Chapter 10

Resource Conservation & Management

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Chapter 10 Resource Conservation & Management

A. Introduction

The most significant determinants of a community's identity and quality of life are its relationship to the surrounding natural environment, the quality and preservation of its biological and cultural resources, and the safety and well-being of its citizens. The City of Rio Vista recognizes that natural resources are limited and must be conserved wherever possible. These resources provide both tangible and intangible benefits. For example, the Sacramento River environs provide benefits to the City, not only in the diversity of species they support but also in their aesthetic appeal to residents and visitors to the community. The challenge for Rio Vista is balancing the preservation of its natural resources with continued urban growth and development. In addition, natural resources will need to be managed in a manner that allows resident use and benefit, while ensuring their long-term viability and availability.

These issues are addressed in this Resource Conservation & Management element, in accordance with the state-mandated conservation element. (*Issues associated with natural hazards, including seismic safety, subsurface hazards, and flooding, are included in the Safety & Noise element.*)

Policy and discussion areas are divided into two general components. The Natural and Cultural Resources component ensures (1) the conservation, development, and use of natural resources—including land, air, water, soils, natural gas, rivers, fish and wildlife, minerals, and other natural resources; and (2) the preservation of archaeological, historic, and visual resources.

The Resource Conservation & Management element directs the use of open space as a means of ensuring the continued availability of land for:

- Managed production for agriculture and mineral extraction.
- Seasonal drainage corridors and floodwater conveyance.
- Preservation of key hilltops and ridges.
- Retention of natural topography in the Montezuma Hills.
- Wildlife habitat.
- Enjoyment as a visual resource and aesthetic amenity.

Open space also is considered in this element as a means to preserve land that, if converted to urban uses, could compromise public health and safety. (*The economic benefits of production [e.g., agricultural and natural gas] on open space lands are discussed in the Economic Development element; open space for outdoor recreational use is discussed in the Open Space & Recreation element; and issues of public health and safety related to natural hazards are addressed in the Safety & Noise element*.)

B. Purpose and Authority

State law requires a General Plan to address open space and conservation issues, including the preservation, management, and efficient use of open space and natural resources. The State has defined open space lands as being essentially unimproved and devoted to the preservation of natural resources, managed production of resources, outdoor recreation, or public health and safety. Conservation efforts are intended to focus on the wise management of natural and manufactured resources in order to ensure their continued availability for use, appreciation, and enjoyment. The policy direction of this element responds to environmental laws that have been passed since the 1970s, including the Clean Water Act, state and federal Clean Air Acts, state and federal Endangered Species Acts, the California Native Plant Protection Act, the National Historic Preservation Act, the Integrated Solid Waste Management Act and Title 24 of the Uniform Building Code. In addition, numerous federal, state, and local regulations related to environmental health and safety will serve to implement the policies and programs that the City has established to manage and conserve its natural resources.

The broad scope of issues addressed in the Resource Conservation & Management element overlaps with other elements of the General Plan. This element should be used in combination with the other elements to ensure full implementation of all General Plan resource-related policies.

C. Rio Vista Principles: Implementing the Community Vision

The community vision and planning principles that most directly relate to the Resource Conservation & Management element are listed below.

PRESERVE RIO VISTA'S SENSE OF COMMUNITY AND SMALL-TOWN CHARACTER

- *Rio Vista should still be recognizable to today's residents 30 years from now. New development should reinforce the characteristics that make Rio Vista unique. Existing neighborhoods should be examined and strengthened.*

- *Farmland and nature are important elements of the community. A clear edge between urban development and agriculture should be maintained.*

- *The Sacramento River and related natural areas should be showcased and enhanced. These resources should be recognized as vital and essential to the community.*

PRESERVE AND STRENGTHEN THE DOWNTOWN, WATERFRONT, AND HISTORIC PLACES

- *The Sacramento River should be made an accessible resource for the enjoyment of Rio Vista residents and the general public.*

PRESERVE THE ENVIRONMENTAL RESOURCES THAT DEFINE RIO VISTA

- *New development should accommodate and showcase natural features as community amenities. New development should respect the contours of hillsides, valleys, and drainageways as important recognizable features of Rio Vista. Key hilltops to be preserved for public use and vistas should be identified.*

- *The community should seek to connect the existing town to new developments and the Sacramento River waterfront by an extensive and interconnecting trail system. The natural drainageways, hills, and sensitive vegetation areas should be the basis for designing such a system.*

ENSURE EASE OF MOBILITY FOR ALL RESIDENTS, VISITORS, AND BUSINESSES

- *The development of the connecting trail system suggested by the above principles should be pursued as a key circulation facility, as well as a natural resource opportunity.*

D. Setting

Natural, cultural, and visual resources contribute to the community's quality of life and sense of identity. The key components to be addressed in establishing a policy framework for resource conservation and management in Rio Vista include:

- Open space*
- Biological resources
- Water resources
- Air quality
- Soils
- Energy
- Solid waste reduction
- Historical and archaeological resources
- Visual resources

*Encompasses agricultural lands, mineral extraction lands, and natural habitats in the Sacramento-San Joaquin River Delta (Delta).

OPEN SPACE

Open space is discussed in several elements of the Rio Vista General Plan. The Open Space & Recreation element discusses open space in the context of the recreational opportunities it provides. The Economic Development element recognizes the importance of open space for the production of food and energy. The Resource Conservation & Management element discusses the function of open space in preserving natural and visual resources.

Open space plays an important role in the management of our water resources. By absorbing rainfall, either by transmitting it to plants or by recharging the groundwater supply, less runoff is created. As the amount of open space decreases and impervious surface area increases through development, so does the volume and velocity of stormwater runoff. As a result, increased flooding problems occur.

The natural vegetation in open space lands plays an important role in the purification of both air and water. The leaves of plants act as filters—intercepting and trapping some airborne and water-borne pollutants. Water taken from the ground is transpired through the leaves, and pollutants are captured in the process. Furthermore, during photosynthesis, plants absorb carbon dioxide and release oxygen, a vital process in producing fresh air. Natural vegetation is also important in providing food and habitat for animals, insects, and migratory birds. By providing these habitats, open space plays a vital role in stabilizing the entire ecosystem.

Open space also serves a valuable role in the protection of aesthetics and visual resources. As lands are converted to urban uses, the visual amenity that open space provides becomes increasingly valuable to the community. Whether it be in the form of developed parks, farmland, or expanses of natural vegetation, open space is a resource that must remain available for relief from the urban hardscape.

AGRICULTURAL LANDS

Delta agricultural lands were "reclaimed" through construction of levees and drainage of the marshy islands of the area. In less than 100 years (from 1850 to 1930), hundreds of thousands of acres of land went into agricultural production. Early crops were grains, fruits, and vegetables that were marketed in nearby cities. Early specialty crops included wheat, barley, beans, and potatoes. Later, asparagus, sugar beets, tomatoes, and celery grew in popularity. The Delta region now produces a variety of crops, including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, and vegetables.

In the recent past, thousands of acres of agricultural lands in the Delta region were developed for residential and other urban uses. Presently, Rio Vista's urbanized core is surrounded by agriculture, primarily grazing and "dry farm" lands on the north, west, and south. Some of these large tracts are permanently managed as pasture, and others are planted in annual crops such as wheat and corn. As with naturally occurring open space, these agricultural lands provide rich seasonal wildlife habitat. Thousands of acres of agricultural lands in the Delta are flooded after harvest to provide feeding and resting areas for local and migratory birds and other wildlife.

Agriculture also remains an important part of the community's well-being, both in terms of identity and economics. Most businesses in Rio Vista are supported in some fashion by agriculture. Many persons employed in agriculture live, purchase goods and services, and send their children to school, as well as participate in a variety of other community activities, in Rio Vista. Ranching operations purchase such "big-ticket" items as harvesting and planting equipment, cars and trucks, and bulk supplies. Rio Vista is now and should remain solidly linked to its agricultural heritage, natural surroundings, and landscapes.

Many counties, as well as some cities, have adopted codes or ordinances that require some level of disclosure or notification to property owners in areas near farm operations. These ordinances are based on the premise that agricultural operations supersede simple nuisance issues that typically would not be acceptable in urban neighborhoods. Rio Vista's General Plan does not propose a Right-to-Farm Ordinance because most undeveloped areas within the city limits have been removed from agricultural production or are bound by previous development agreements. Instead, proposed projects will be evaluated on a case-by-case basis to determine appropriate disclosures or notification to property owners in areas near farm operations. *(Note: The Land Use and Economic Development elements contain additional discussion of agricultural land use.)*

SACRAMENTO RIVER DELTA

The principal waterway in the Rio Vista area is the Sacramento River, which borders the City to the east. The river and Delta environs provide a variety of habitat types for wildlife in and around Rio Vista.

The Delta Protection Commission (DPC) was created in 1992 to protect and enhance the existing land uses in the Delta: agriculture, recreation, and wildlife habitat. The Commission was charged with preparation of a regional land use and resource management plan for the Primary Zone of the legal Delta, a portion of which lies within the City of Rio Vista and its planning area (*also see the Planning Constraints & Boundaries element*). The Solano County General Plan

supports the agricultural land uses in this area—this policy was underscored by the action of Solano County voters who, in 1984, approved a measure to prohibit land uses other than agriculture and open space in this region except by a vote of County residents.

One of the most noticeable changes in the Delta Primary Zone in recent years was the planting of about 4,500 acres of new orchards and vineyards. In addition, significant acreages in the Primary Zone have been purchased in the last few years by state, federal, and non-profit agencies for enhancement and management as wildlife habitat.

BIOLOGICAL RESOURCES

The Sacramento River Delta in and around Rio Vista is an area rich in biological resources. From shorebirds and wintering waterfowl to the varied fish and other aquatic species, the Delta is one of the City's most valued natural resources. The following sections describe the vegetation and wildlife resources in the vicinity.

VEGETATION

Outside the urban core, most of the planning area contains agricultural and vacant lands. Small amounts of herbaceous upland and some open water habitats may be found, as well as woody non-native vegetation. Sensitive habitat types found in the nearby Delta lands include marsh, riparian, and naturally occurring vernal pools. The following text describes the various habitat types found in the Delta region.

AGRICULTURE

The planning area contains large tracts of land in active agricultural use. These tracts include lands that are actively farmed or in a temporarily fallow condition (i.e., fallow for less than 2 years) and other lands that are left vacant for natural gas extraction. Predominant crops in the region are corn, wheat, milo, sunflower, and potato. A smaller portion of the agricultural land is in perennial crops, such as asparagus or vineyards. Much of the land around Rio Vista is permanently managed as pasture and grazed, primarily by beef cattle; however, land containing field crops is grazed seasonally by sheep for weed control and stubble reduction. Many low-lying agricultural areas are flooded during the rainy winter.

RIPARIAN HABITAT

Riparian habitat is associated with areas at the margins of perennial and intermittent streams, rivers, and other waterbodies with abundant soil moisture. Small areas of riparian habitat exist in the Delta, primarily in thin strips along waterways and levees. Some larger areas of riparian vegetation can be found around blowout ponds in the interior of Delta islands. Ecologically, riparian habitat is biologically very rich, supporting more species than most other habitat types due to the presence of water and a productive, nutrient-rich environment. However, historical loss of riparian habitat exceeds 90 percent statewide as a result of agricultural land conversion, urbanization, and construction of flood control and water conveyance systems. Many species dependent on riparian communities now are considered rare, and several of these are legally protected or are being considered for protection under state or federal endangered species laws. Because of the rarity of this habitat type and its importance biologically, riparian habitat is

considered sensitive. Common species in riparian habitat include willow, cattail, tule, blue elderberry, white alder, buttonbush, blackberry, and California rose.

Because weeds become established readily on Delta islands, farm management emphasizes "clean farming" practices that include annual disking of fallow fields and periodic clearing of riparian trees and shrubs from the interior of ditch systems. Thus, overhanging riparian vegetation is rare along ditches or canals on the interior of Delta islands but is more prevalent along many portions of sloughs and channels between Delta islands that are not riprapped.

MARSH

Marsh habitat is dominated by herbaceous plant species growing in inundated or saturated soil. Tidal marsh and non-tidal permanent and seasonal freshwater marsh occupy much of the Delta islands. Non-tidal permanent and seasonal freshwater marsh typically is associated with riparian and open-water habitats in relatively undisturbed locations. Seasonal non-tidal marsh supports some of the same species as permanent marsh. Seasonal non-tidal marsh occurs in low grassland areas and the perimeter of permanent marsh, where high winter and spring flooding occurs for 3-4 months yearly. Marsh habitat is similar to riparian habitat in terms of its location, species associations, and historical losses. Therefore, like riparian habitat, marsh habitat is considered a sensitive community. Dominant marsh plants include cattail, tule, bulrush, other emergent wetland species, and buttonbush.

VERNAL POOL AND VERNAL SWALE

Vernal pools are seasonally flooded depressions that pond water during the rainy season. They are internally drained and lack a drainage outlet. The pools usually are found on ancient soils with an impermeable layer, such as a hardpan, claypan, or volcanic basalt. The impermeable layer allows the pools to retain water much longer than the surrounding uplands. However, the pools are shallow enough to dry up each season. Vernal pools occur as isolated pools in annual grasslands or may be located in an intricate matrix within seasonal swales.

