of Watsonville to work with Santa Cruz County to allow this quarry/landfill operation to continue to the extent that significant nuisances, hazards, or environmental damage do not occur. The City shall also work with the County to ensure that reclamation occurs in a well-planned, timely, and comprehensive fashion.



Egrets are frequently seen along waterways in the Pajaro Valley. "Pajaro" means bird in Spanish.

COASTAL ZONE

The City of Watsonville has a *Local Coastal Plan* that describes use regulations for the five Coastal Zone properties within the City limits. The sites are shown on the Land Use Diagram. The specific uses and conditions applicable to these properties are outlined in the *Local Coastal Plan* and the *Coastal Zone Implementation Plan*, included within the Municipal Code. Amendment of these Plans will be required when additional coastal lands are brought under the jurisdiction of the City.

TIMBER RESOURCES

There are no economically significant timber resources in the Planning Area. However, there are scenic Redwood and Douglas Fir woodlands along the shaded ravines of the Santa Cruz Mountains to the east of Watsonville. These woodlands form a scenic backdrop to the city and perform a valuable watershed protection function. They also provide a recreational resource within a twenty minute drive from Watsonville.

ARCHAEOLOGICAL RESOURCES

The Pajaro Valley's geographic location has provided a rich and varied array of archaeological resources. The State Archaeological Inventory has identified at least 19 recorded sites within the Planning Area and indicated a strong likelihood of future discoveries. Future development must respect these important scientific and cultural reasons. Toward that end, policies are included to protect them from the adverse impacts of development.

HAZARDOUS MATERIALS

A serious potential threat to the natural resources of the Pajaro Valley is contamination by hazardous materials. Hazardous material threats include products and by-products of local industry and commerce, toxic household products, and hazardous materials being transported through the area. The overall goal of the policies in this plan is to protect both the residents and the environment from damage by exposure to such materials.

Policies focus on damage prevention through careful planning and monitoring, source reduction and waste minimization, and preparedness for organized management, containment, and clean-up when accidents occur. Additional related policies and implementation measures are found in the Transportation chapter, Public Facilities chapter, and Public Safety chapter.

ENERGY

Energy conservation and promotion of alternative energy resources can benefit Watsonville. Preserving non-renewable resources will help assure future availability. Reduction of gasoline consumption will assist the City in improving air quality, reducing traffic congestion, and providing gasoline cost savings to the residents. Reduction in natural gas and electric consumption will provide utility savings to the residents. The promotion of alternative energy will contribute to the job and tax base of the City.

The General Plan addresses reduced energy consumption in a variety of locations. The Housing, Urban Design and Scenic Resources chapters provide policies and implementation measures relative to reduction of energy consumption and promotion of the use of alternative energy resources in residential, commercial, and industrial developments. The Transportation and Circulation chapter outlines policies and programs for reducing automobile use and therefore fuel consumption and promotes the development and use of alternative transportation modes and electric vehicles. The Land Use chapter and accompanying Land Use Diagram encourages land use densities, intensities and locations that enable the use of transportation modes other than the single occupant automobile. The portion of the Environmental Resource Management chapter addressing the air quality includes a variety of measures to reduce fossil fuel dependency and encourage alternative transportation modes.

GOALS FOR ENVIRONMENTAL RESOURCE MANAGEMENT

Goals for environmental resource management have been established to preserve the natural resources of the Planning Area. These goals provide for open space, conservation, and limitations on the extent of future urbanization.

Goal 9.1 Open Space Network

Provide a comprehensive network of open space land uses for outdoor recreation and environmental protection.

Goal 9.2 Open Space Preservation

Preserve the open space and agricultural land uses surrounding the urban limit line which contribute to the economic base, provide scenic vistas, and offer opportunities for scientific exploration.

Goal 9.3 Natural Resources

Identify and protect the natural resources of the Watsonville Planning Area.

Goal 9.4 Air Quality

Maintain or improve the present air quality level within the Pajaro Valley.

