

CITY OF LARKSPUR, CALIFORNIA GENERAL PLAN

CHAPTER 6, ENVIRONMENTAL RESOURCES CONTENTS

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Chapter 6. Environmental Resources

This chapter covers open space and conservation as prescribed by Government Code sections 65302(e) and 65302(d), respectively. It addresses open space and preservation of the natural environment; water conservation and water quality; and waste recycling.

OPEN SPACE

State Government Code Section 65560 defines *open space land* as "any parcel of land or water which is essentially unimproved and devoted to an open space use for the purposes of: (1) preservation of natural resources; (2) managed production of resources; (3) outdoor recreation; and (4) public health and safety." In Larkspur, the primary purposes of open space lands are resource preservation, outdoor recreation, public health and safety, and community separation.

Preservation and enhancement of the biological diversity of plants and animals within the urban environment is important in an area with significant ecological resources. Larkspur's open space lands are diverse. They include hillsides and ridges; riparian, marsh, and shoreline areas; and an abandoned railroad right-of-way. The City values the native habitat resources within Larkspur and continues to implement policies designed for

their protection.

Hillsides and Ridges

Corte Madera Ridge, forming the city's south and western boundary, and *Southern Heights Ridge*, forming the city's northern boundary, define Larkspur's urban form and separate it from other communities (Ridge names are USGS nomenclature). Corte Madera Ridge in particular, with Big and Little King Mountains standing out in the foreground, is a symbol of the community.

Corte Madera Ridge lies on the northeastern slopes of Mount Tamalpais. The ridge, and Blithedale Summit to the south, make up the 1,000-acre Northridge Open Space Preserve owned by the Marin County Open Space District. About 260 acres of the preserve are within Larkspur, including the newly-acquired 14-acre parcel at the upper end of Piedmont Road.

The Northridge Open Space Preserve includes shaded canyons and open wind-blown hillsides. Woodlands (oaks, madrone, bay, buckeye, and redwoods) are interspersed with dense stands of chaparral (chamise, chaparral oak, manzanita, bush monkeyflower, coyote brush, and toyon) and annual grasslands. There are both native and introduced grasses (*King Mountain Estates Draft Environmental Impact Report*, April 5, 1989).

The vegetation is home to many species of wildlife, from western fence lizards and gopher snakes to deer, fox, bobcat, and coyote. Trees in the woodland provide nesting and perching sites for numerous bird species - jays, red-tailed hawks, great horned owls, and others. There are no known rare or endangered species on the Northridge property. However, the spotted owl is on the California Department of Fish and Game list of Bird Species of Special Concern (*North Wildlife Survey*, Mitchell Katzel, February 18, 1989).

(The Marin County Audubon Society has counted between 71 and 90 different species of birds in Larkspur during its annual Christmas bird counts from 1978 to 1988. The Christmas Count area includes Corte Madera Creek from Highway 101 to the College of Marin bridge and adjacent upland areas, including King Mountain and various neighborhoods (Marin Audubon Society, Mill Valley).

Most of the land on the slopes of Corte Madera Ridge that is not in the open space preserve is developed with single and multiple-family housing. An exception is the Tiscornia Estate - a 300-plus-acre holding on and around King Mountain and Little King Mountain. A large part of the Tiscornia Estate is in unincorporated Marin County. About 160 acres on King Mountain is proposed to be divided into four large single-family lots with 125 acres of it reserved in a scenic open space easement. About 76 acres in Larkspur and a similar amount in the County (at the upper end of Baltimore Canyon) are being added to the Northridge Preserve. As of September 1990, the Marin County Open Space District had the property in escrow. About 30 acres on the lower slopes (including the former Escalle Winery) is designated for Low Density Residential.

Both the publicly and privately-owned lands on Corte Madera Ridge are

easily accessible from several residential neighborhoods and are used by hikers and joggers.

Southern Heights Ridge separates Larkspur from San Rafael. West of Highway 101, the south-facing hillside has been developed with the single-family homes of the Greenbrae neighborhood. Although landscaping is extensive, the area cannot be defined as open space except to the extent that it is an important visual backdrop to the community. A plant called the White Rayed Pentachaeta found on the slopes of the hill has been designated as a candidate for the federal list of threatened species.

