



CHAPTER 7 NATURAL RESOURCES

INTRODUCTION

Napa's natural resources--water, vegetation, wildlife, open space, and air--contribute to the City's economy and are important elements in the quality of life and overall economic, social and environmental well-being of the community. These natural resources exist in limited quantity and are at risk of destruction or degradation through continued urban development.

This chapter is a guide for the city's relationship to its natural resources and open space lands.

Over time, increasing urbanization leads to a decrease in the number and diversity of natural plant and animal species. In the Napa Valley, maintaining a natural biological diversity is particularly important for the Napa River's watershed, which is sensitive because it is centered at the transition of major north-south and east-west biological regions. For example, the Napa Valley represents the easternmost habitat for Coast Redwood, the intermixing zone for Coast and Interior Live Oak, and the most northern extension of San Francisco Bay wetland habitats. Because natural plant and wildlife habitats are essentially nonrenewable and irreplaceable resources, their loss to development should be carefully considered. Once urbanized, it is uncommon to find natural habitats rehabilitated to their former status.

Major Natural Resource Objectives

- *Maintenance of high quality plant and wildlife habitats surrounding the city*
- *Protection of important plant and wildlife habitats incorporated into developed areas within the RUL*
- *High quality air and water resources*
- *Support of Open Space areas in and around the City in coordination with the protection and enhancement of natural resources, plant and wildlife habitats.*

This chapter contains goals, policies, and implementation programs that establish the framework for the protection of valuable natural resources in the Napa area. The goals and policies are organized topically according to the following categories:

- Plant, Wildlife and Fish Habitat
- Rare and Endangered Species
- Public Awareness for Natural Resource Protection
- Water Quality
- Air Quality

This chapter is also a guide for the city's relationship to its natural resources and open space lands. (*Also see Appendix F, Open Space Action Program*)

PLANT, WILDLIFE, AND FISH HABITAT

Working in tandem with Napa County's General Plan goals and policies, the RUL separates the unincorporated lands from the city lands inside the RUL which are designated for development. The agricultural and open space lands around the City adjacent to the RUL (including the City's Alston Park) function as a greenbelt that provides habitat and open space that is integral to, and an extension of, the City's own.

Habitat Types

There are four primary habitat types in Napa that are known to be used by sensitive plant, animal, and fish species: Riparian; Aquatic; Wetlands; and Woodland, Grassland, and Chaparral.

Riparian Habitat: Riparian habitat consists of trees, shrubs, herbaceous plants and grasses that grow along watercourses that are both year-round and seasonal. Many species depend upon the riparian vegetation along the Napa River and its tributaries for water, food, cover and nesting sites. The vegetation cover shades the waterways and keeps the water temperature within the range necessary for fish breeding and feeding patterns. At one time, a dense canopy of riparian habitat lined the banks of the Napa River, but today most of the remaining vegetation exists only below the tops of the river banks. Expanses of rip-rap protecting the banks in the lower third of the river within the city do not support any substantial vegetation, and in other areas non-native trees have replaced native vegetation.

Aquatic Habitat: Aquatic habitat is found in the waters of the Napa River and its tributaries and in wetland areas. Aquatic areas provide habitat for plants and animals that live in or on water, and also support wildlife that depend on the aquatic environment for feeding, breeding, and protection. The Napa River and its tributaries provide an important habitat for sport fish, including striped bass, sturgeon, catfish, and carp. The Napa River and tributaries also provide important migration corridors and spawning habitat for anadromous fish, primarily steelhead.

Wetland Habitat: In general, a wetland is land that is permanently or periodically saturated by water from tidal action, a rise in river flow, rain, or human action. Marshes, bogs, vernal pools, swamps, baylands and riparian areas are examples of these wetland habitats. Figure 7-1 shows the general locations of wetlands in the RUL. Wetlands are of three general types: freshwater emergent wetlands (ponds, creeks, and upper portions of the Napa River); saltwater emergent wetland (found along the edges of sections of the Napa River that are under tidal influence); and seasonal wetlands (seasonal marshes, some creeks, and vernal pools).