Goal 9.5 Water Quality

Ensure that surface and groundwater resources are protected.

Goal 9.6 Soil Conservation

Preserve and protect the soil resources throughout the community and minimize the environmental degradation caused by soil erosion, construction impact on soils, and deterioration of water quality caused by suspended solids.

Goal 9.7 Agricultural Soils

Limit the urbanization of productive agricultural soils to only those parcels contiguous with existing urban use, best suited for urban development, and within the urban limit line.

Goal 9.8 Wildlife Habitat

Preserve and protect the remaining areas of wildlife habitat for their scenic and scientific value.

Goal 9.9 Mineral Resources

Provide for protection and appropriate conservation of economically important mineral resources.

Goal 9.10 Archaeological Resources

Identify and protect prehistoric resources for their scientific, educational, and cultural values.

Goal 9.11 Hazardous Materials

Protect the air, water, soil, and biotic resources from damage by exposure to hazardous materials through aggressive management of hazardous materials.

Goal 9.12 Energy

Promote the conservation of energy and the use of alternative energy resources in transportation and residential, commercial, and industrial development.

POLICIES AND IMPLEMENTATION MEASURES

The policies for environmental resource management reflect the state mandate for open space and conservation elements. In general they serve to direct urban development away from areas with significant natural resources. Additional environmental resource management policies and implementation measures are included in the Public Facilities and Services chapter (11).

Policy 9.A Open Space Land Use

The City shall designate land as environmental management to protect ecological, scientific, and scenic values.

Implementation Measures

9.A.1 Environmental Protection – The City shall use planning measures, such as an urban limit line, greenbelts, open space zoning, conservation easements, and other tools, to

restrict urban development in environmentally sensitive areas.

9.A.2 Landscape Restoration – The City shall require landscape restoration with native plants from regional seed stocks on sites disturbed by urban development.

9.A.3 Land Purchase – When necessary and possible, the City shall purchase lands for open space uses including wildland preservation, parks, environmental safety, and scenic corridor preservation.

9.A.4 Biological Study – The City shall cooperate with the County in preparing a biological study for protection of the sloughs and habitat dependent on the sloughs located in and around Watsonville. A plant inventory and map of sensitive biological and botanical resources should be a part of the study.

9.A.5 Acquisition and Management Plan – The City Council shall consider approving an Open Space Acquisition Plan within two years of the adoption of *Watsonville 2005*. The goal of the plan is to protect and manage wetlands, wetland-associated uplands, sensitive habitats, grasslands, and other environmentally sensitive habitats and agricultural lands. The plan shall evaluate acquisition priorities based on resource values, degree of threat, and availability. The plan shall explore and, where feasible, implement such means as public and private loans and grants, open space districts, transferrable density credits, dedications from property owners, purchase/leasebacks of agricultural lands, developer fees, and city funds to protect environmentally sensitive and agricultural lands.

Policy 9.B Natural Resource Protection

The City shall designate land necessary for the preservation of natural resources and to avoid conflicts with urban land uses.