Southern Heights Ridge continues east across Highway 101 where it forms the spine of the San Quentin Peninsula. The ridge drops off steeply into the old rock quarry, now developed with housing. The top of the ridge (about 20 acres within Larkspur) was set aside as open space as a condition of development approval for the Larkspur Landing and Lincoln Terraces development.

Except for grass, the ridgeline is quite barren. It is a landmark visible from all directions.

Besides the hillside open space areas within Larkspur, the community greatly benefits from its proximity to Mount Tamalpais State Park and Marin Municipal Water District watershed lands, which are open to public use. The total acreage in recreation and open space use in Marin quadrupled between 1970 and 1990. Together, the Golden Gate National Recreation Area, the Point Reyes National Seashore, the state parks, the Marin Municipal and North Marin County Water District watershed lands, and the Open Space District lands comprise approximately 150,000 acres (*Marin Countywide Plan, Parks and Recreation Element, Draft, October 1988*).

Shoreline and Marsh Areas

Corte Madera Creek, although substantially channelized, once flowed through a wide valley of tidal marshes. The creek still remains as the major open space resource in Larkspur's flatlands. Before urbanization, these marshes extended from Magnolia Avenue on the south to Sir Francis Drake Boulevard on the north (with the exception of Bon Air Hill). The creek's natural character has been greatly altered by the Army Corps of Engineers flood control project, and by private development. All that remains of the marshes is a narrow fringe along segments of the creek edge, and small areas preserved at the College of Marin, Piper Park, Redwood High School, the Larkspur Ferry Terminal, and Remillard Park.

The U.S. Fish and Wildlife Service classifies most of the marshes as estuarine, or tidal wetlands, because the waters have some access to the Bay (The California General Plan Glossary (The California Planning Roundtable, 1990) defines "wetlands" as "Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water." Under a "unified" methodology now used by all federal agencies, wetlands are defined as those areas meeting certain criteria for hydrology, vegetation, and soils.). The marshes along the southeasterly boundary of Redwood High School, at the College of Marin, and at Remillard Park are classified as *palustrine*, or *nontidal*

wetlands - cut off from tidal action.

The wetlands contain a variety of marsh vegetation. One plant, cordgrass, is the most productive in its yield per acre of any grass food known. It also produces more oxygen by photosynthesis than any other vascular plant. Another plant found along Corte Madera Creek, the Marin knotweed, is a preeminent, extremely rare, endangered, and unprotected species, according to the California Department of Fish and Game. Corte Madera Creek is one of only two known locations where the knotweed still exists (*Creekside Supplemental Environmental Report*, September 1987).

Salt marshes support a great diversity of animals ranging from small invertebrates to large vertebrates such as great blue herons. Fish graze the marshes at high tide and are in turn eaten by birds. The marsh vegetation provides nest sites and food sources for song birds and rodents (*ibid.*).

The marshes of the San Francisco Bay and the waters of Corte Madera Creek provide an important over-wintering habitat for migratory species of the Pacific Flyway. In the fall, migrating waterfowl and shorebirds by the hundreds of thousands arrive from the north to rest and feed before resuming their flights southward to Mexico and Central and South America. In spring, waves of shorebirds are seen once again as they return. The northward migration is not as populous, as many of the birds choose to return through the Central Valley.

Three special status species have been sighted near the creek in Larkspur, although not in recent years - the California clapper rail, the California black rail, and the salt marsh harvest mouse. The clapper rail and salt marsh harvest mouse are listed as endangered by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

Balance Between Recreational Uses and Protecting Natural Vegetation and Wildlife

In recent years, Larkspur has aggressively fought to preserve its few remaining marshes. The City has also sought to retain the recreational aspects of the creekside environment by establishing bike and pedestrian paths along some segments. The City recognizes that creekside improvements may encourage human intrusion into areas of the creek that sustain important habitat for wildlife. Therefore, the provision of recreation facilities in areas with critical ecological resources is balanced with a sensitivity to protecting wildlife habitat, wildlife species, and remnants of native riparian vegetation.