Vernal swales are natural, gently sloping broad drainages that convey runoff during, and for short periods after, rainfalls and may be connected with vernal pools. Both vernal pools and swales support a distinctive biota adapted to (1) periodic or continuous inundation during the wet season, and (2) the absence of either ponded water or wet soil during the dry season.

Vernal pools and swales support a high diversity of native annual hydrophytic plant species. Common dominants include goldfields, navarretia, prostrate pigweed, coyote thistle, woolly marbles, popcorn flowers, downingias, annual hairgrass, and common spikerush. Alkali pools may include additional dominants such as alkali heath, alkali-mallow, alkali weed, saltgrass, and introduced matgrass. Subalkaline flats support dominants such as saltgrass, *Chenopodium* species, and *Atriplex* species. Vernal pools often provide habitat for a number of rare endemic plant species, including legenere, dwarf downingia, and Colusa and Solano grasses.

Vernal pools and swales in the aquatic phase often support diverse and dense assemblages of invertebrates, particularly crustaceans and insects. Common crustaceans in vernal pools include copepods, seed shrimp, fairy shrimp, and tadpole shrimp. Diving beetles and fly and mosquito larvae are typical insects in vernal pools. Many invertebrates thrive in vernal pools because of

the absence of fish, which are their primary predators in other aquatic habitats. The abundance of invertebrates provides food for a variety of bird species, including cinnamon teal, mallard, and other waterfowl, as well as shorebirds and wading birds such as avocet, killdeer, and yellowlegs. Vernal pools provide important breeding grounds for several amphibians, including western spadefoot toad and California tiger salamander. Other species commonly encountered in the drying phase of vernal pools include the Pacific treefrog and common garter snake.

HERBACEOUS UPLAND

Annual grassland is found primarily on the broad, gentle interior slopes of the perimeter levees. Typical annual grassland species include canary grass, ripgut brome, mustard, and burr-clover. Levees may be grazed but are not cultivated.

Exotic perennial grassland is a habitat type with moisture conditions ranging between those of perennial grasses (e.g., Bermuda grass, perennial ryegrass, saltgrass, and Johnson grass) and annuals, but is not wet enough in the dry season to support typical wetland species (e.g., cattail, rush, dock, tule, and bulrush). More mesic (moderately moist) portions of the interior levee slopes may include this habitat type.

Both exotic marsh and exotic perennial grasslands tend to be ruderal plant communities that colonize previously disturbed sites, such as abandoned fields, mowed levees, or flooded corners of active crop lands. If not disturbed for several years, grasslands tend to be replaced by native, woody riparian or freshwater marsh species.

WILDLIFE

At least 230 species of birds and 43 species of mammals are found in the Delta (California Department of Fish and Game, 1987). Many of these species occur in the Delta only during fall and winter, when the Delta becomes home to an abundance of migratory and wintering wildlife. The most conspicuous groups of wintering wildlife include waterfowl, shorebirds, and raptors. Wildlife species and populations on different islands vary primarily according to the amounts and types of crops grown, amounts of natural habitats remaining, and extent of seasonal flooding of agricultural fields.

The Delta is a particularly important habitat for shorebirds. Thousands of shorebirds use fields flooded for weed control in late summer and fall, and fields that flood shallowly from seepage and rainfall in winter. The Delta also provides habitat for an abundance of wintering waterfowl that migrate down the Pacific Flyway each year. Large populations of ducks, geese, and swans inhabit agricultural fields and seasonal wetland habitats throughout the Delta. Concentrations of snow geese, tundra swans, white-fronted geese, pintails, and mallards are among the more visible species that are attracted to the Delta. Large amounts of waste grain and winter wheat provide foraging habitat, and seasonally flooded fields provide both food and roosting habitat.

The sandhill crane is one of the more conspicuous species that migrates to the Delta each year. Both lesser and greater sandhill cranes use traditional wintering areas in the Delta from October through February. The Delta also is home to an abundance of wintering raptors, including red-tailed hawk, ferruginous hawk, rough-legged hawk, white-tailed kite, American kestrel, sharp-

shinned hawk, Cooper's hawk, and peregrine falcon. During winter, raptors forage opportunistically throughout the Delta on rodents that become accessible because of flooded fields and other agricultural activities.

SPECIAL-STATUS FISH AND AQUATIC SPECIES

The Delta contains fish and other aquatic species that have been identified by state or federal agencies as species at risk. Chinook salmon, steelhead trout, green sturgeon, Delta smelt, longfin smelt, and splittail are present either year-round or seasonally. Some species, like the chinook salmon, steelhead trout, and green sturgeon, are seasonal; others, such as Delta smelt, longfin smelt, and Sacramento splittail, are year-round residents in the Delta. Other aquatic species that could inhabit the area include the Southwestern pond turtle and vernal pool fairy shrimp.

SPECIAL-STATUS PLANTS

Special-status plant species potentially occurring in the planning area are defined as at-risk species with known populations in or near the planning area, or species found in habitats identical or similar to those found in the planning area. The California Department of Fish and Game's Natural Diversity Data Base indicates that six special-status plant species are known to occur in the planning area. All are wetland-associated species from wetland habitats that occur along margins of large waterways or within the confines of the levee system (i.e., in-water islands or large remnant marshes). Reference "Appendix A of the General Plan Final EIR" for a list of the special-status plant species known or with the potential to occur in the planning area.

SPECIAL-STATUS WILDLIFE

Numerous special-status wildlife species are found in the Delta during fall and winter. Reference "Appendix A of the General Plan Final EIR."

WATER RESOURCES

The discussion of water resources in the Resource Conservation & Management element focuses primarily on water quality and groundwater recharge. (*Water supply and the City's role as a service provider is discussed in the Public Facilities & Services element.*)

Surface water serves many important purposes in both the natural and built environment. Beneficial uses of the Sacramento River in the Rio Vista planning area include:

- Municipal and domestic, industrial, and agricultural water supply.
- A navigable channel for large shipping vessels.
- Water sports and recreation.
- Aesthetic enjoyment.
- Groundwater recharge and freshwater replenishment.
- Preservation and enhancement of fish, wildlife, and other aquatic resources.

The beneficial uses of the underlying groundwater are municipal and domestic, industrial, and agricultural water supply.

Watersheds within the city limits are partially urbanized areas with large tracts of vacant land. Drainage in the undeveloped areas of the City is generally by sheet flow into various small swales and intermittent streams.

For the most part, measurements of water quality in Rio Vista indicate that no major sources of pollution are present. However, the City's wastewater treatment plant, which flows to the Sacramento River, exceeds capacity during extreme wet-weather periods. The plant currently is undergoing physical improvements to (1) improve plant reliability, and (2) expand the facility's capacity in order to fully accommodate the current wastewater flow conditions and the increases that are expected as a result of ongoing development. *(Note: A full discussion of the City's wastewater treatment facilities is found in the Public Facilities & Services element.)*

AIR QUALITY

Air is a critical environmental resource that must be protected. Rio Vista enjoys good air quality due to the Delta breezes and the community's relative distance from the large urban areas of the Bay Area and Central Valley. Nevertheless, without conscious efforts to achieve and maintain air quality standards, threats to the public health may result from degraded air quality. Degradation of air quality is caused, in part, by emissions of pollutants from motor vehicles, as well as by commercial and industrial development. Agricultural activities and wood-burning stoves also affect air quality.

Both the state and the federal Environmental Protection Agencies (EPAs) have established ambient air quality standards for six key air pollutants by which overall air quality is measured. These six pollutants are photochemical ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter 10 microns or less in diameter (PM_{10}), and lead.

High concentrations of ozone and carbon monoxide lead to harmful effects. Ozone diminishes lung function and leads to respiratory infections; carbon monoxide reduces the amount of oxygen reaching the heart, brain, and other vital organs. Seniors, children, fetuses, and persons with respiratory and cardiovascular diseases are especially sensitive to the effects of carbon monoxide and ozone.

The Sacramento Valley Air Basin, of which Rio Vista is a part, meets each of the ambient air quality standards except ozone (state and federal standards) and PM_{10} (state standards). Ozone forms when precursor pollutants (i.e., hydrocarbons and nitrogen oxides) react together in sunlight. Sources of ozone precursors include motor vehicles, petroleum and chemical industries, consumer products, and dry cleaning. From 80 to 90 percent of carbon monoxide emissions results from motor vehicles burning gasoline incompletely. The Yolo-Solano Air Quality Management District (YSAQMD) is the agency responsible for protecting human health and property from the harmful effects of air pollution. The YSAQMD has jurisdiction over the northeast portion of Solano County, from Vacaville on the west to Rio Vista on the south. The District is governed by an air quality management board composed of representatives from both the county boards of supervisors and the mayors and city council members from the cities within the District.

SOILS

Soil conservation is an important aspect of natural resource management—both during construction and after development. Consequently, Rio Vista soils are considered a community resource to be preserved. The U.S. Natural Resource Conservation District's (NRCS's) soils map of the Rio Vista quadrangle is shown in *Figure 10-1*.

Soil properties that are most limiting in the Sacramento River Delta include drainage, slope, shrink-swell potential, bank stability, and shear strength. The planning area is underlain by thick deposits of alluvial sediments. Near-surface deposits are generally dark-colored, often highly organic, and of mixed lithologic composition and origin. Recent sediments along the eastern margin of the Delta are derived mostly from metamorphic sources in the Sierra Nevada foothills. Sediments along the western edge of the Delta are derived from the uplifted Tertiary sedimentary rocks of the Coast Ranges. The deepest layers of the alluvial sediments are a complex mixture of coarse sand and gravel bedrock deposits, sand- and silt-sized overbank deposits, and silt- and clay-sized backwater deposits. Sedimentary bedrock underlies the alluvial sediments.

Soils in the planning area reflect its original land cover, supporting mostly tule marsh vegetation and riparian forest vegetation. Soil types include loams, clays, clay loams, silty clay loams, fluvaquents, and mucks. Mineral soils cover most of the upland portions of the Delta and the lowland portions are dominated by peat soils. These soils are generally deep (up to 60 feet) and very poorly drained.

ENERGY

Rio Vista is in Pacific Gas and Electric Company's (PG&E's) Sacramento Division of Area 6. Since the California legislature approved deregulation of the utilities in 1996, PG&E has divested itself of its production facilities and now purchases electricity for distribution through the Independent Systems Operator (ISO). Power is transmitted to Rio Vista by PG&E transmission lines that run from the Brighton substation in Sacramento to the Grand Island substation. Large transformers at the Grand Island substation then step the electricity down from 115,000 volts to 21,000 volts for local distribution and use. PG&E operates 12-kilovolt (kV) electrical distribution lines to serve residences and farm operations. These lines typically run on wooden utility poles.

PG&E is also the distributor of natural gas through lines that run through central California. Approximately 80 percent of existing demand in Rio Vista is from homes. Commercial development and industry each account for 10 percent of the City's demand.

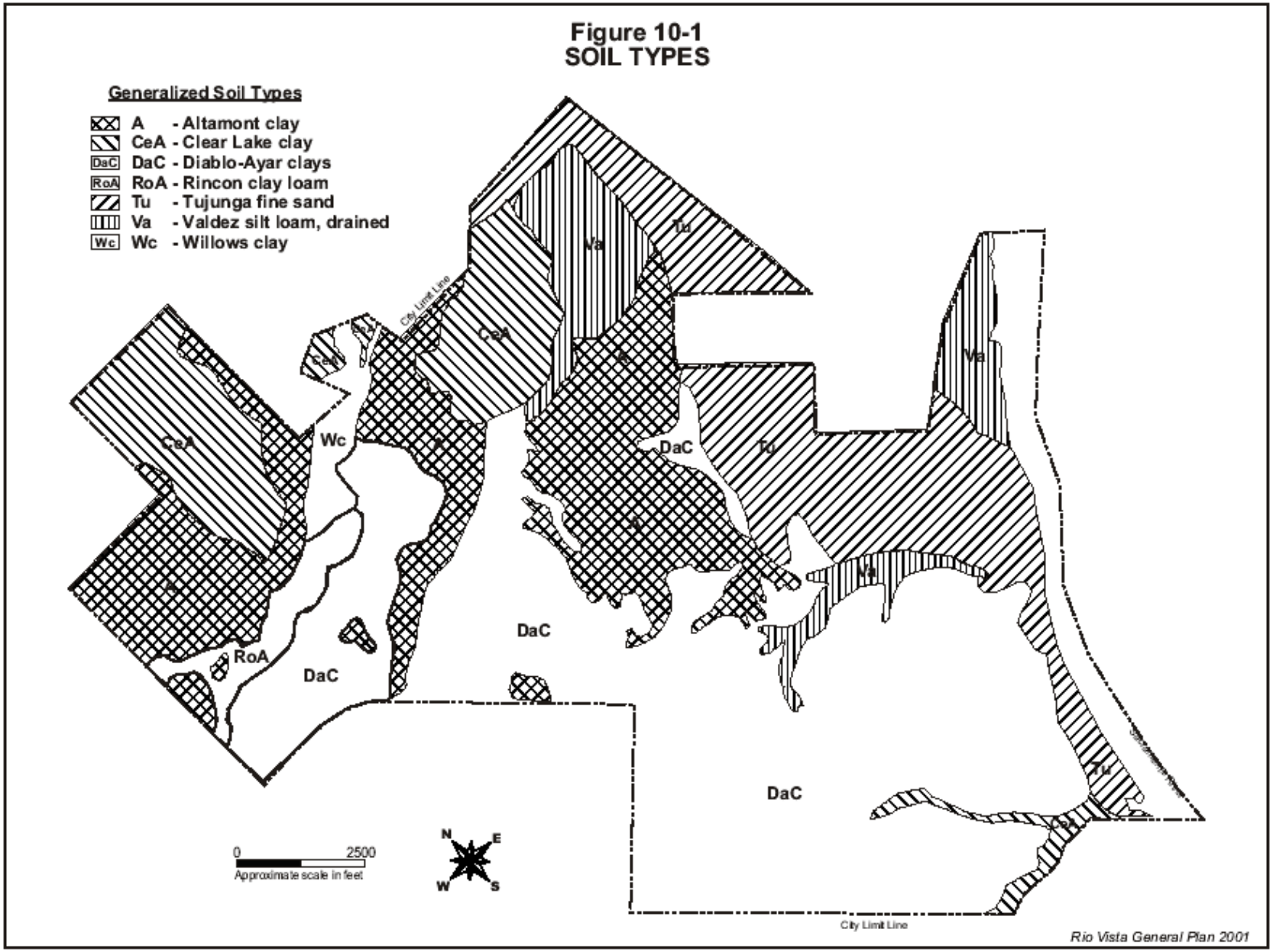
Figure 10-1
SOIL TYPES
Generalized Soil Types
A - Altamont clay
CeA - Clear Lake clay
DaC - Diablo-Ayar clays
RoA - Rincon clay loam
Tu - Tujunga fine sand
Va - Valdez silt loam, drained
Wc - Willows clay
City Limit Line
CeA
Wc
RoA
DaC
Tu
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2500
Approximate scale in feet
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City Limit Line
Rio Vista General Plan 2001