Just downstream of Napa, the Napa River broadens and meets the meandering sloughs of the Napa Marsh, a vast (47,000 acres) complex of existing and historic salt marshes. Portions of the Stanly Ranch, the Airport Industrial Area, and other lands south of the City historically were part of this extensive salt marsh, but past filling and flood control projects have greatly reduced its extent.

Because much wetland has already been lost, the enhancement, restoration, rehabilitation, and where practical, expansion of remaining wetland areas is important. Wetland preservation and maintenance can be designed as part of new development projects and public works projects (e.g., flood control).

Woodland, Grassland, and Chaparral Habitat: Grasslands, composed of various annual grasses and herbs, cover much of Napa's remaining undeveloped, valley bottomlands, foothills and south-facing slopes. These areas serve as recharge areas to streams and marshes and provide habitat for much wildlife. Grassland vegetation also protects against hillside erosion.

Chaparral is an evergreen vegetation with typically small leathery leaves; typical species include manzanita, poison oak, and scrub oak. Many animals depend on the chaparral brush and understory shrubs for food and shelter from predators. Chaparral is also important for preserving soil structure, retaining water, and controlling

erosion. The vegetation is particularly susceptible to fire and some species depend on fire for regeneration.

Blue oak and coast oak are the dominant trees on the west-facing eastern foothills and valley oak is found on the valley floor.

Habitat Protection and Enhancement

Habitat protection and enhancement issues relate to stream and riverbank protection, streambank erosion, urban pollutants, and public access to sensitive habitats.

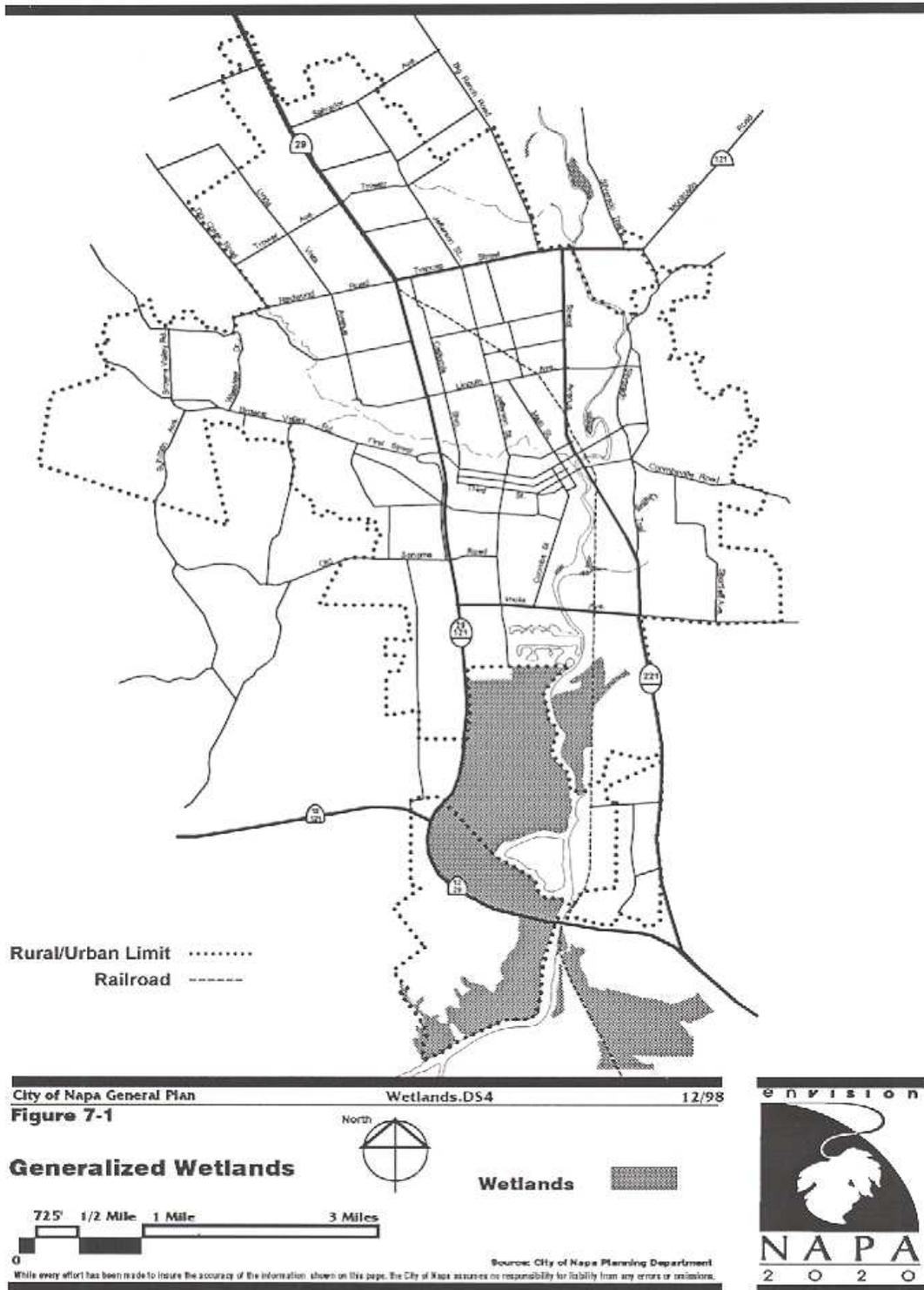
Stream and Riverbank Protection: Riparian habitat can be protected by providing tree, shrub and ground cover buffers which: 1) stabilize stream banks; 2) reduce sedimentation and the introduction of pollutants into the stream by filtering runoff; 3) decrease ambient summer water temperatures; 4) decrease storm runoff peaks by increasing rainfall infiltration into the soil; and 5) increase between-storm stream flows through greater stream recharge.