Water Quality

Intermittent or continually running water distinguishes rivers and streams. Streams originate as outlets of ponds or lakes, or from springs, seepage, or seasonal runoff. Riparian streams and creeks represent a rare habitat type, affected by the availability and quality of their water. The quality of water in streams, creeks, ponds, and other surface bodies can be affected by erosion, sedimentation, and runoff. Naturally occurring processes, such as erosion, can be accelerated by human actions. Excessive grading, removal of

vegetation, and construction adjacent to stream banks can hasten the natural erosion process, resulting in the rapid loss of soil from the land and high levels of sediment in surface water bodies. The sediment in rapidly moving water undercuts stream banks, while slower moving waters deposit silt. The potential for erosion occurs primarily along natural channel banks that have not been altered by flood control projects.

Another source of surface water pollution is contaminated surface runoff. Surface runoff typically contains contaminants such as oil and grease from driveways, parking lots, and streets, sediment from construction sites, litter, animal waste, pesticides, lead from auto exhausts, and yard waste.

San Francisco Bay

Larkspur only has about one-half mile of direct Bay frontage - from the Larkspur Landing pedestrian bridge to the eastern end of Remillard Park. The shoreline is designated either Open Space or Parkland and there is no potential for development. The Bay frontage beyond Remillard Park is outside the City Limits and within the boundaries of San Quentin Prison, except for a small beach between the park and the prison boundaries. Wind surfers launch their craft from the beach. (See Policy "e" and Action Programs 7 and 8, and discussion of this site in Chapter 5, Public Facilities and Services, page 107) Other than at the beach, access to the Bay is difficult. The shoreline is rocky and narrow, and it is unsafe to stop a car along busy Sir Francis Drake Boulevard, which parallels the Bay front. A paved bike/pedestrian path does provide access to views of the Bay and the hills beyond.

The wave action from boats approaching the Larkspur Ferry Terminal has caused some shoreline erosion. Ferries now reduce their speeds as they approach and leave the terminal, mitigating the problem.

Railroad Right-of-Way

The former Northwestern Pacific Railroad right-of-way paralleling Holcomb and William Avenues and the Redwood High School marsh is also a valuable urban open space area. Since abandonment of the line for railroad use, the property has become overgrown with blackberries, native willow, wild rose, broom, and acacias. It is used informally for biking, walking, and play. Any new development should provide for a permanent bicycle/pedestrian path to replace the existing informal path. As of October 1990, a citizens' group was working to acquire this land for open space.

Parks

Larkspur's parks are discussed in Chapter 5, Community Facilities and Services, pages 93-95. However, three City parks are unique in that they serve more than recreational purposes. Piper Park, Remillard Park, and Miwok Park each contain protected marshes and natural areas. The marshes at Piper and Remillard Parks are discussed above.

Miwok Park on the slopes of the San Quentin Peninsula contains a manmade reservoir, Tubb Lake, that has become a valuable biologic study resource for the community. Tubb Lake is in need of dredging, and its cattails should be

cleared. The dam should also be assessed for stability. Lands adjacent to the park which are designated for residential development could have an impact on the Tubb Lake watershed the natural character of the park. There is an existing lease at the park. It is crucial to enhance Tubb Lake and the surrounding park to make it a functional public facility.

Open Space Goals, Policies, and Programs

Goal 1: Preserve and enhance a variety of open space features including ridgelines, the wetlands along the Bay and the creeks, wildlife habitats, view corridors, and other amenities which contribute to a sense of openness in Larkspur.

Goal 2: Maintain Corte Madera and Southern Heights Ridges as community separators.

Policy a: Work with local and regional open space agencies and interest groups to develop an open space preservation strategy.

Action Program [1]: Map and rank open space features as to their value to the community.

Action Program [2]: Support the efforts of the Marin County Open Space District to acquire more open space in the Larkspur Sphere of Influence.