Rio Vista contributes to the natural gas supply with its gas reserves in various locations throughout the City. Gas-gathering facilities in Rio Vista place most of the natural gas in lines directed toward Stockton and Lodi.

SOLID WASTE REDUCTION

Solid waste is any unwanted or discarded material that is not a liquid or a gas. Common solid wastes are paper products, metals, glass, plastics, cloth, food scraps, rock, soil, yard waste, and wood. In Rio Vista, businesses generate 30 percent of the waste and households generate 70 percent. Since much of this material is recyclable, conservation efforts to reduce solid waste and landfill volumes are an important component of this General Plan.

Currently, a private waste collection company (Rio Vista Sanitation Service [RVSS]) is authorized to provide residential, commercial, and industrial solid waste collection and disposal services to the City of Rio Vista. Waste is collected and transported in compliance with county and state regulations governing solid waste disposal to the Contra Costa Waste Service Transfer Station in Pittsburg, where loads are sorted through and recyclable material is removed.

The residual waste is loaded in transfer trailers and taken to the Potrero Hills Landfill (PHLF) in Fairfield, operated by Potrero Hills Landfill, Inc. The current capacity of PHLF is 21 million cubic yards. The estimated time of closure ranges from 15 to 57 years, depending on the annual fill rate. There is expansion potential if needed in the future.

Several diversion programs currently operate in Rio Vista. RVSS works specifically with the Rio Vista High School Recycling Center. RVSS provides containers for newspaper, cardboard, glass, aluminum, and plastic. The drop-off location is at the Rio Vista High School parking lot. The material is hauled to Mt. Diablo Recycling in Concord for processing. Information regarding other recycling programs and diversion rates can be obtained from the City of Rio Vista.

HISTORIC RESOURCES

The Delta possesses a unique blend of historic and archaeological resources. Until the Gold Rush of the 1840s and 1850s, the Delta was a network of waterways and natural islands of sand and peat. The levee system that evolved between the 1850s and the present represents a unique human-made landscape that contributes to the rich historic heritage of the Delta region.

The growth of the Central Valley economy, prompted by the discovery of gold, brought thousands of new settlers to the region in the mid-1800s and dramatically increased the demand for agricultural land. The water cannon process of gold extraction contributed to the transformation of the ecosystem and, in combination with levee construction, eliminated most of the marshlands before 1900.

In 1857, when Rio Vista was established in its current location, levees were under construction along the river in many locations throughout the Central Valley. These levees opened up the vast, rich agricultural lands around Rio Vista and enabled this small river landing settlement to grow and prosper. *(See the Introduction for a more detailed discussion of the community's history.)*

The Rio Vista Museum on Front Street houses most of the documentation of Rio Vista's history. Numerous books have been written about this small river town; local efforts are now being made to correct, update, and expand historical accounts of the area. While the community is rich in its history—with numerous homes and commercial buildings dating back to the mid-nineteenth century and the settlement of Chinese immigrants—there is no historic district in Rio Vista, nor do any programs exist to promote or preserve its historic structures or sites. The Rio Vista Museum, which operates under a Board and is funded through donations and memberships, functions as the primary local source for historical and genealogical data. Local residents also serve as authoritative, albeit unofficial, sources of historical and cultural information.

VISUAL RESOURCES

Visual resources are both varied and abundant in and around Rio Vista. Those approaching town from the west enter the Rio Vista city limits miles before they experience the historic flavor of its downtown core, where vast expanses of agricultural lands intermingle with new residential development and vacant grasslands are dotted with natural gas production wells. Just beyond this view corridor—south of Highway 113—are the rolling Montezuma Hills, with undulating topography that creates spectacular vistas. On the northern edge of the City, the Delta marshlands provide yet another viewing opportunity. Travelers from the east enter the City's gateway at the Rio Vista Bridge, with panoramic views extending the length of the town from the Deep Water Channel to the marina. Primary viewing opportunities in Rio Vista are intermittent, from vantage points along Highway 12 that offer sweeping vistas of the Montezuma Hills to the Sacramento riverfront from the Rio Vista Bridge south to Sandy Beach.

E. Outlook

This Resource Conservation & Management element will be used as a guide to direct future actions by the City and the development community in their treatment of natural, cultural, and visual resources. Specific resources of concern include open space, biological resources, water resources, air quality, soils, energy, solid waste reduction, historic resources, and visual resources. This element focuses on open space as a means of ensuring the continued availability of land for (1) managed production for agriculture and mineral extraction, (2) seasonal drainage corridors and floodwater conveyance, (3) preservation of key hilltops and ridges, (4) retention of natural topography in the Montezuma Hills, (5) wildlife habitat, and (6) enjoyment as a visual resource and aesthetic amenity

SENSITIVE LOCAL RESOURCE AREAS

The General Plan identifies several significant areas in the Rio Vista planning area where one or more of the resources identified above may be concentrated or that may feature several of these resources. Throughout this element and others in the General Plan, these significant areas are referred to as "Sensitive Local Resource Areas" (SLRAs). SLRAs can be defined as "areas possessing one or more natural resources that, when taken together, create a feature that is uniquely representative of Rio Vista's character." The SLRAs are mapped in *Figure 10-2* as areas that are to be preserved to the extent feasible during the course of development. The SLRA boundaries map is not intended to be exact; the map is drawn in general form to serve as an overlay, to guide the project design and development phases in affected areas.

The Sensitive Local Resource areas illustrated in Figure 10-2 can be separated into two general categories; low areas comprised of minor water courses known as drainageways or corridors, floodplain and marsh or wetland areas; and the key landforms, which include specific hilltops, ridgelines, valleys and the**ir** adjacent slopes, characteristic of the northern Montezuma Hills. The low **areas** are discussed and defined in the Water Resources section of Outlook; policies related to these are found under Goal 10.5 (protection of water resources). Key landforms (hilltops, ridgelines and valleys) are discussed in the section of that name under Outlook; related policies are found under Goal 10.11. Figures 5-3 and 10-2 show the general locations of both low areas and the key landforms that have been identified as particularly prominent or important to retaining the character of the community's context and setting**.** Figures 10-2 and 5-3 are not intended to delineate exact locations.

OPEN SPACE

Preservation of open space for myriad uses is a basic goal of the Rio Vista General Plan. While the City's intent for use of open space is discussed in detail in the Open Space & Recreation element, the policies of this element and their supporting programs will help to preserve and enhance open space as natural habitat. Implementing these actions will:

- Ensure that sensitive biological areas are properly conserved and managed with future development projects.

- Contribute to the preservation of the City's archaeological, historic, and visual resources.

Growth pressures from the Bay Area and plans for large-scale development within the city present challenges in achieving these objectives. The potential loss of open space areas to development pressures represents a concern that is addressed in the policies and implementing actions of this element. The City will be challenged in balancing resource preservation with the development needed to sustain a healthy and prosperous community. Preservation efforts will first focus on avoidance, with compensation a less desirable approach to be used when avoidance is not feasible. The overall goal is to minimize loss of valuable and significant natural resources.

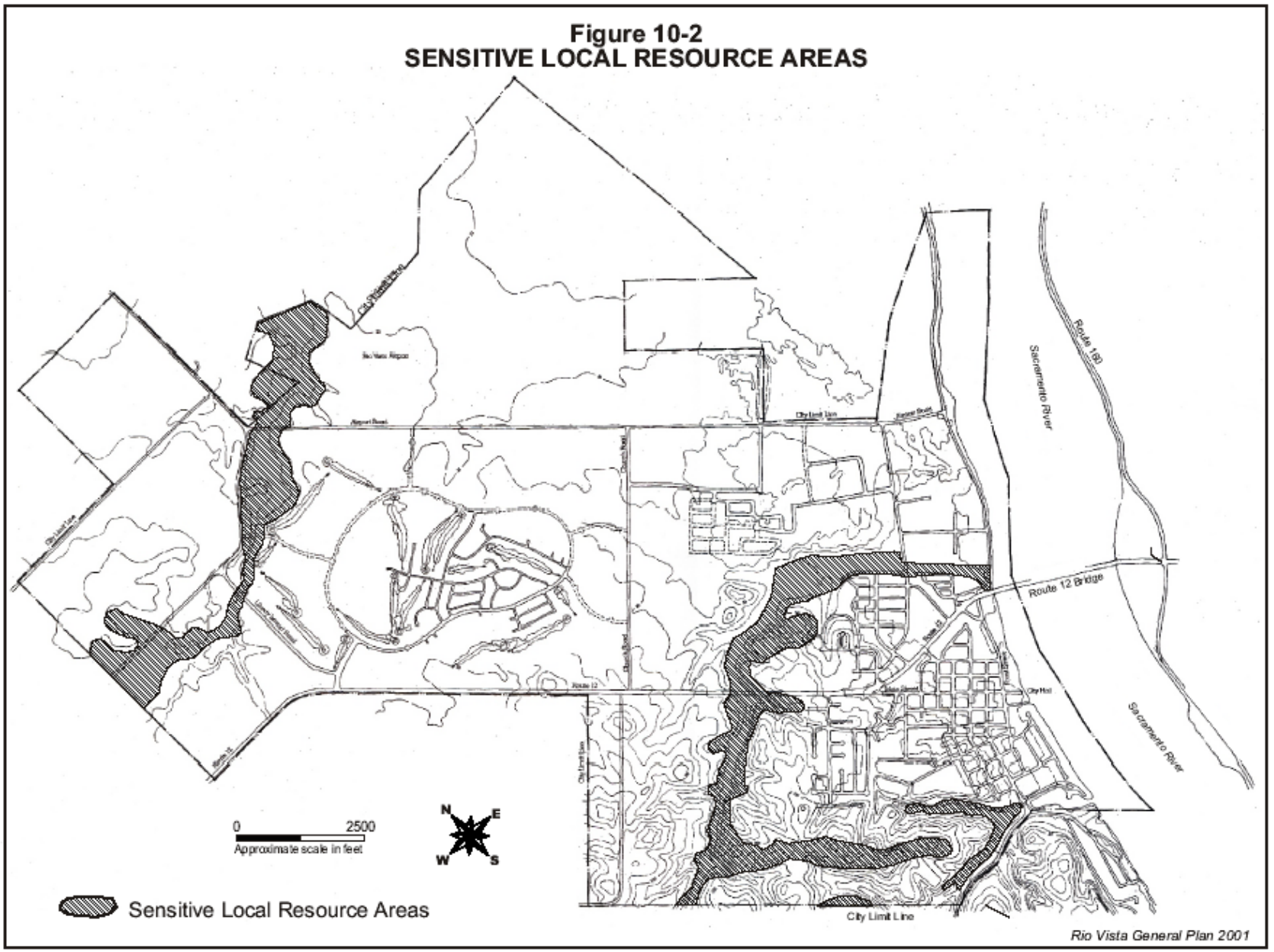


Figure 10-2
SENSITIVE LOCAL RESOURCE AREAS
Sacramento River
Route 12 Bridge
Sacramento River
City Limit Line
0
2500
Approximate scale in feet
N
E
W
S
Sensitive Local Resource Areas
Rio Vista General Plan 2001

Policies directed at the preservation of open space are intended to guide rather than hinder the development process. Toward that end, the General Plan provides key tools, such as the SLRAs map, Sensitive Habitat Buffer Guidelines, and Resource Evaluation Criteria, to facilitate the design and development of projects that are in keeping with the Rio Vista Principles and goals of this element.