Implementation Measures	Implementation Measures
9.B.1 Resource Zoning – The City shall designate and zone environmentally sensitive areas as EM-OS (Environmental Management – Open Space) to prohibit urban development and to preserve natural resources.	9.C.1 Referral to MBUAPCD – The City shall refer projects with identifiable air quality impacts to the MBUAPCD for recommendations on appropriate air quality impact mitigations.
9.B.2 Natural Resource Mitigations – The City shall require implementation of environmental mitigations on projects that may destroy or impair the future use or existence of natural resources.	9.C.2 Alternate Travel Modes – In order to reduce automobile related pollution, the City shall plan for and encourage the use of transit, ridesharing, bicycles, and walking as alternatives to automobile travel, and the use of low-emission and electric vehicles.
9.B.3 Environmental Constraints – The City shall encourage development on land which has the fewest natural resource impacts and discourage or prohibit development on land having multiple natural resource impacts. An environmental constraint matrix shall be developed for use by the City.	9.C.3 Housing Jobs Linkage – The City shall encourage new residential development to include housing suitable to employees of workplaces in the city and its immediate environs in order to minimize commuting and the motor vehicle emissions thus generated. The City shall strive to locate housing and job land uses to enhance the use of carpooling and transit.
9.B.4 Greenbelt – The City shall utilize the greenbelt to serve any of the purposes described in Policy 3.D, Establishment of a Greenbelt.	9.C.4 Design Review – The City shall require new development to include considerations for transit, Transportation Demand Management (TDM), and alternative travel modes in project designs including but not limited to transit stops, car and van pool preferred parking, and bicycle access and storage facilities.
9.B.5 Coastal Zone – The City shall abide by the provisions of the <i>Watsonville Local Coastal Plan</i> and <i>Watsonville Local Coastal Plan Implementation Ordinance</i> in the review of proposed development on Coastal Zone lands.	9.C.5 Industrial and Commercial Development – The City shall as a part of its development review process and CEQA process place conditions on new industrial and commercial development responding to the stationary and transportation related air quality impacts.
9.B.6 Environmental Review – The City shall conduct an appropriate environmental review process and require that proposed projects adjacent to surrounding, or containing, wetlands be subject to a site-specific analysis which will determine the appropriate size and configuration of areas to buffer wetlands from urban development.	9.C.6 Employer-based Incentives – The City shall provide incentives to employers to foster employer based transportation control measures resulting in employee based trip reduction such as ridesharing, use of public transportation, bicycling, and walking for employees.
Policy 9.C Air Quality	Discussion: Incentives may include but not
<p>The City shall cooperate with the Monterey Bay Unified Air Pollution Control District (MBUAPCD) to maintain and improve regional air quality. <i>In addition to the measures listed below, measures 4.A.4 and 4.G.1 promote improved air quality by providing for a balance of jobs and housing, and by increasing the density of residential development which makes use of transit feasible.</i></p>	

be limited to reductions in parking requirements, reduced development fees, increased development intensity or other mechanisms that encourage employer cooperation.

- 9.C.7 Other Use-based Incentives** – The City shall provide incentives to high trip generation uses, such as schools, hospitals, and some commercial uses to develop trip reduction programs.

Discussion: Incentives may include but not be limited to those outlined above or others that encourage high trip generation use participation.

- 9.C.8 Transportation Management Associations** – The City shall promote the creation of transportation management associations in areas of high employment density.

- 9.C.9 Environmental Review** – The City shall use the environmental review process to determine both stationary source and transportation related potential air quality impacts for project proposals.

- 9.C.10 Construction-related Impacts** – The City shall require construction contractors to implement a dust abatement program to reduce the effect of construction on local PM₁₀ concentrations.

- 9.C.11 Planning for Electric Automobiles** – The City Council shall consider an ordinance requiring all new development to install electrical power sources in parking areas and garages to recharge electric automobiles.

- 9.C.12 Promotion of Low-Emission Automobiles** – Where feasible, the City shall consider replacing its fleet of city automobiles with clean fuel and low-emission vehicles as vehicles wear out.

- 9.C.13 Innovative Programs** – The City shall look for ways to work with the private, non-profit, and public sectors to achieve the implementation of innovative programs to mitigate new air quality impacts and

improve existing air quality. Innovative programs may include, but are not limited to, high emission level vehicle buy-back (old vehicle buy-back) programs, incentives to accommodate electric vehicles in new developments, and programs to encourage transit ridership by employees.

- 9.C.14 Trip Reduction** – The City shall consider for adoption a trip reduction ordinance.

Policy 9.D Water Quality

The City shall provide for the protection of water quality to meet all beneficial uses, including domestic, agricultural, industrial, recreational, and ecological uses.

Discussion: Water conservation and use reduction is addressed in the Public Facilities chapter (11) of this Plan.