Providing and maintaining shade tree cover helps to decrease the growth of plants such as willows and tules that can: 1) obstruct water flow in wet months; 2) decrease water temperature; 3) decrease evaporative losses of water; and 4) decrease algal bloom and subsequent eutrophication in dry months.

Access: Unrestricted public access to riparian habitat on public lands can be harmful to the habitat. Riparian habitat in golf courses, parks and other public and private recreation areas should be shielded from indiscriminate access by providing access points, with appropriate signage, in designated areas (analogous to coastal zone access points).

Streambank Erosion: According to a streambank erosion inventory prepared by the Napa County Resource Conservation District in 1985, some of these tributaries are contributing to the existing heavy sediment load in the Napa River, which in turn carries the load to San Pablo Bay. This has adversely affected wetlands, water quality, and navigation. Future urban development, without sufficient guidance, has the potential for causing even more erosion and sedimentation of stream habitats.

Providing vegetated buffer strips alongside the Napa River and its tributaries can significantly help to stabilize stream banks and to reduce sedimentation and the introduction of pollutants into the waterways. The buffer strips work by filtering runoff, decreasing storm runoff peaks by increasing rainfall infiltration into the soil, and increasing between-storm stream flows through greater stream recharge.



Pollution: Natural habitats need protection from pollution caused by runoff from paved surfaces, pesticide and fertilizer pollution and uncontrolled access to sensitive habitats. The City can help reduce habitat pollution by using low pesticide and fertilizer management practices in parks, golf courses, cemeteries, etc. and utilizing periodic hazardous waste collection events to allow the public to dispose of toxic products.

Habitat Corridors: In the past, incremental development has resulted in the gradual fragmentation and/or degradation of natural habitats. Benefits from habitat enhancement are significantly increased when contiguous habitats are connected into corridors. Such corridors, particularly along waterways, encourage greater diversity while adding property value to adjacent properties.