AGRICULTURAL LANDS

Although Rio Vista has not designated any of its lands in the city limits for agricultural uses, preservation of farmland is a critical component in maintaining its rural, small-town character. Rio Vista supports agriculture outside the municipal boundaries. As the City develops and expands, it will continue to promote agricultural conservation practices and will oppose premature or inappropriate efforts to intensify land uses in adjacent unincorporated areas. The General Plan policies are intended to solidify this stance and provide implementing actions that will encourage agriculture to continue right up to the urban edge.

General Plan policies in all elements with an agriculture component were developed under the assumption that Solano County's Measure A (or its equivalent) will remain in place during the life of this General Plan. That is, lands outside and adjacent to the city limits will remain in agricultural production and any urban uses will be directed to areas within municipal boundaries. With this County policy of keeping unincorporated lands around Rio Vista in agriculture, the need for an urban separator within the city limits will not be needed and the City will be able to maximize the use of land to where it abuts County lines. The City will encourage compact design and development of traditional neighborhoods in pedestrian-friendly environments throughout the City. The City will need to closely monitor land use decisions in the County, to ensure that this policy remains in place. Rio Vista will actively oppose any efforts to intensify land uses in the vicinity of the City.

In cases where agricultural buffers are required for health and safety purposes, the City will encourage the use of easements, density transfers, or binding agreements between developers and agricultural landowners to establish sufficient transition areas between urban and agricultural land uses. Such implementation measures are fully described in Section F of this chapter. The need for buffer areas to separate urban development from agricultural lands may vary from project to project and from lot to lot, depending on the adjacent agricultural use. The General Plan adheres to the agricultural buffer standards, according to class, as established by the State of California and used by Solano County.

SACRAMENTO RIVER DELTA

While changes in land use from agriculture are proposed on several Delta islands in the Primary Zone, no land use changes are proposed on DPC lands in the Rio Vista planning area. Loss of steady water supplies for Valley farmers will tend to make Delta lands with their riparian water rights more valuable for agriculture. New markets to sell crops and new crops, including crops to burn as energy sources, will continue to keep agriculture an important land resource in the Delta and in California.

Since the DPC is a state agency, the City's General Plan policies must be in accordance with this agency's policies for protected lands within Rio Vista's planning boundaries. Agricultural operations, natural resource protection, water-related recreation, and public facility uses will remain the only allowable uses in the Delta Primary Zone under the new General Plan.

BIOLOGICAL RESOURCES

Development under buildout of the General Plan would result in the conversion of large tracts of undeveloped land that could have the potential to adversely affect sensitive habitat. Infill development in more developed areas of the City is not expected to adversely affect important biological habitats or plant species.

This element provides a Sensitive Local Resource Areas Map to provide a starting point for site planning as large development projects are proposed. While this map is intended to serve as a general guide in identifying SLRAs, site-specific biological resource evaluations also will be required with each proposed project when it has been determined through the use of an initial study or environmental checklist that the project could result in potentially significant impacts to sensitive biological resources. Implementing actions, such as establishing Sensitive Habitat Buffer Guidelines, updating the Zoning Ordinance, and open space requirements, are some of the ways in which developments will be able to mitigate any potential impacts.

WATER RESOURCES

The Sacramento River and inland drainages are among the most significant and valuable of Rio Vista's natural resources. Development adjacent to streams will need to be designed, constructed and maintained to avoid adverse impacts on riparian vegetation, river bank stability, and water quality to the maximum extent feasible. The City's policies in this regard apply to all watercourses, wetlands, and drainage corridors shown on the SLRAs Map *(Note: In this element, "drainage corridor" is used as the collective term for drainageways, minor watercourses, and intermittent and perennial streams; these corridors include the smallest tributaries in a river basin.)*

The City strengthens its commitment to water conservation and water quality for both surface water and groundwater through its General Plan policies. Implementing actions emphasize the use of buffers and proper design to minimize urban runoff and pollutants entering waterways. (*Water supply policies are discussed in the Public Facilities & Services element.)* These are further defined as intermittent streams or watercourses shown on USGS topographic maps; there are two such features contained within the areas shown in Figure 10-2: the "Industrial Creek" intermittent stream bed and adjacent floodplain that flows through the main "valley" that bisects the Esperson and Riverwalk properties; and the Watson Hollow stream basin that flows through the Brann, Gibbs and City airport properties.

In addition to land use considerations, key implementing actions to protect water resources involve the use of setbacks, best management practices (BMPs) (e.g., grading, drainage, and erosion control), and site design. The City will encourage the use of natural stormwater drainage systems to preserve and enhance existing natural features.

AIR QUALITY

Buildout under this General Plan will result in a substantial increase in vehicle emissions, as a direct result of population growth. Regional growth will continue to negatively affect air quality. Rio Vista has defined its role in the attainment of state and federal air quality standards of the Sacramento Valley Air Basin through its policies and programs. Land use patterns and the General Plan's Community Design Guidelines (*as part of the Community Character & Design element*) will directly benefit the City's air quality. The emphasis on traditional neighborhood design and the creation of a pedestrian-friendly environment are expected to decrease the amount of local automobile travel and vehicle emissions. In addition, the Plan's guidance with regard to site preparation and construction activities, the use of trees and vegetation for air contaminant reduction, and cooperation with the YSAQMD will further serve to reduce the adverse impacts of growth on air quality. (*Additional implementing actions relating to air quality are discussed in the Circulation & Mobility element*.)

SOILS

Development under buildout of this General Plan will significantly disturb soils. Policies and implementing actions in this element are intended to preserve or minimize disturbance to soils, primarily through the use of sound grading and erosion control techniques. The General Plan policies rely on local ordinances and the BMPs recommended by the NRCS as the primary guidelines for grading and erosion control measures. *Figure 10-3* illustrates the preferred method for cuts and fills.

In addition, knowledge of soils limitations and their suitability for development will help to conserve this limited resource and determine proper land use. The soils map on *Figure 10-1*, combined with the USDA Resource Conservation District's *Soils of Solano County*, define the characteristics of soils in Rio Vista; this information can be applied to constraints analyses for proposed development.

HILLTOPS, RIDGELINES, VALLEYS AND SLOPES

Rio Vista's location in the Montezuma Hills, adjacent to the Sacramento River, is a unique feature of the city's character. The Montezuma Hills offer outstanding views of the existing city, the Sacramento River, and the regional agricultural landscape. Low-lying areas that include drainage corridors (intermittent streams), wetlands and floodplains, absorb storm water runoff and help to alleviate or reduce flooding. Figure 10-2, Sensitive Local Resource Areas and Figure 5-3, General Locations of Key Hilltops, Valleys and Ridgelines, identify the sensitive resources that require special resource conservation and management policies.

The preservation of the sensitive hilltops, ridgelines and valleys accomplishes several resource conservation and management objectives. The hilltops, ridgelines and the adhacent slopes, define the natural character of the Montezuma Hills and provide for long views to the regional landscape. When viewed from the existing city, they provide a visual link and connection to the natural character of this unique environmental feature. When in the hills, the hilltops and ridgelines offer the potential for views to a variety of urban and_natural

features. Taken together, this perspective is one of the key defining elements of Rio Vista's sense of place, its connection to its surroundings and its definition of itself as a community.

The valleys and drainage corridors are a significant component of the structure of the Montezuma Hills, and are integral to the surface run-off that feeds the wetlands located at the low end of this sensitive resource area. The valleys also offer the potential for an integrated public open space and trail system that can link the majority of the developing lands immediately contiguous to the existing urban core.

The hilltops, ridgelines and valleys offer a variety of outstanding community benefits as the city develops adjacent to these sensitive environmental areas. The preservation of the significant natural functions of these resources presents a unique opportunity for public benefit, access and enjoyment that is otherwise impossible to create.

Goals, policies, and implementation measures, including design criteria, that relate to these key resources and the opportunities they represent, are stated mainly in two Elements: Chapter 5, Community Character and Design; and this Chapter 10, Resource Conservation and Management.

VISUAL RESOURCES

The City of Rio Vista will use the tools provided in this General Plan to retain its small-town character in what is now a desirable rural setting. In an effort to avoid generic suburban architectural styles, the policies and implementing actions in this element seek to preserve open space areas and views as an important feature of the community. Together with the design guidelines in the Community Character & Design element, the policies and implementing actions in this element will help to further strengthen the visual interest of the city.

The gateway areas are visual focal points for those entering the city on Highway 12. Buildout under this General Plan will bring substantial new development along the highway—portions of which are within highly sensitive viewing corridors. Consequently, proper siting and design of development projects in these areas are critical to maintaining a desirable aesthetic quality in these areas.

Development should be sensitive to the key natural features of the area, including ecological systems, vegetative communities, mature trees, watercourses, land forms, archaeological and historical resources, and architecturally significant structures. Proposed projects should identify and conserve special areas of high ecological sensitivity throughout the City—for example, key hilltops, riparian areas, and views of the Sacramento River waterfront. By respecting and preserving important natural resources and visual character, development may serve as an asset rather than a detriment to the community.

ENERGY

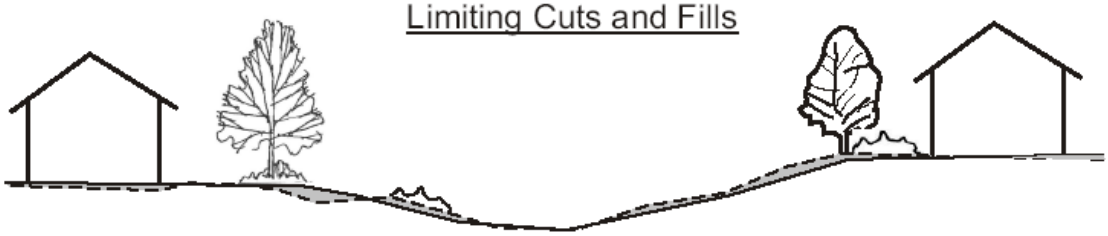
Californians have become more energy conscious since the energy crisis in 1972. The advent of deregulation, rapidly escalating cost of energy, and ever-decreasing availability of fuel sources have prompted government agencies to conserve energy and look for alternatives to the use of non-renewable resources. Strategies used by state and local communities include improving the efficiency of transportation systems, replacing fixtures that use a lot of energy with newer and more efficient equipment, and promoting recycling. (*These strategies also are discussed in the Circulation & Mobility element and in other sections of this element.*)

Communities throughout the state are presently experiencing "rolling blackouts" as a result of the imbalance at certain times between the supply of and demand for electricity. The ISO, which serves as a power brokerage, operates the State's electricity power grid and tells the distributors of electricity when they need to transfer load to PG&E.

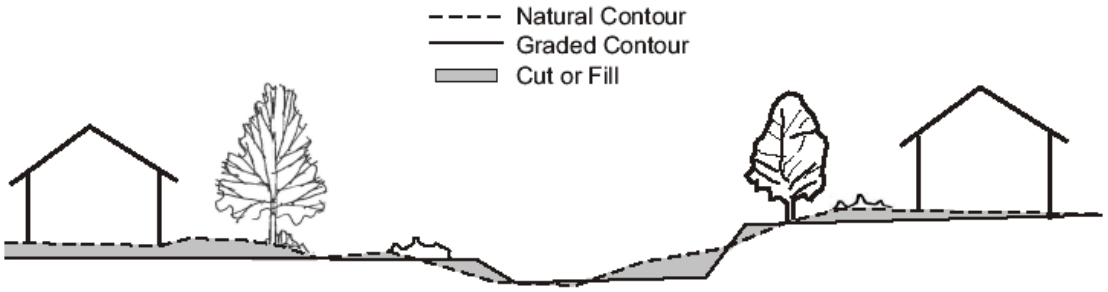
As electricity demand continues to outstrip the available supply in California, Rio Vistans will need to change the way they use and manage limited power resources. Reports from the ISO indicate that statewide energy conservation is significantly reducing the demand. Until additional or alternative power generation sources come online, energy conservation will become increasingly important to the community.