Implementation Measures

- 9.D.1 Recharge Protection** – The City shall direct urban development away from the groundwater recharge zones and surface water bodies. Projects with potential to jeopardize water quality shall be required to include mitigation measures prior to project approval.

- 9.D.2 Erosion Control** – The City shall continue to enforce regulations over grading activities and other land use practices that expose bare soil and accelerate soil erosion and sedimentation.

- 9.D.3 Water Monitoring** – The City shall continue to monitor the quality of water pumped into the distribution system, and the quality of effluent leaving the system in the form of wastewater discharges.

- 9.D.4 Saltwater Intrusion** – In conjunction with PVWMA, the City shall participate in state- and federally-assisted studies to identify and solve saltwater intrusion problems within the Pajaro Valley.

9.D.5 Wetland Protection – Where drainage from developments involves discharge into sloughs or wetlands, grease, sediment traps, or other protection measures shall be required. Mitigation monitoring shall be required and enforced by the City to ensure performance as appropriate.

Policy 9.E Soil Conservation

The City shall prevent degradation of local soil resources through erosion control improvement and grading guidelines.

Implementation Measures

9.E.1 Vegetation – The City shall require that removal of vegetation from a site be limited to the area required for building, and that all exposed soils be provided with new vegetation prior to project completion.

9.E.2 Soil Stockpiling – The City shall require that topsoil disturbed during project grading be stockpiled at the site and reapplied after construction to promote vegetative growth, unless that soil is to be transferred to another site for agricultural use.

9.E.3 Wetland Protection – The City shall require that new construction on slopes leading toward sloughs and wetlands, maintain an undisturbed protective buffer between all cut and fill slopes and the riparian zone.

9.E.4 Sediment Containment – The City shall require that all topsoil stored on-site during construction be contained to prevent escape of sediment from the site.

9.E.5 Winter Operations – The City shall require protective measures outlined in the grading ordinance to prevent soil erosion of disturbed soil during the normal rainy season between October 15 and April 15.

9.E.6 Agricultural Land Conservation – The City shall encourage retention of agricultural land beyond its urban limit line.

9.E.7 Consultation – The City shall consult with the Santa Cruz County Resource Conservation District (RCD) for development of soil erosion and sedimentation control plans for applicable areas.

Policy 9.F Wildlife Habitat Protection

The City shall designate for open space and environmental management those areas rich in wildlife species and fragile in ecological make-up. These habitat zones shall be made part of the greenbelt where appropriate.

Implementation Measures

9.F.1 Habitat Protection – Impacts to important wildlife habitat areas shall be identified as part of the City's development review and environmental review processes, and appropriate mitigations shall be considered. Mitigation measures to be considered include: designation of sensitive areas as open space, restriction of new development on lands that provide important wildlife habitat, setback requirements, habitat conservation plans, and habitat mitigation banking. Lands within the urban limit line that provide important wildlife habitat include, but are not limited to the following:

- a. Riparian Corridors
- b. Fresh Water Marshes and Sloughs
- c. Woodlands and Steep Slopes.

9.F.2 Restoration – The City shall support and encourage public and private efforts to restore degraded natural habitat zones and, when possible, to acquire them for preservation.

9.F.3 Pesticide Control – The City shall carefully regulate and monitor, within the limits of its authority, the use of pesticides, herbicides, and fungicides in and adjacent to wildlife habitat zones.

9.F.4 Fish and Game Consultation – The City shall refer development proposals to the California Department of Fish and Game for its

recommendations on conservation measures for native plant communities, riparian vegetation, wildlife habitat, and wetland preservation.

Policy 9.G Mineral Resources

The City shall work in cooperation with the County and State to conserve economically significant mineral deposits including sand and gravel.