The benefits of these more efficient habitat corridors include increased water infiltration into the soil; increased biological diversity and subsequent potential decrease in biological pests. Such benefits help to maintain the natural uniqueness of the Napa Valley and contribute to an improvement in the general quality of life for its residents. Two ways of establishing habitat corridors are: 1) developing intra- and inter-city habitat open space green belts on public lands and habitat open space easements on private land with the participation of the Napa County Land Trust; and 2) obtaining habitat open space easements.

Species Limitations: Habitats can also be enhanced by encouraging native varieties or equivalent plants adapted to dry, hot summers and wet winters. Also, particular attention should be paid to the riparian habitat along the Napa River and its tributaries to ensure that projects affecting the waterways (flood control, dredging, private development) do not compromise the ability to enhance and maintain healthy habitat.

Aquatic Recreation: There has been an increase of water-oriented recreational use (boating, water- and jet-skiing) on the lower Napa River (shallow draft limits such uses to about as far north as the Third Street bridge). As a result, there has been an increase in riparian and fish habitat exposure to environmental hazards such as accelerated bank erosion from strong wakes and fuel and waste pollution.

There is a need to increase the awareness level of those who use the Napa River for recreation. In general, recreational boating and fishing from boats is not compatible with water- and jet-skiing. An enforceable maximum speed limit of five miles per hour (the upper limit of recreational boating) north of the County's boat

launch at the end of Cuttings Wharf Road would effectively preclude incompatible watercraft uses like water- and jet-skiing.

For those boats using the Napa River, sensitive areas (e.g., nesting sites) and shallows need to be signed to warn boaters. Signage is also needed to warn of tidal fluctuations.

Boat use and storage are potential sources of pollution that can degrade habitat. Fuel and cleaning agents need to be kept a safe distance from the Napa River and septic waste needs to be properly disposed of in approved facilities.

GOAL NR-1 To manage the natural resources, wetlands and open space areas in and around the city to preserve and enhance plant and wildlife habitats.

POLICIES

- NR-1.1 The City shall protect riparian habitat along the Napa River and its tributaries from incompatible urban uses and activities.
- NR-1.2 The City shall identify existing wildlife habitat corridors and seek to protect them from being severed or significantly obstructed.
- NR-1.3 The City shall encourage the planting of native plant species in natural habitats.
- NR-1.4 The City shall review all future waterway improvement projects (e.g., flood control, dredging, private development), as well as all projects that are within 100 feet of the waterway, to ensure that they protect and minimize effects on the riparian and aquatic habitats. The City shall also encourage native plantings along the river and creek banks to stabilize the banks, reduce sedimentation, reduce stormwater runoff volumes, and enhance aquatic habitats.
- NR-1.5 The City shall pursue federal and state funding to restore and enhance wetland, riparian, and fish habitats.
- NR-1.6 The City shall require as a condition of approval that development provide protection for significant on-site natural habitat whenever possible.

- NR-1.7 During development review, the City shall endeavor to identify and protect significant species and groves or clusters of trees on project sites.
- NR-1.8 The City shall provide controlled access points in designated areas to prevent unrestricted public access to riparian habitat on public lands.
- NR-1.9 The City shall continue the existing program for hazardous waste collection events to allow the public to safely dispose of pollution-causing products.
- NR-1.10 The City shall pursue appropriate new management practices for reducing the impact of pollution from urban activities. *See Storm Drainage section of Chapter 4, Community Services.*
- NR-1.11 The City shall continue to enforce the Fire Prevention Abatement program to protect riparian habitat from destruction by fire.
- NR-1.12 The City shall provide for the use of permeable or semi-permeable materials for parking lots and other off-street paved areas.
- NR-1.13 The City shall require that the composting and recycling of landscape maintenance debris be located so as to avoid adverse impacts on wetland, riparian, and fish habitat.

- NR-1.C The City shall develop guidelines and regulations to encourage new development to protect and enhance on-site habitat and incorporate it into the project. The City will allow the creation of off-site habitat on public or private land as an alternative if it is demonstrated to be infeasible to incorporate significant habitat protection into plans.