Figure 10-3
GRADING GUIDELINES

Limiting Cuts and Fills

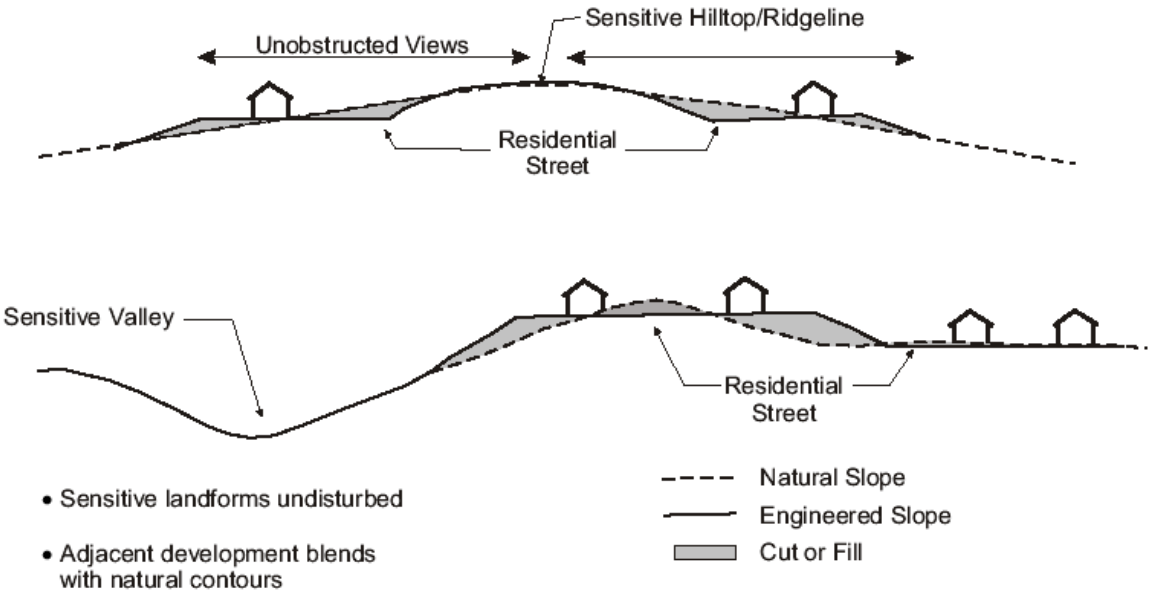


Preferred Method: Limit cuts and fills to maintain natural contours to the greatest extent feasible.



Discouraged Method: Excessive cuts and fills disrupt the site's natural contours.

Slope Treatment



- Sensitive landforms undisturbed
- Adjacent development blends with natural contours

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There is a potential for utilizing biofuels from the Delta to power a generating plant in the vicinity. Current Rio Vista demands are about 4-5 megawatts; future demand will grow to about 20 megawatts at today's energy usage rates. If feasible, a biofuel plant might provide a large portion of Rio Vista's demand or perhaps even excess capacity. Various solid wastes might also be used for co-generation.

SOLID WASTE REDUCTION

The cities and County of Solano have established goals and policies for solid waste reduction and increased use of secondary (recycled) materials. These goals and policies, which are contained in the *Solano County Countywide Integrated Waste Management Plan* (Environmental Science Associates, 1995), include measures for transforming the current system of producing, consuming, and disposing of material goods to a new system that places greatest emphasis on reducing the generation of solid waste at the source of the generation; secondary emphasis on recycling or composting the maximum feasible amount of the solid waste that is generated; and finally, disposing of the residue that cannot be reduced, recycled or composted in sanitary landfills that meet current regulatory design criteria for environmental protection.

These goals include the reduction of the amount and hazard of special wastes generated. Maximizing recycling, reuse and composting of special waste, and ensuring environmentally safe disposal of special waste that cannot be reused, recycled or composted is an integral part of this program.

Another goal of the plan includes increased use of secondary materials. The *Solano County Countywide Integrated Waste Management Plan* states the intent of this interjurisdictional effort to strengthen markets for secondary materials by continuing to place emphasis on front-end (source-separated) management methods that produce the highest quality, most marketable materials, and by increasing local markets for locally produced materials.

The City of Rio Vista will continue to work with the cities and Solano County to achieve these stated goals. Future development within the planning area is not expected to affect the ability of the City or its solid waste disposal service provider, Rio Vista Sanitation Service (RVSS), to continue their part in implementing solid waste reduction programs.

HISTORIC RESOURCES

Rio Vista's historic resources continue to play a vital role in maintaining the community's character. The city's rich historical context needs to be called out and preserved for future generations. The City's overall preservation objectives are to identify, protect, and encourage preservation of Rio Vista's historic and cultural resources throughout the City. This element establishes the policies and implementing actions to guide the City's achievement of its preservation objectives.

Restoration of historic buildings to meet modern building codes (i.e., the Uniform Building Code, the Uniform Fire Code, and the Uniform Plumbing Code) can be too costly for property owners. In addition, some alterations required by these modern codes could detract from the historic aspects of the structures. Therefore, the City will encourage property owners to pursue historic designation for their structures and sites under federal, state, or local authority. Such a

designation would enable the property owner to implement alternative building regulations for the rehabilitation, preservation, restoration, or relocation of structures designated as qualified historic buildings, as allowed by the State Historical Building Code (Title 24, Part 8).

F. Goals, Policies, and Implementing Actions

This section sets forth goals and policies to:

- Direct how water and air quality will be improved.
- Direct how natural, cultural, and visual resources will be preserved, enhanced, and managed.
- Establish the City's approach to addressing natural hazards in a manner that will ensure the public's safety.

The implementing actions associated with each policy are fully described at the end of this chapter.

NATURAL AND CULTURAL RESOURCES

OPEN SPACE

GOAL 10.1 TO PRESERVE, PROTECT, AND ENHANCE AN INTERCONNECTED SYSTEM OF SIGNIFICANT OPEN SPACE AREAS, INCLUDING SENSITIVE LOCAL RESOURCE AREAS.

Policy		Implementing Action	
10.1.A	The City shall ensure that the development process respects the unique characteristics and functions of Sensitive Local Resource Areas (SLRAs). The preferred treatment is first, avoidance of disturbance; second, on-site restoration; third, in-kind restoration; then, other approaches or mitigation.	*RCM-1* *RCM-2* *RCM-6* *RCM-7* *RCM-8*	*Sensitive Habitat Buffer Guidelines* *Fees, Dedications, and Easements* *Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map* *Development Review*

Policy		Implementing Action	
10.1.B	The City shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually sensitive areas, such as hillsides and ridges, and along important transportation corridors (as shown in the Sensitive Local Resource Areas shown in *Figure 10-2*).	*RCM-1* *RCM-2* *RCM-3* *RCM-4* *RCM-5* *RCM-6* *RCM-7*	*Sensitive Habitat Buffer Guidelines* *Fees, Dedications, and Easements* *Community Design Guidelines* *Natural and Cultural Resources Inventory* *Public Awareness/Education Programs* *Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map*
10.1.C	The City shall require that new development be designed and constructed to preserve the following types of areas and features as open space to the maximum extent feasible: • High erosion hazard areas • Scenic and trail corridors • Streams and riparian vegetation • Wetlands • Drainage corridors • Other significant stands of vegetation • Wildlife corridors • Key hilltops • Views of the Sacramento River • Any areas of federal, state or local significance • Sensitive Local Resource Areas shown in Figure 10-2	*RCM-2* *RCM-4* *RCM-6* *RCM-7* *RCM-8* *RCM-9* *RCM-10*	*Fees, Dedications, and Easements* *Natural and Cultural Resources Inventory* *Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map* *Development Review* *Best Management Practices* *Resource Maintenance and Management Programs*
10.1.D	The City shall recommend levels of preservation and protection based on the inherent qualities, capabilities, and limitations of undeveloped sites.	*RCM-11* *RCM-12*	*Resource Evaluation Criteria* *Zoning Ordinance Review and Update*

Policy		Implementing Action	
10.1.E	The City shall require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in fulfilling landscaping and natural habitat mitigation requirements.	*RCM-8* *RCM-10*	*Development Review* *Resource Maintenance and Management Programs*
10.1.F	The City shall require that significant natural habitat areas be identified in advance of development and incorporated into site-specific development project design.	*RCM-4* *RCM-6* *RCM-7* *RCM-8* *RCM-12*	*Natural and Cultural Resources Inventory* *Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map* *Development Review* *Zoning Ordinance Review and Update*
10.1.G	The City shall ensure that development constructs linkages between natural habitat preservation areas.	*RCM-3* *RCM-8* *RCM-12* *RCM-13*	*Community Design Guidelines* *Development Review* *Zoning Ordinance Review and Update* *Land Use Map*
10.1.H	The City shall ensure that development identifies alternative sites for linkages where sensitive habitat areas may be adversely affected.	*RCM-4* *RCM-12* *RCM-13*	*Natural and Cultural Resources Inventory* *Zoning Ordinance Review and Update* *Land Use Map*

AGRICULTURAL LANDS

GOAL 10.2 TO PRESERVE AND PROTECT AGRICULTURAL LANDS AND FARMING OPERATIONS.

Policy		Implementing Action	
10.2.A	The City shall require an evaluation of the potential for adverse impacts on agricultural production and economic value from exposure to urban development for all new development projects adjacent to rural lands. It is the intent of this policy to prevent the creation of conditions that will impair any present farm operations on land adjacent to city limits, to a degree that threatens the long-term viability of the use of that land for agricultural purposes.	*RCM-1* *RCM-8* *RCM-14* *RCM-15*	*Sensitive Habitat Buffer Guidelines* *Development Review* *Agricultural Buffers* *Interagency Coordination*
10.2.B	The City shall support efforts by Solano County to discourage non-agricultural land uses in agricultural areas adjacent to the Rio Vista city limits.	*RCM-13* *RCM-15*	*Land Use Map* *Interagency Coordination*
10.2.C	The City shall pursue development of a wastewater irrigation program to increase the efficiency of water delivery and use for agricultural consumers.	*RCM-5* *RCM-10* *RCM-16*	*Public Awareness/Education Programs* *Resource Maintenance and Management Programs* *Wastewater Reuse*

SACRAMENTO RIVER DELTA

GOAL 10.3 TO PRESERVE AND PROTECT THE SACRAMENTO RIVER DELTA AS AN IMPORTANT LAND RESOURCE FOR AGRICULTURE AND WILDLIFE HABITAT.

Policy		Implementing Action	
10.3.A	The City shall ensure that agricultural operations, natural resource protection, water-related recreation, and public facility uses shall remain the only allowable uses in the Delta Primary Zone.	*RCM-1* *RCM-8* *RCM-14* *RCM-15*	*Sensitive Habitat Buffer Guidelines* *Development Review* *Agricultural Buffers* *Interagency Coordination*

BIOLOGICAL RESOURCES

GOAL 10.4 TO PRESERVE AND PROTECT BIOLOGICAL RESOURCES FOR THEIR WILDLIFE HABITAT, AESTHETIC, AND RECREATIONAL VALUES.

Policy		Implementing Action	
10.4.A	The City shall require that development projects be designed to protect and enhance the area's biological resources to the greatest extent feasible.	*RCM-1* *RCM-6* *RCM-7* *RCM-8* *RCM-14* *RCM-15*	*Sensitive Habitat Buffer Guidelines* *Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map* *Development Review* *Agricultural Buffers* *Interagency Coordination*
10.4.B	The City shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in sensitive areas.	*RCM-1* *RCM-6* *RCM-8* *RCM-11* *RCM-17*	*Sensitive Habitat Buffer Guidelines* *Sensitive Local Resource Areas Map* *Development Review* *Resource Evaluation Criteria* *Environmental Design Criteria*

Policy		Implementing Action	
10.4.C	The City shall encourage the use of native and compatible non-native species—especially drought-resistant ones—in fulfilling landscaping requirements imposed as conditions of discretionary permits or for project mitigation.	*RCM-8* *RCM-18*	*Development Review* *Landscape Ordinance*
10.4.D	The City shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of their desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation that provides the opportunity to mitigate impacts on rare, threatened, and endangered species or the habitat that supports these species in wetland and riparian areas.	*RCM-6* *RCM-8*	*Sensitive Local Resource Areas Map* *Development Review*
10.4.E	The City shall require new private or public developments to preserve and enhance existing native riparian habitat, unless public safety concerns require removal of habitat for flood control or other public purposes.	*RCM-6* *RCM-8*	*Sensitive Local Resource Areas Map* *Development Review*
10.4.F	The City shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development, so that pollutants and siltation will not adversely affect the value or function of wetlands.	*RCM-8* *RCM-9* *RCM-19*	*Development Review* *Best Management Practices* *Grading and Erosion Control Ordinance*

WATER RESOURCES

GOAL 10.5 TO MANAGE AND PROTECT THE CITY'S WATER RESOURCES.