Implementation Measures

- 9.G.1** Restoration – The City and County governments shall cooperate to ensure that adequate plans are prepared for landscape restoration following mineral extraction activities within the Watsonville Planning Area.
- 9.G.2** Mineral Inventory – The City shall work in conjunction with the State Division of Mines and Geology to inventory lands containing economically significant mineral deposits, and to designate appropriate land uses to avoid conflicts.

Policy 9.H Archaeological Resources

The City shall foster and provide for the preservation of cultural resources and artifacts of historic and prehistoric human occupation within the Pajaro Valley.

Implementation Measures

- 9.H.1** Inventory – The City shall maintain an inventory of historic and prehistoric sites, structures, and landmarks of historic and cultural significance in order to determine the potential impacts on these resources from proposed projects.
- 9.H.2** Protection Measures – The City shall notify the Regional Office, California Archaeological Site Survey, and the Ohlone Indian Cultural Association of projects within identified archaeological sensitive areas. An archaeological site survey by a professional archaeologist may also be required.

9.H.3 Project Conditions – The City shall require appropriate land use controls on projects that may endanger or destroy historic and prehistoric artifacts. Such controls include addition of fill to prevent disruption of site by grading, and site planning to avoid disturbance on sensitive portions of the site.

9.H.4 Private Participation – The City shall foster and encourage private efforts to preserve historic sites and cultural artifacts.

9.H.5 Ordinance – The City shall enforce the historic preservation ordinance.

Policy 9.I Hazardous Materials

The City shall protect the natural environment through aggressive enforcement and compliance with hazardous materials plans.

Implementation Measures

- 9.I.1** Coordinated Management – The City shall review the Santa Cruz County Hazardous Waste Management Plan and shall continue to cooperate with the County to ensure the adequacy of the plan for future control of hazardous waste in the city and Planning Area.
- 9.I.2** Education – The City shall support the development of an educational program designed to ensure the effective and proper use of hazardous waste and to encourage source reduction, waste minimization, reuse, and recycling when possible.
- 9.I.3** Underground Tanks – The City shall require double containment and/or monitoring of all underground tanks.
- 9.I.4** Hazardous Household Waste – The City shall support the implementation of a household hazardous waste collection program. The program shall emphasize public education on how to reduce and minimize hazardous waste and recycle usable materials.
- 9.I.5** Emergency Preparedness – The City Fire Department shall develop and maintain

aggressive efforts to prevent accidental hazardous materials releases, to preplan for potential emergencies, and to provide an effective and coordinated emergency response through the preparation of a *Community-based Disaster Response Plan*.

- 9.I.6** Buffer Zone – Where residential uses exist or are proposed adjacent to industrial and commercial uses, a buffer zone or barrier shall be used to decrease potential threat of contamination by hazardous materials.

Policy 9.J Energy

The City shall strive to reduce non-renewable energy resource consumption and promote the use of alternative energy resources.

- 9.J.1** Alternative Transportation – As outlined in the Transportation and Circulation chapter, the City shall promote the use and development of alternative transportation modes intended to reduce the consumption of fossil fuels and other non-renewable energy resources.

Environmental Resource Management Goals and Policies

Goals	Policies									
	9A	9B	9C	9D	9E	9F	9G	9H	9I	9J
9.1	•	•								
9.2	•									
9.3		•								
9.4			•							
9.5				•						
9.6					•					
9.7					•					
9.8						•				
9.9							•			
9.10								•		
9.11									•	
9.12										•

Each policy for environmental resource management serves to implement one or more of the 12 goals. This relationship is presented above in the form of a policy-to-goal matrix.

- 9.J.2 Development – The City shall encourage energy efficient design and design which utilizes solar opportunities in residential, commercial, and industrial development.
- 9.J.3 Land Use and Transportation – Development shall be encouraged to occur in locations and at intensities that facilitate the use of alternative transportation modes to the extent compatible with the community.



Photo: Courtesy of the Register-Pajaronian

One thousand native trees and shrubs plus 3,000 grass plants were planted to help restore Watsonville Slough as a condition of City approval for a new auto center on Main Street.