Responsibility: Planning Department
 Time Frame: FY 05-07

- NR-1.D The City shall investigate the possibility of an ordinance to establish a maximum watercraft speed to protect against bank erosion from wakes, and shall develop informational/instructional signage for watercraft users.

Responsibility: City Council;
 City Attorney;
 Police Department
 Time Frame: FY 99-03

- NR-1.E The City shall continue to require implementation of sensitive construction practices that minimize erosion and sedimentation, protect native and other important trees, restrict riparian encroachment, and maintain unobstructed drainageways.

Responsibility: Planning Department;
 Public Works Department
 Time Frame: Ongoing

IMPLEMENTATION PROGRAMS

- NR-1.A The City shall review and modify as necessary existing regulations for the conservation and management of marsh, wetland, riparian, wildlife and plant habitats to ensure consistency with the General Plan.

 Responsibility: Planning Department;
 City Council
 Time Frame: FY 05-07
- NR-1.B The City shall continue to rezone properties in marsh, wetland, oak woodland and riparian habitats to be subject to the provisions of the Conservation and Safety Regulations of the City's *Zoning Ordinance*.

 Responsibility: Planning Department;
 City Council
 Time Frame: FY 05-07

RARE, ENDANGERED, AND THREATENED SPECIES

Federal and state Endangered Species Acts prohibit harming endangered and threatened plant, fish, and wildlife species. "Endangered" means in danger of extinction throughout all or a significant portion of the specie's range; the usual cause is loss of habitat. "Threatened" means likely to become endangered within the foreseeable future without special protection or management efforts. In California, the definition of these terms is limited to species or subspecies that are native to the state. Also, the term "rare" is applied in special cases when a species exists in such small numbers throughout its range that it may become endangered if its existing habitat is degraded.

The California Department of Fish and Game (DFG) and the U.S. Fish and Wildlife Service (USFWS) recognize another category called "sensitive" plant and animal species. These species are: 1) listed, or are candidates for listing, as threatened, endangered or rare; 2) depleted or declining in population; or 3) limited in distribution or of unique characteristics. The California Native Plant Society (CNPS) also has a rating classification for rare and endangered plants.

About 19 sensitive plant and wildlife species are known to occur in the Napa area and are described in the *Background Report*.

In addition to complying with state and federal species protection laws, City support is necessary for the preservation of unique and fragile biological environments such as vernal pools, wetlands, and record trees (height and/or width). Because some of these species and environments are located in the unincorporated area outside the RUL, city-county cooperation is needed for effective preservation.

part of the environmental review, the City shall determine whether the Department of Fish and Game, in implementing the California Endangered Species Act, and/or the United States Fish and Wildlife Service, in implementing the Federal Endangered Species Act, will likely require mitigation sufficient to avoid any net loss of habitat or of habitat value for such species. Where these agencies are likely to require such a level of mitigation, the City may formulate its own mitigation measures so as to minimize the extent to which those measures duplicate the efforts of these agencies.

IMPLEMENTATION PROGRAMS

NR-2.A The City shall update its CEQA Initial Study Form to include specific questions that trigger review of the potential for impact on endangered species for sensitive habitat known to exist in the City of Napa.

Responsibility: Planning Department
Time Frame: 98 – Ongoing

NR-2.B The City shall prepare and maintain a set of resource maps identifying known locations of rare and endangered species and sensitive habitats for staff use as a reference during the Initial Study review of individual projects.

Responsibility: Planning Department
Time Frame: 99 – Ongoing

GOAL To recognize and support the preservation of rare, endangered and threatened species and of other unique and fragile biological environments.
NR-2

POLICIES

NR-2.1 The City shall maintain information about the location of endangered, threatened, and rare species

NR-2.2 The City shall encourage the County to preserve unique and fragile biological environments on unincorporated lands outside the Rural Urban Limit.

NR-2.3 The City shall continue to refer development proposals in sensitive areas to state and federal wildlife agencies for review and comment.