THE FOLLOWING POLICIES APPLY TO LANDS WITHIN THE SENSITIVE LOCAL RESOURCE AREAS SHOWN IN FIGURE 10.2

Policy		Implementing Action	
10.5.A	The City shall ensure that natural drainage flows are maintained in new development projects to the greatest extent feasible.	*RCM-1* *RCM-8*	*Sensitive Habitat Buffer Guidelines* *Development Review*
10.5.B	The City shall review individual projects to determine the setback requirements that will adequately buffer natural drainage corridors from development.	*RCM-1*	*Sensitive Habitat Buffer Guidelines*
10.5.C	The City shall require that natural drainage corridors are integrated into new development in such a way that they are accessible to the public and serve as a positive amenity to the community.	*RCM-3* *RCM-7* *RCM-8*	*Community Design Guidelines* *Environmental/Visual Constraints Map* *Development Review*
10.5.D	The City shall ensure that natural drainage corridors and other watercourses are protected from the adverse effects of construction activities and urban runoff.	*RCM-1* *RCM-8* *RCM-9* *RCM-19*	*Sensitive Habitat Buffer Guidelines* *Development Review* *Best Management Practices* *Grading and Erosion Control Ordinance*

Policy		Implementing Action	
10.5.E	The City shall require proposed development projects that would encroach into natural drainage corridors to implement one or more of the following measures, in descending order of their desirability: • Avoid disturbance of the drainage corridor. • Replace any riparian vegetation (onsite, in-kind). • Restore another section of drainage corridor (in-kind). • Pay a mitigation fee for restoration elsewhere in the City. • Implement other mitigation as appropriate.	*RCM-2* *RCM-8* *RCM-19*	*Fees, Dedications, and Easements* *Development Review* *Grading and Erosion Control Ordinance*
IN ALL LANDS SUBJECT TO THE GENERAL PLAN:			
10.5.F	The City shall restrict development of lands in the 100-year floodplain to protect human habitation, property and sensitive wildlife or vegetation.	*RCM-13* *RCM-20*	*Land Use Map* *Flood Insurance Rate Maps*
10.5.G	The City shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of drainageways and damage to riparian habitat.	*RCM-9* *RCM-19*	*Best Management Practices* *Grading and Erosion Control Ordinance*
10.5.H	The City shall condition projects on applying pollution control measures that will restrict pollutants from entering Rio Vista's storm drain system.	*RCM-8* *RCM-9* *RCM-19*	*Development Review* *Best Management Practices* *Grading and Erosion Control Ordinance*

Policy		Implementing Action	
10.5.I	The City shall ensure that groundwater resources are protected from contamination and overdraft.	*RCM-9* *RCM-19*	*Best Management Practices* *Grading and Erosion Control Ordinance*
10.5.J	The City shall encourage the use of treated wastewater for irrigation and groundwater recharge.	*RCM-5* *RCM-16*	*Public Awareness/Education Programs* *Wastewater Reuse*
10.5.K	The City shall maintain its ability to meet its water supply requirements.	*RCM-8* *RCM-12* *RCM-13* *RCM-16*	*Development Review* *Zoning Ordinance Review and Update* *Land Use Map* *Wastewater Reuse*
10.5.L	The City shall recognize water as a limited resource by encouraging the use of water conservation measures. (Also see Policy 12.8.A and implementing action PF-22 in the Public Facilities & Services element concerning metered water use.)	*RCM-5* *RCM-8*	*Public Awareness/Education Programs* *Development Review*
10.5.M	The City shall encourage activities that maintain and improve drinking water quality.	*RCM-9* *RCM-19*	*Best Management Practices* *Grading and Erosion Control Ordinance*

AIR QUALITY

GOAL 10.6 TO RECOGNIZE IMPROVED AIR QUALITY AS A HEALTH BENEFIT AND TO PRESERVE AIR QUALITY AS A NATURAL RESOURCE.

Policy		Implementing Action	
10.6.A	The City shall require that site preparation and construction activities incorporate effective measures to minimize dust emissions and pollutant emissions from motorized construction equipment and vehicles.	*RCM-8* *RCM-9*	*Development Review* *Best Management Practices*
10.6.B	The City shall ensure that development projects facilitate non-motorized travel through the use of connecting streets, alleys, and connecting pathways.	*RCM-3* *RCM-8*	*Community Design Guidelines* *Development Review*
10.6.C	The City shall ensure that street design within new developments provides multiple access points within neighborhoods as much as possible, in order to avoid long, circuitous routes for motor vehicles.	*RCM-3* *RCM-8*	*Community Design Guidelines* *Development Review*
10.6.D	The City shall ensure that existing trees and vegetation are retained and incorporated into the project design wherever feasible.	*RCM-6* *RCM-8* *RCM-19*	*Sensitive Local Resource Areas Map* *Development Review* *Grading and Erosion Control Ordinance*
10.6.E	The City shall ensure that new development pays its fair share of the cost to provide alternative transportation systems, including bikeways, pedestrian paths, and public transit facilities.	*RCM-2*	*Fees, Dedications and Exactions*
10.6.F	The City shall encourage the use of non-motorized transportation wherever possible in the community.	*RCM-3* *RCM-21*	*Community Design Guidelines* *Countywide Bicycle Master Plan*

Policy		Implementing Action	
10.6.G	The City shall encourage the use of public transportation as an alternative to the automobile.	*RCM-5*	*Public Awareness/Education Programs*
10.6.H	The City shall plan for a multi-modal transfer site that incorporates automobile parking areas, bike parking, transit, pedestrian paths, and park-and-and-ride pick-up points. (Also see Circulation and Mobility Element for General Plan Policy 8.3.O>)	*RCM-2* *RCM-8* *RCM-28*	*Fees, Dedications, and Easements* *Development Review* *Local, State, and Federal Funds*
10.6.I	The City shall work to improve the public's understanding of the land use, transportation, and air quality link.	*RCM-5* *RCM-28*	*Public Awareness/Education Programs* *Local, State, and Federal Funds*
10.6.J	All City submittals of transportation improvement projects to be included in regional transportation plans shall be consistent with the air quality goals and policies of the General Plan.	*RCM-8*	*Development Review*
10.6.K	The City shall pursue and use State and federal funds earmarked for air quality benefits.	*RCM-28*	*Local, State, and Federal Funds*
10.6.L	The City shall work to replace the City's conventional fuel vehicles with low emission vehicles as funding becomes available and as functional/operational requirements allow.	*RCM-28*	*Local, State, and Federal Funds*
10.6M	The City shall require application of the analysis methods and significance thresholds recommended by the Yolo-Solano Air Quality Management District, as needed, to determine a project's air quality impacts.	*RCM-8*	*Development Review*

SOILS

GOAL 10.7 TO PROTECT AND PRESERVE SOILS AS A NATURAL RESOURCE.

Policy		Implementing Action	
10.7.A	The City shall minimize soil erosion and sedimentation by maintaining compatible land uses, suitable building designs, and appropriate construction techniques.	*RCM-3* *RCM-8* *RCM-12* *RCM-13* *RCM-19*	*Community Design Guidelines* *Development Review* *Zoning Ordinance Review and Update* *Land Use Map* *Grading and Erosion Control Ordinance*

ENERGY

GOAL 10.8 TO ENCOURAGE THE OPTIMAL USE OF AVAILABLE ENERGY RESOURCES.

Policy		Implementing Action	
10.8.A	The City shall promote energy conservation programs for all utility users.	*RCM-8* *RCM-22*	*Development Review* *Public Services Monitoring Report*
10.8.B	The City shall encourage active and passive solar energy design in building and site development.	*RCM-8* *RCM-23*	*Development Review* *Title 24 of the Uniform Building Code*
10.8.C	The City shall encourage the development and use of alternative energy sources.	*RCM-15*	*Interagency Coordination*

SOLID WASTE REDUCTION

GOAL 10.9 TO REDUCE THE AMOUNT OF SOLID WASTE GENERATED IN RIO VISTA.

Policy		Implementing Action	
10.9.A	The City shall promote waste reduction methods within the City.	*RCM-24*	*Source Reduction and Recycling Plan*

10.9.B	The City shall promote recycling and resources conservation.	*RCM-5* *RCM-22*	*Public Awareness/Education Programs* *Public Services Monitoring Report*

HISTORIC RESOURCES

GOAL 10.10 TO ENCOURAGE PRESERVATION OF THE CITY'S HISTORIC RESOURCES WHILE ENHANCING THEIR VALUE AND ECONOMIC LIFE.

Policy		Implementing Action	
10.10.A	The City shall ensure that urban changes preserve and maintain historic and architectural resources, including historic buildings and industrial spaces that are of historical significance.	*RCM-3* *RCM-4* *RCM-25*	*Community Design Guidelines* *Natural and Cultural Resources Inventory* *Sign Ordinance Review and Update*
10.10.B	The City shall improve local awareness of its cultural and historical resources.	*RCM-3* *RCM-5* *RCM-25*	*Community Design Guidelines* *Public Awareness/Education Programs* *Sign Ordinance Review and Update*
10.10.C	The City shall require that discretionary development projects identify important historic, archaeological, and cultural sites and their contributing environment from damage, destruction, and abuse. The City shall ensure that such assessments are incorporated into the City's cultural and historical database, to be maintained by the Rio Vista Museum.	*RCM-4* *RCM-8* *RCM-25* *RCM-26*	*Natural and Cultural Resources Inventory* *Development Review* *Sign Ordinance Review and Update* *Preservation Ordinance*

Policy		Implementing Action	
10.10.D	The City shall identify and promote incentive programs to assist private property owners in preserving and enhancing historic structures.	*RCM-5* *RCM-27* *RCM-28* *RCM-29*	*Public Awareness/Education Programs* *Official Register* *Local, State, and Federal Funds* *State Historical Building Code*
10.10.E	The City shall encourage the preservation of historic structures and shall discourage rehabilitation and remodel projects that would alter their historic character.	*RCM-5* *RCM-8* *RCM-12* *RCM-26* *RCM-27* *RCM-28* *RCM-29*	*Public Awareness/Education Programs* *Development Review* *Zoning Ordinance Review and Update* *Preservation Ordinance* *Official Register* *Local, State, and Federal Funds* *State Historical Building Code*
10.10.F	The City shall regard demolition of historic resources as a last resort, to be permitted only after the City determines that the resource retains no reasonable economic use; that demolition is necessary to protect health, safety, and welfare; or that demolition is necessary to proceed with a new project where the benefits of the new project outweigh the loss of the historic resource.	*RCM-4* *RCM-8* *RCM-26* *RCM-28* *RCM-29*	*Natural and Cultural Resources Inventory* *Development Review* *Preservation Ordinance* *Local, State, and Federal Funds* *State Historical Building Code*
10.10.G	The City shall support public, quasi-public, and private entities in their preservation efforts.	*RCM-4* *RCM-5* *RCM-26* *RCM-27* *RCM-28*	*Natural and Cultural Resources Inventory* *Public Awareness/Education Programs* *Preservation Ordinance* *Official Register* *Local, State, and Federal Funds*

VISUAL RESOURCES

GOAL 10.11 TO PROTECT THE VISUAL AND SCENIC RESOURCES OF RIO VISTA—RECOGNIZING THEIR IMPORTANCE IN THE QUALITY OF LIFE FOR CITY RESIDENTS AND IN PROMOTING RECREATION AND TOURISM.

Policy		Implementing Action	
10.11.A	The City shall require new development in scenic areas (e.g., river banks, Highway 12 corridor, Sacramento River waterfront, and hillsides) to use planning, design, construction, and maintenance techniques that: • Incorporate design and screening measures to minimize the visibility of structures and graded areas. • Maximize views in sensitive viewing areas and corridors. • Maintain the character and visual quality of the area.	*RCM-6* *RCM-7* *RCM-8*	*Sensitive Local Resource Areas Map* *Environmental/Visual Constraints Map* *Development Review*
10.11.B	The City shall require that new development be designed to integrate natural landforms and vegetation in order to minimize alteration of scenic vistas. Figure 10-2 shall be used to identify sensitive areas of particular concern during project design and development.	*RCM-1* *RCM-2* *RCM-8* *RCM-28* *RCM-29*	*Sensitive Habitat Buffer Guidelines* *Fees, Dedications, and Easements* *Development Review* *Local, State, and Federal Funds* *State Historical Building Code*
10.11.C	The City shall encourage new development to use natural vegetation in buffer areas (if required) between the development and adjacent farmland.	*RCM-1* *RCM-8*	*Sensitive Habitat Buffer Guidelines* *Development Review*
10.11.D	The City shall require that development design maximizes the amount of open space frontage accessible to public view.	*RCM-8*	*Development Review*

Policy		Implementing Action
10.11.E	The City shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities shall be installed underground, and roadways and parking areas shall be landscaped and designed to accommodate the natural terrain.	*RCM-8 Development Review* *RCM-10 Resource Maintenance and Management Programs* *RCM-15 Interagency Coordination*
10.11.F	The City shall require new development to incorporate sound soil conservation practices and minimize land alterations. Land alterations within areas illustrated by Figures 10-2 and 5-3 (as further defined by specific site analysis required by RCM-7), shall comply with the following guidelines, illustrated by Figure 10-3: • Limit grading to the smallest practical area of land. • Limit land exposure to the shortest practical amount of time. • Use erosion and sediment control measures, including temporary vegetation sufficient to stabilize disturbed areas. • Replant graded areas to ensure establishment of plant cover before the next rainy season.	*RCM-1 Sensitive Habitat Buffer Guidelines* *RCM-8 Development Review* *RCM-9 Best Management Practices* *RCM-19 Grading and Erosion Control Ordinance*

Policy		Implementing Action	
10.11.F	Continued. • Create grading contours that blend with the natural contours onsite or with contours on property immediately adjacent to the area of development. • Ensure that development near or on portions of hillsides does not cause or worsen natural hazards, such as erosion, sedimentation, increased risk of fire, or degraded water quality. • Maintain the character and visual quality of the hillside.		
10.11.G	The City shall protect and seek to enhance scenic corridors.	*RCM-2* *RCM-3* *RCM-8* *RCM-12* *RCM-13*	*Fees, Dedications, and Easements* *Community Design Guidelines* *Development Review* *Zoning Ordinance Review and Update* *Land Use Map*
10.11.H	The City shall encourage the development of trails, picnicking and observation areas, and parks along scenic corridors. (Also refer to the Open Space & Recreation and Circulation & Mobility elements.)	*RCM-3* *RCM-12*	*Community Design Guidelines* *Zoning Ordinance Update and Review*
10.11.I	The City shall include aesthetic design considerations in road construction, reconstruction, and maintenance for local streets and highways.	*RCM-3* *RCM-8*	*Community Design Guidelines* *Development Review*
10.11.J	The City shall support and encourage anti-litter, beautification, and cleanup programs along Highway 12.	*RCM-5*	*Public Awareness/Education Programs*

G. Implementing Actions for Resource Conservation & Management (RCM)

Each of the following actions will be used, wherever appropriate, to implement the goals and policies of the Resource Conservation & Management element.

RCM-1 SENSITIVE HABITAT BUFFER GUIDELINES
(Proposed)

The City will review projects on a case-by-case basis to determine the setback requirements for sensitive habitat. General guidelines for setbacks will include 100 feet from the edge of perennial streams; 50 feet from the edge of intermittent streams; and 50 feet from the edge of sensitive habitats, including riparian zones, wetlands, and habitats of rare, threatened, and endangered species. Based on more detailed information supplied as part of the review for a specific project, the City may determine that these setback distances are not applicable in a particular instance or that they should be modified (decreased or increased) based on the new information provided. Additional setbacks may be required for Sensitive Local Resource Areas (*as defined in Section E in this chapter and shown in Figure 10-2; also see implementing action RCM-6 below*). The City may allow exceptions as follows:

- The location is necessary to avoid or mitigate hazards to the public.
- The location is necessary for the repair of roads, bridges, trails, or similar infrastructure; the City determines that there is no feasible alternative; and/or the City's decision makers have determined that the project has minimized environmental impacts through project design and infrastructure placement.

RCM-2 FEES, DEDICATIONS, AND EASEMENTS
(Proposed)

Parcel lines (in the case of a subdivision) or easements (in the case of a subdivision or other development) should be located to optimize resource protection. If a Sensitive Local Resource Area (SLRA) or other significant corridor, including drainage corridors, hilltops, or other sensitive areas, is proposed for inclusion in an open space parcel or easement, allowed uses and maintenance responsibilities within that parcel should be clearly defined and conditioned prior to map or project approval.

The City will seek to protect SLRAs by (1) requiring adequate setbacks; (2) maintaining these areas in an essentially natural state; (3) prohibiting the planting of invasive, non-native plants within the SLRAs or setback areas; and (4) avoiding removal of natural vegetation within the areas to the extent feasible.

RCM-3 COMMUNITY DESIGN GUIDELINES
(Proposed)

The City will apply the Community Design Guidelines, as described in the Community Character & Design element of the General Plan. These guidelines will promote the integration of natural and built environments.

RCM-4 NATURAL AND CULTURAL RESOURCES INVENTORY
(Proposed)

In conjunction with the environmental review of a project required by the California Environmental Quality Act, the City will require that resource field surveys be submitted, concurrent with development applications, that provide an inventory of the type, quantity, and quality of existing open space and natural resources. This requirement may be waived if the City determines that the proposed planning area has been sufficiently surveyed or does not contain resources considered significant. The completed surveys will be used to evaluate individual projects and to compile a comprehensive natural resources inventory for the City.

The City will initiate, or work with the Rio Vista Museum Board and other interested local civic groups to undertake, an inventory of structures (50 or more years old) or sites with potential architectural, historic, archaeological, or cultural significance to the community. The inventory could include developing historic context statements for each property that is determined to have local historical significance. The information will be incorporated into the City's cultural and historical database, to be maintained by the Rio Vista Museum, which then can be made available to historians or property owners pursuing listing on the official state or federal register.

RCM-5 PUBLIC AWARENESS/EDUCATION PROGRAMS
(Proposed)

The City's role in public education about resource conservation and management will, at a minimum, provide City residents with literature and public information announcements on habitat preservation; highway cleanup and beautification; water and energy issues; wastewater generation, treatment, and reuse; and household waste reduction. In addition, the City will request additional information from state and federal agencies, such as the U.S. Fish and Wildlife Service, California Department of Fish and Game, and State Office of Emergency Services that can be reproduced and distributed. The City will attempt to reach all households and businesses by ensuring that this information is easily accessible to them.

Another key component of this implementing action is to increase public awareness of and involvement in the preservation of cultural and historical resources. The City will work with the Rio Vista Museum Board and local historians to promote involvement in historical research, construction of informational markers and kiosks, and historic structure restoration efforts. Outreach efforts will be made, in partnerships with these groups, to solicit involvement in signage design, funding and construction through the local schools, businesses and residents.

RCM-6 SENSITIVE LOCAL RESOURCE AREAS MAP
(To be adopted as part of this General Plan)

The General Plan identifies several significant areas in the Rio Vista planning area where one or more sensitive natural resources may be concentrated, or that may feature several of these resources. Throughout the General Plan, these significant areas are referred to as Sensitive Local Resource Areas (SLRAs). SLRAs can be defined as "areas possessing one or more natural resources that, when taken together, create a feature that is uniquely representative of Rio Vista's character." The SLRAs are mapped in *Figure 10-2* as areas where particular care is taken

to respect and preserve major portions of these important features during the course of development. The SLRAs boundaries map is not intended to be exact. Specific locations of key features are expected to be identified by RCM-7, the environmental / visual constraints map that will be prepared and submitted as one of the first steps in the development review process. Figure 10-2 is considered to be subject to change as more specific information becomes available about a particular site or property. Its purpose is to identify certain sensitive areas and key features as a point of beginning for the design process.

RCM-7 **ENVIRONMENTAL/VISUAL CONSTRAINTS MAP**
(Proposed)

The City will require with each development proposal an environmental/visual constraints map, based on the findings of a project-specific biological assessment and consistent with General Plan goals and policies. These maps will consider the potential open space opportunities illustrated in *Figure 10-2,* the Sensitive Local Resource Areas Map.

RCM-8 **DEVELOPMENT REVIEW**
(Existing)

Through the development review process, the City will use the California Environmental Quality Act (CEQA) process to evaluate the impacts of proposed new development on natural resources, including Sensitive Local Resource Areas (SLRAs). The CEQA process dictates that the City will refer any development proposal with a potential for direct or indirect impacts on open space, sensitive habitat, air quality or drainage to the Community Development Director and City Engineer, and other local agencies (e.g., YSAQMD) as applicable, for comment.

Where the Initial Study indicates that development projects may affect resources under the jurisdiction of state or federal agencies (e.g., YSAQMD, the California Department of Fish and Game, Regional Water Quality Control Board, Department of Water Resources (for Reclamation Board), U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, or U.S. Environmental Protection Agency), the City will use the State Clearinghouse to refer such projects to the appropriate agencies. The City will consider the comments of these departments and agencies in the development review process. The City also may adopt its own specific standards for some or all of the resources discussed in this element, in order to achieve the community's stated goals and policies.

In conducting its environmental review for projects, the City may require an inventory of the quantity and quality of resources, assessment of potential project impacts, and identification of preservation methods and other mitigation and monitoring measures. When significant natural resources would cause parcels to be undevelopable, such parcels will not be created for urban purposes unless City/CEQA-approved mitigation programs are incorporated.

Sensitive Local Resource Areas The City will work with developers to explore development alternatives and standards that will minimize impacts on SLRAs. Such techniques may include grading standards, limitation of development intensity, and cluster development. The City will evaluate proposed projects for potential water quality impacts; projects may require sediment basins as part of grading activities or grease/oil traps where concentrations of pollutants are anticipated.

Where appropriate, the City will encourage the establishment of native plants and landscaping that provide wildlife habitat. Where possible, the City will place archaeological sites or fragile historic sites within open space areas as defined during this process. The City will determine the potential for project linkages to local and regional open space networks through project review. The City will use development agreements and/or other entitlement processes to ensure open space preservation, maintenance, and management whenever feasible.

Agricultural Lands Mitigation of significant impacts on agricultural operations will be required as a condition of approval of plans or subdivision maps. The City will determine the extent of required buffers on annexation areas following an evaluation of probable impacts on agricultural operations. Potential measures include the following "typical" mechanisms, as well as ad hoc measures to be applied to individual projects:

- Disclosure of potential agricultural impacts to potential buyers of properties within 1,000 feet of a property line adjacent to crop or grazing land; disclosure agreements to be included in homebuyer purchase agreements and attached to the deed of trust to ensure the information is also received by all future buyers of the property.

- Buffers consisting of natural resource areas or similar uses sited adjacent to agricultural lands where feasible.

- Conservation easements.

- Binding agreements between the developer, adjacent landowner, and the City that will reduce the potential impacts of agricultural operations. All parties shall enter into such agreements voluntarily.

- Implementing the provisions of Assembly Bill 1190 to provide that certain agricultural activities, operations, facilities, or appurtenances thereof, do not constitute a nuisance as long as they continue to operate in a similar manner to that in which they have historically operated.

- Agricultural easements, similar to aviation easements around airports (i.e., may be subject to legal restrictions).

Air Quality The City nmay require new development projects to submit an air quality analysis for review and approval. Based on that analysis, the City shall require appropriate mitigation measures. The City shall require as a condition of approval that all new development projects submit a Construction Emission/Dust Control Plan to the Yolo-Solano Air Quality Management District for review and approval prior to issuance of grading permits.

Historic and Cultural Resources Any project that may affect the character-defining features of a historic or cultural resource will be reviewed to determine the potential for effects on the significance of the resource to occur. If the property has not been previously evaluated but is 50 years or older, it should be evaluated to determine its potential eligibility and related review requirements. The environmental review and certification process is distinct from, although directly related to, the actual discretionary action decisions.

RCM-9 BEST MANAGEMENT PRACTICES
(Existing)

The City will require that developers use best management practices (BMPs) as recommended by the U.S. Natural Resources Conservation Service. Approaches to design, construction, and maintenance techniques should ensure that development near a sensitive corridor would not cause or worsen natural hazards (e.g., erosion, sedimentation, flooding, and water pollution). Techniques will include erosion and sediment control practices, such as hay bales, turbidity screens, temporary vegetation, and other management practices to minimize siltation, sedimentation, and erosion. The City will require that these measures be left in place until disturbed areas are stabilized with permanent vegetation that will prevent the transport of sediment offsite. Additional BMPs to be used include oil and sand separators, grassy swales, detention ponds, vegetative buffers, and other source control and treatment measures.

RCM-10 RESOURCE MAINTENANCE AND MANAGEMENT PROGRAMS
(Proposed)

The City will accompany the designation of any area as Open Space with a program to ensure the long-term maintenance and management of the area. The program will address the frequency and type of maintenance needed, management and monitoring provisions to ensure the continued viability of the resource, and designated costs and funding sources. When the open space area is required as the result of permits issued by federal or state agencies, the maintenance and management program will be consistent with applicable permitting requirements. The City will consider the establishment of maintenance districts or homeowners' associations (HOAs) to ensure sufficient funding for maintenance. Funding should consider all municipal costs that will ensure protection of natural values, improvements, public use, and adjacent properties.

Most property owners have some protected open space on their privately held land; its use and maintenance is restricted by conditions in the deed. Open space could exist as private open space; or the original developer could retain ownership of the open space land; or it could be conveyed to a nonprofit land trust; or could be owned and managed by a homeowners association (HOA). The intent of these options is that neither the individual homeowner nor the community be adversely affected by the protected open space. While a deed restriction could potentially lower the value of the open space, the loss could be offset by the increased value of homes adjoining the open space.

RCM-11 RESOURCE EVALUATION CRITERIA
(Proposed)

To establish levels of protection for open space lands, the City will review and consider the inherent capabilities, qualities, and limitations of undeveloped lands targeted for development. Sites will be evaluated in terms of their resource capacity, based on the following criteria, to determine the extent to which they may require protection as a valuable natural resource:

- ***Significance.*** Significance involves the uniqueness or rarity of the site, or portions thereof.

- ***Natural function.*** Either directly or indirectly, large tracts of undeveloped land serve a purpose in natural cycles or systems. In some instances, sites provide habitat; in other instances, they are a vital factor in food, chemical, or energy cycles.

- ***Moderator of other natural phemonena.*** One natural function that is of particular concern to the City is the potential role of a site in modifying the environment or buffering its effect on adjoining areas. The site also may provide a moderating influence in a cycle or process. These functions often are critical to maintaining a balance in nature by slowing processes that otherwise would alter the environment too quickly.

- ***Geomorphological processes.*** Many physical and chemical processes act on the land's surface to produce distinctive areas. Recognizing the significance of factors that affect landform evolution is essential to understanding the effects of such factors on urban development.

- ***Stability.*** Certain sites may lack durability or relative permanence because of the physical factors affecting the location. Some sites are naturally unstable, some are unstable when disturbed, and others are naturally stable.

- ***Degradation potential.*** The risks of degrading or destroying a site or transferring effects to other areas must be carefully considered. Undesirable alteration of natural systems may be an unanticipated consequence of development.

- ***Tolerance.*** The ability to recover from disturbance of different intensities is closely related to, and in some ways builds on, the concept of degradation potential. The degree of tolerance often is related to the type of use.

- ***Hazard.*** In some cases, a site may not be passive. Intrusion into an area may pose unnecessary safety risks to both life and property, as well as to the environment.