NR-2.4 When acting as a project proponent or when reviewing proposals for private projects requiring discretionary review by the City, the City shall ensure that its environmental review documents identify any feasible means of avoiding any net loss of habitat or of habitat value for endangered, threatened, and rare species. Where necessary or desirable, such avoidance can be achieved through off-site mitigation measures. As

PUBLIC AWARENESS FOR NATURAL RESOURCE PROTECTION

Public understanding and support are essential to the City's ability to successfully manage its natural habitats. A community that has a good understanding of, and interest in, its natural habitat conditions is better equipped and more likely to manage them in a thoughtful, sustainable manner.

Encouraging and supporting the involvement of governmental agencies, local organizations and neighborhoods is integral to obtaining public support for preserving and maintaining our natural habitats. For example, the Napa County Resource Conservation District (NCRCD) has developed a watershed curriculum and land steward workshops as part of its Teaching

Resource Exchange. The watershed is used as a "living laboratory" to provide hands-on participation in watershed enhancement projects and long-term field studies. As part of this program, students from kindergarten through high school (and even adult education) receive credits for participation in projects like tree planting and stream habitat restoration.

The City has participated in some of these projects. For example, students in kindergarten and third grade worked with the Community Resources Department in an oak planting program for Alston Park.

Other ways that the City could generate and maintain community understanding and involvement are by providing the support (staff, facilities, funds) for educational and informational publications and displays. For example, the City provides a brochure on the Carolyn Parr Nature Museum and has installed wetland information exhibits in Kennedy Park. Also, City support and/or participation could include educational programs for homeowners in the proper use of fertilizers and pesticides in order to reduce the degradation of natural habitats; and using news releases and staff public speaking, etc. to inform the public about habitat preservation and enhancement issues.

The John F. Kennedy Park marsh enhancement is an outstanding example of a wetland habitat restoration that fulfills a regional need for interpretive public access to wetlands. This City-developed project includes a 13-acre seasonal wetland located behind the levees adjacent to the Napa River and a 4-acre duck pond and riparian area. Interpretive signs have been installed to explain about wetlands and their wildlife inhabitants.

The Connolly Ranch, acquired by the Napa County Land Trust in 1991, is located next to Westwood Hills Park at the intersection of Thompson Avenue and Browns Valley Road. The 12-acre site has been restored as an agricultural and environmental education center for the public. Also, the Land Trust has developed an agricultural and environmental appreciation program for elementary grade students in the Napa Valley Unified School District.

The Carolyn Parr Nature Center in Westwood Hills Park is sponsored by the Napa Valley Naturalists. The Center has a small museum with displays, exhibits and dioramas explaining about local plants and animals. Docents give lectures and nature lessons, especially for elementary school-aged children.

GOAL To educate and involve the public in the stewardship of the area's natural resources.
NR-3

POLICIES

- NR-3.1 The City shall continue its education programs for the public as part of the management program for its natural resources and encourage the use of the Napa County Resource and Conservation District "Owners Manual".
- NR-3.2 The City shall continue to participate in community habitat enhancement work programs in cooperation with the Napa County Resource Conservation District as funds and staffing permits.
- NR-3.3 The City shall support stenciling storm drains to identify the location of direct inflow to waterways from storm drains.

See also Chapter 5, Parks and Recreation, for a discussion of enhancing the natural environment in parks and along the Napa River Trail.

WATER QUALITY

The availability, quantity, and quality of water are vital to natural processes and human activities within any urban or rural area. Water is essential to the development of housing, commerce, industry, and agriculture, to recreation, and to the maintenance of high quality fish and wildlife habitats.

The Napa River, its tributaries, and the underlying groundwater aquifer are the major water resources in the Napa area. The city relies on surface water for its municipal water supply. The reservoirs and City water system are discussed in Chapter 4, Community Services.

Surface Water

The RWQCB has identified eleven beneficial uses of the Napa River that need to be protected: municipal, domestic and agricultural supply; fresh water replenishment; navigation; contact and non-contact water recreation; warm and cold freshwater habitat; wildlife habitat; preservation of rare and endangered species; and fish migration and spawning.

A RWQCB "water quality objective" is the minimum quality that must be met to support a designated beneficial use. Within the RUL, water quality objectives are mostly satisfied for the Napa River. The remaining problems are high winter coliform bacteria levels, excess nutrients and habitat loss which result from urban activities and agricultural practices.

Coliform Bacteria Pollution: During the winter rainy season, fecal and total coliform bacteria levels often exceed water contact recreation objectives for the Napa River. In 1987, the RWQCB recommended that recreation use of the river should be curtailed during the winter because of these conditions.

Because high fecal coliform counts coincide with rainfall events, it appears that the sources are failed septic tanks, runoff from cattle and horse pastures, and municipal storm drainage which contains pet wastes. However, much grazing land in the River's watershed has been converted to vineyard and urban uses, and as this trend continues agricultural animal waste pollution will be reduced.

The City does not currently monitor urban stormwater quantity or quality, unless under a project mitigation monitoring program. Although new subdivisions are conditioned to prevent stormwater runoff pollution, the effectiveness of permit conditioning is difficult to assess.

Urban runoff management regulations have been established by the RWQCB for implementation by local jurisdictions. The goal of the regulations is to prevent the discharge of pollutants into storm drains or directly into the River or its tributaries.

Excess Nutrient Pollution: Nutrients, which exacerbate algae growth, enter the river in urban and agricultural lands runoff which contains fertilizers. Significant sources are household landscaping, parks and golf courses.

Habitat Loss: Vegetation is often removed from riparian habitat during agricultural clearing, urban development and as a result of grazing. When vegetation is cleared or a waterway channel modified, such as urban waterway channelization or dredging in the Napa River, the transfer of various pollutants to the waterway is accelerated. Also, water temperatures generally increase which reduces dissolved oxygen levels and adversely affects cold water fish and other aquatic life.

Many streamside restoration projects have been initiated in the lower watershed. However, future urbanization and flood control activities have the potential for increasing removal of streamside vegetation.

Groundwater

Although ground water is a significant source of potable and irrigation water in Napa County, the City does not obtain its water supply from ground water sources and is an insignificant user of irrigation water from ground water sources.

Ground water quality data for the Napa Valley are limited and were mostly collected before 1973. A 1973 study of that data by the U.S. Geological Survey showed that the Valley's ground water was generally of good quality but with high levels of sodium, boron, chloride and iron.

In June 1991, the Regional Water Quality Control Board (RWQCB) conducted a random sample of 12 agricultural and domestic wells in Rutherford, Yountville, south Napa and the Carneros area. No pesticides, PCBs, chlorinated herbicides or extractable organics were detected. However, in the Northern Napa and Carneros ground water basins, the high levels of nitrates and metals exceeded drinking water standards and were considered to be "unsatisfactory" and/or "not recommended" for irrigation and industry.

Activities that can adversely affect groundwater can occur above or below ground. Above ground, disposal of solid and liquid wastes, horse, livestock and household pet excrement, fertilizers, pesticides, and sewage sludge disposal can infiltrate the groundwater table. Below ground, abandoned and water supply wells can act as conduits for pollutants into the water table.

It is important to maintain the groundwater recharge process. Recharge occurs by maintaining the floodplains, limiting impermeable surfaces, and by collecting runoff in detention basins and swales.

GOAL To protect and enhance surface water and ground water quality.
NR-4

POLICIES

- NR-4.1 The City shall support the maintenance and improvement of surface and ground water quality.
- NR-4.2 The City shall support the maintenance and improvement of water quality in the Napa River.
- NR-4.3 The City shall support the monitoring and assessment of the effects of dredging in the Napa River.

- NR-4.4 The City shall adopt standards and regulations for the reduction and/or elimination of nonpoint sources of pollution.
- NR-4.5 The City shall maintain and strengthen where feasible current efforts to eliminate point sources of pollution.
- NR-4.6 The City shall cooperate with Napa County to maintain the current program to identify and remove leaking underground storage tanks.
- NR-4.7 Encourage design of projects to avoid covering creeks and drainageways whenever possible.