- ***Cultural importance.*** Sites can convey a sense of well-being or satisfaction to an individual or groups of people. Although this characteristic is often objectively not quantifiable, its consideration may be important in establishing protection standards.

- ***Special uses.*** Some land uses, by their very nature, must be located in a particular site. These uses, when identified, may need exception from the policy. Other land uses may acceptably locate on a site, provided special care is taken to protect the resource.

RCM-12 **ZONING ORDINANCE REVIEW AND UPDATE**
(Proposed)

To ensure that the Zoning Ordinance works in conjunction with General Plan policies to achieve resource conservation and other City objectives, the City will review and modify its Zoning Ordinance on an ongoing basis.

The Zoning Ordinance update may include such modifications as the establishment of a zoning designation applicable to sensitive resource areas. After modifications, the Zoning Ordinance will serve as a tool for directing specific land uses to appropriate areas of the City and away from sensitive resources.

The City also will review and update the Zoning Ordinance to ensure that it contains provisions for non-conforming uses and structures in order to allow for the continued use and reuse of historic buildings that do not meet current zoning standards.

RCM-13 LAND USE MAP
(To be adopted as part of this General Plan)

To mitigate the impacts of land development on natural resources, and to minimize exposure by residents to natural hazards (i.e., geologic and flooding), the City has designated the general areas where open space, as shown on the proposed Land Use Map in the Land Use element, may act as buffers between urbanized development and environmentally sensitive or flood-prone areas.

RCM-14 AGRICULTURAL BUFFERS
(Proposed)

Since the General Plan Land Use element allows development to occur at urban densities to the edge of the City limits, agricultural buffers will not be used to create a fixed greenbelt or urban separator between the City and agricultural lands. Agricultural buffers will be applied, however, in cases where a transition zone is needed to mitigate health and safety impacts or to reduce land use incompatibility impacts to a less-than-significant level.

On a case-by-case basis, the City will evaluate development projects that abut agricultural lands and will apply the agricultural buffer standards established by the Solano County Agricultural Commission and the State of California for mitigation of health and safety concerns. While the base land use of this buffer area will remain that of the adjoining urban use, methods such as dedications, fees, and easements; resource maintenance and management programs; or binding agreements between developers and agricultural landowners will be implemented to establish adequate mitigation while giving developers flexibility in project design.

RCM-15 INTERAGENCY COORDINATION
(Existing)

At the earliest opportunity, the City will consult with Solano County and other responsible agencies to ensure the coordinated designation and preservation of agricultural lands in the Planning Area. The City also will cooperate with Solano County, nonprofit organizations, and landowners to maintain policies (such as Measure A) that will continue to protect farmland at the edge of urban development on unincorporated lands. These policies include the County's Right-to-Farm Ordinance, the use of agricultural easements, and farmland acquisition by non-profit farmland trusts.

The City will continue to comply with the U.S. Environmental Protection Agency wastewater discharge and stormwater management regulations, as enforced by the State Water Resources

Control Board and the Regional Water Quality Control Board. These regulations include requirements for National Pollutant Discharge Elimination System (NPDES) permits. Rio Vista intends to meet its requirements by promoting the use of cost-effective urban runoff controls, including best management practices, to reduce the amount of pollutants entering the waterways. Plans to protect the City's water resources and water quality include the development of standards for urban runoff to protect waterways and recharge areas.

The City will support the policies for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with all agencies with jurisdiction at all levels of project review will continue to ensure that appropriate mitigation measures are implemented and the necessary permits are obtained.

The City will work in conjunction with the Delta Protection Commission (DPC) to implement the goals and policies of the DPC's *Regional Land Use and Resource Management Plan* (Delta Protection Commission, 1995) for the Primary Zone of the Delta.

RCM-16 WASTEWATER REUSE
(Proposed)

The City will actively pursue the use of treated wastewater in irrigation and industrial applications and, if feasible, in wildlife or wetlands habitat. The City will plan for development of the proper infrastructure to facilitate wastewater reuse by the public and private sectors.

RCM-17 ENVIRONMENTAL DESIGN CRITERIA
(Proposed)

1. The City will require developers to minimize the creation of engineered drainage channels that concentrate runoff and disrupt natural drainage patterns. Runoff should be directed into vegetated valleys to allow for greater absorption of stormwater into the water table.

2. Key hilltops (landforms), valleys, and sensitive areas are identified in *Figure 10-2*. The City will require these features to be left in their natural state as follows:

   - **Key hilltops (landforms).** Sufficient natural slope and contours should remain to retain the view of the landform as an easily identifiable natural landmark from nearby streets and public areas.

   - **Valleys.** Engineered cut or fill along banks should be avoided so that natural drainage retention and opportunities for trails at the top of the banks remain. The valley should not be substantially altered from its natural form and direction.

3. Grading Criteria for development within Sensitive Resource Areas and adjacent to Hilltops, Ridgelines & Valleys

   The primary objective of grading criteria is to allow for urban development to occur, while ensuring that finished grades adjacent to and within sensitive resource areas, hilltops,

ridgelines and valleys respect the existing natural character of the Montezuma Hills landform. Both the alignment of the existing contours and the existing moderate gradients of these slopes, which rarely exceed one foot of rise over five feet of run, are important features of the Montezuma Hills, and must be integrated into development plans within and adjacent to them. Development within and adjacent to the sensitive resource areas and key landforms identified by Figure 10-2, is to meet the following grading criteria, illustrated in Figure 10-3.

Where development occurs within sensitive resource areas and/or adjacent to key landforms (sensitive hilltops, ridgelines or valleys), the finished character of the engineered slopes and development should blend with the undulating character and alignment of the existing natural contours. The gradual changes in elevation of the site should still be recognizable after development is complete. The preferred approach to implementation is illustrated by the following criteria. The reviewing authority may accept variations from these criteria if and when it finds that site conditions warrant and the policies the criteria are intended to implement will be achieved equally as well by the proposed variation.

- On key landforms themselves, grading should be mininal. The landform or feature identified is to remain largely undisturbed; some streets, trails, utilities and similar minor improvements are allowed, but no homes or significant accessory structures. If limited grading occurs, graded sections should conform to limited gradients defined below.

- Slopes adjacent to key landforms should exhibit limited gradients: Areas between key feature (highest elevation of hilltops, ridges, lowest elevation of valleys) and edge of development (graded pad, fence, roadway, utilities, structures, etc.) – finished appearance of engineered slopes to be compatible with pre-development appearance of natural features. This requirement is typically achieved by ensuring that engineered slopes achieve an average gradient of no more than 4 to 1; maximum gradient 3 to 1; with a minimum gradient the same as natural slope (See Figure 10-3)

- All other developed areas, where proposed engineered slopes do not occur within sensitive resource areas and/or adjacent to sensitive hilltops, ridgelines or valleys, the alignment of the engineered slopes does not need to follow the character and alignment of the existing natural contours. Vegetation, drainage, erosion and maintenance issues will be considered where slopes in excess of 3:1 are proposed.

4. View Preservation

- View sheds to be identified by the environmental/visual constraints map (RCM-7):

- From existing developed neighborhoods

- From proposed new neighborhoods

- From public streets and major arterials

View shed analysis and preservation: Views to and from the key features identified by Fig 10-2 will be identified as follows: From existing public roadways, public facilities, neighborhoods to the key landforms (hilltops, ridges, valleys); from identified hilltops and ridges to the river, distant hills and rural areas, bridge and other local landmarks. A view shed analysis, determining critical views (sight lines) to be protected or preserved will be conducted as part of the development review process. Lot configurations, building placement, landscaping and private fence lines should respect the identified view sheds and allow views of the hilltop, ridgeline or valley within the identified view shed. Views out over countryside from higher points in neighborhoods and from identified hilltops and ridgelines should remain unobstructed over structures and improvements.

5. The City will require the submittal of vegetation protection and restoration plans as part of the development review process.

6. Natural gas well reserve sites should be developed as usable open space or neighborhood visual amenities. Opportunities for the development of natural gas well sites as park facilities are discussed in the Open Space & Recreation element.

RCM-18 LANDSCAPE ORDINANCE
(Proposed)

The City will adopt and implement a landscape ordinance, which will establish standards for water-conserving landscaping in order to reduce water use in developed areas. Requirements will specify the use of trees and other vegetation in new development in order to preserve and enhance the natural habitat. This ordinance will be applied in the design and development of private and public development projects, and will be consistent with the provisions of the Open Space & Recreation element.

RCM-19 GRADING AND EROSION CONTROL ORDINANCE
(Proposed)

Through the Public Works and Community Development Departments, the City will establish a Grading and Erosion Control Ordinance that includes specific standards for project construction and erosion control. This ordinance will address prompt revegetation of disturbed areas, avoidance of grading activities during wet weather, avoidance of drainage corridors and SLRAs, and other erosion control measures.

RCM-20 FLOOD INSURANCE RATE MAPS
(Existing)

The City will continue its participation in the National Flood Insurance Program, including adoption and administration of updated Federal Emergency Management Agency (FEMA) model ordinances and Flood Insurance Rate Maps (FIRMs).

RCM-21 COUNTYWIDE BICYCLE PLAN
(Proposed)

To reduce consumption of non-renewable energy sources and improve air quality, the City will integrate its Trails and Pathways Map (*Figure 8-6 in the Circulation & Mobility element*) with the *Solano Countywide Bicycle Plan (author, year [[need rest of citation info for references section]])*, in order to further encourage alternative modes of transportation. The Trails and Pathways Map will incorporate bikeway and pedestrian linkages throughout the City, including connections through and between neighborhoods and the open space network. (*Also see Implementing Action CM-13 in the Circulation & Mobility element.*)

RCM-22 PUBLIC SERVICES MONITORING REPORT
(Proposed)

The Community Development Department will coordinate preparation of a biennial public services monitoring report for presentation to the City Council. This report will document growth trends, the capacity and level of service for public services, and facility planning efforts. The report will include a resource inventory for use in reevaluating current goals and policies related to water and energy use and conservation.

RCM-23 TITLE 24 OF THE UNIFORM BUILDING CODE
(Existing)

Through the Building Department, the City will continue to enforce Title 24 energy requirements. These requirements are part of the Uniform Building Code, which defines construction standards to promote energy conservation.

RCM-24 SOURCE REDUCTION AND RECYCLING PLAN
(Existing)

In accordance with the California Integrated Waste Management Act, Rio Vista has adopted Solano County's *Countywide Integrated Waste Management Plan* that contains a Source Reduction and Recycling Element. The Plan provides for specific steps that will be taken by local agencies—acting independently and in concert—to meet the countywide diversion objectives for waste through source reduction. Rio Vista will work with the County and the six other incorporated jurisdictions to encourage a transition to reducing waste (and the toxicity of waste) through the following measures:

- Educating the community regarding product reuse, reduction of material volume, increased product lifetime, and decreased consumption.
- Encouraging residents, businesses, and institutions to engage in recycling and composting programs.
- Setting an example within City government operations for resource conservation and less wasteful behavior.

This will be accomplished in part by the City's cooperation with the County and other cities to develop new source-reduction programs through pilot programs and to establish a Recycling Market Development Zone that can attract industries that use recovered materials. Other source-reduction options for the City include continued use of its recycling facility at the Corporation Yard for community recycling, and the diversion program currently in operation at the Rio Vista High School Recycling Center.

RCM-25 SIGN ORDINANCE REVIEW AND UPDATE
(Proposed)

The City will review and amend the Sign Ordinance to include a section that addresses placement of historical signage, markers, or kiosks on or near historical structures and sites in the City. The Sign Ordinance will be amended to add design guidelines for this informational signage.

RCM-26 PRESERVATION ORDINANCE
(Proposed)

The City will adopt a Preservation Ordinance as part of its Municipal Code update to be the primary implementing mechanism for preservation of historic structures and sites. The ordinance will establish criteria for the review of new development, alterations, and rehabilitation and remodel projects that involve structures that are 50 or more years old.

RCM-27 OFFICIAL REGISTER
(Proposed)

The City will work with the Rio Vista Museum Board and interested community members to encourage owners of historic structures to pursue eligibility for listing of their properties in the National Register of Historic Places and the California Register of Historical Resources. As appropriate and to the extent feasible, the City will assist historic property owners with the process.

RCM-28 LOCAL, STATE, AND FEDERAL FUNDS
(Existing)

The City will target qualifying structures for programs that provide financing toward the preservation of these historic properties. Resources include federal historic rehabilitation tax credits and the Transportation Equity Act (TEA) enhancements program.

The California Mills Act (Government Code Section 50280, et seq.) is a state program that permits local governments to provide for a reduction in property taxes on a historic property when certain conditions are met. Owners of designated historic properties must enter into a preservation contract directly with the local government. Under this legal contract, the owners agree to restore the property, if necessary, to maintain its historic character, and use it in a manner compatible with its historic character. A reduction in property tax is given for 10 years, and the contract renews automatically every year until either party notifies the other to terminate the contract.

RCM-29 STATE HISTORICAL BUILDING CODE
(Existing)

The State Historical Building Code is Part 8 of Title 24 (State Building Standards Code) and applies to all qualified historic structures, districts, and sites designated under federal, state, and local authority. The code provides alternative building regulations for the rehabilitation, preservation, restoration, or relocation of structures designated as qualified historic buildings.