See Policies CS-11.4 to 11.6 and Policies NR-1.9 to 1.13 for related water quality policies.

AIR QUALITY

Napa is located within the Bay Area Air Quality Management District (BAAQMD). The Bay Area is in attainment for all air quality standards except for the California standard for ozone. To achieve and maintain compliance with federal and state standards, the BAAQMD, together with the Association of Bay Area Governments (ABAG) adopted an *Air Quality Management Plan* (AQMP) in 1982, the purpose of which was to identify pollutant sources, quantify present emissions, estimate future emissions, and examine pollutant control strategies for the attainment and maintenance of state and federal standards. Complementing the AQMP is the *Clean Air Plan* which was prepared pursuant to the California Clean Air Act of 1988.

While the BAAQMD already imposes numerous regulations to deal with stationary and mobile sources of air emissions, there is much the City can do to benefit regional and local air quality. Policies throughout the General Plan seek to coordinate the planning of land use, circulation, housing, and other City policies in order to support regional efforts at improving air quality.

Land Use and Design Considerations

Land use decisions are critical to air quality planning because land use patterns determine transportation needs, and motor vehicles are the largest source of air pollution. The location, intensity, and design of land use strategies such as locating moderate or high density development near transit stations increase opportunities

for residents/employees to use transit rather than drive their cars. Similarly, design considerations such as orienting a building entrance toward a sidewalk and/or transit stop increase the attractiveness of walking and transit as an alternative to driving. Policies addressing land use and transit design issues are included in Chapter 1, Land Use, and Chapter 3, Transportation.

The location of a development project is a major factor in determining whether it will result in localized air quality impacts. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases. Impacts on sensitive receptors are of particular concern. Sensitive receptors are facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. However, all members of the population can be adversely affected by pollutants, toxic air contaminants, and odor and dust.

Air quality problems arise when sources of air pollutants and sensitive receptors are located near one another. Early consultation between project proponents and City staff can avoid or minimize localized impacts to sensitive receptors. Often, the provision of an adequate distance, or buffer zone, between the source of emissions and the receptor(s) is necessary to mitigate the problem.

Transportation

Future air pollutant discharges can also be reduced through the use of transportation alternatives to the personal automobile, including public transit, car pooling, bicycling, and walking. Chapter 3, Transportation, promotes the use of alternative forms of transportation.

Policies throughout the plan have implications for air quality. See Appendix E for a compilation of policies and programs relating to air quality.

GOAL To maintain acceptable levels of air quality in Napa.
NR-5

POLICIES

- NR-5.1 The City shall encourage the use of mass transit, bicycle facilities, and pedestrian walkways in order to decrease use of private vehicles and thereby reduce

emissions from mobile sources. *Refer also to transit and bicycle policies, T-5.1 to 5.17, T-6.1 to 6.11, and T-7.1 and 7.2.*

NR-5.2 The City shall encourage land use patterns and management practices that conserve air and energy resources, such as mixed use development and provisions for local-serving commercial uses adjacent to neighborhoods.

NR-5.3 The City shall promote energy conservation/energy efficiency improvement programs, which reduce energy demand from power-generating facilities which contribute to background levels of regional air emissions.

NR-5.4 The City shall, during discretionary review, require that development proposals comply with federal and state air quality standards, or make findings that the project has overriding benefits to the community that outweigh nonattainment of the standards.

NR-5.5 The City shall, during early consultation with project proponents, encourage project design that minimizes direct and indirect air emissions. Projects should consider the following air quality concerns:

- a. Land use and design measures to encourage alternatives to the automobile and to conserve energy;
- b. Land use and design measures to minimize exposure of sensitive receptors to odors, toxics, and criteria pollutants; and
- c. Applicable Bay Area Air Quality Management District rules, regulations, and permit requirements.

NR-5.6 The City shall continue and, where appropriate, expand the use of synchronized traffic signals on roadways susceptible to emissions improvement through approach control.