Action Program [3] Identify financing mechanisms to acquire privately held lands designated for future open space.

Action Program [4]: Educate school children and the general public about Larkspur's open space resources.

Policy b: Designate and preserve in open space the areas so shown on the General Plan Land Use map. They include Those portions of the Northridge that are above the 350-foot elevation, Baltimore canyon, the Piedmont and Redwood Avenue areas, Big and Little King Mountains and their saddle area, the Tubb Lake watershed, and the ridge above the old quarries on the San Quentin Peninsula.

Policy c: Designate and preserve in Shoreline/Marsh Conservation area the wetlands along Corte Madera Creek and at Piper Park, Redwood High School, and the Larkspur Ferry Terminal, and the shoreline between East Sir Francis Drake Boulevard and the Bay waters.

Action Program [5]: Rezone publicly-owned or dedicated open space areas to appropriate zone districts that indicate that their potential for development has been eliminated.

The Land Use and Circulation Plan designates the areas listed in Policies "b" and "c" as Open Space, Shoreline/Marsh Conservation, or Parkland. Most of these areas are in public ownership or are required to remain in open space as conditions of development approval. However, except for the parkland,

the underlying zoning suggests there is potential for development (e.g., the Northridge Preserve is zoned RMP, Residential Master Plan). In areas where the potential for development has been eliminated, the zoning should reflect a commitment to keeping the land open.

In the few remaining areas where development is allowed, Policies d-f and Action Programs 6-10 apply:

Policy d: Allow low-intensity development on hillsides and near Corte Madera Creek only if the design preserves natural features, such as significant stands of trees, forested hillsides, riparian vegetation, marshlands, wildlife habitats, ridgelines, and buffer zones.

Policy e: Encourage the use of cluster site plans for large parcels of land provided the design will not be detrimental to the character and scale of the community.

Clustering is the construction of buildings in closer groupings than usual with the purpose of retaining open space areas. Common access points, shared driveways, and the pooling of small yard spaces can create more usable open space and other amenities than is possible with traditional setbacks and access requirements. In those situations in which tradeoffs between General Plan policies are required, the preservation of Larkspur's unique community character should be given more weight than the objective of clustering to achieve open space.

Action Program [6]: Require new development to preserve some natural area.

Action Program [7]: If a development proposal requires the removal of trees or other vegetation of significant resource value or adversely impacts a wetlands area (as defined in implementing ordinances), require the developer to replace the lost resources.

The Initial Study for each public or private project should indicate whether the project will be located in or adjacent to wetlands or other natural habitat. Where wetlands or other sensitive biologic resources are identified, studies should be prepared by a qualified biologist to assess the impacts of the project and to identify measures that will fully mitigate those impacts so that the habitat values are preserved.

Action Program [8]: Avoid development in areas which contain rare or endangered species of plants or animals.

Policy f: Increase visual access to the Bay and Corte Madera Creek.

Action Program [9]: Provide public spaces with views onto the Bay and Corte Madera Creek.

Action Program [10]: Apply conditions of project approval that will preserve or open up views of the Bay and Corte Madera Creek.

Policy g: Provide boating access to Corte Madera Creek and the Bay.

Action Program [11]: Maintain or improve the existing level of access to Corte Madera Creek for the launching of small boats.

Larkspur and the Marin Rowing Club have worked out an agreement whereby the club has built a clubhouse and dock on City land near the Greenbrae (Sir Francis Drake) interchange. In return, the public can take rowing classes and use the dock on weekends. (See also Chapter 5, page 94, last paragraph, regarding this Joint Powers Agreement.)

Goal 3: Provide reasonable access to open space areas and trails without adversely impacting natural habitats.

Policy h: Seek a balance between the recreational aspects of open space and the need to protect wildlife and fragile vegetation from intrusion by humans and domestic animals.

Action Program [12]: Provide a buffer zone between natural habitats and human use areas (such as paths), and clearly mark the boundaries. Place restrictions on access to these sensitive areas by pets.

The City will consider an ordinance to implement Action Program 12. The ordinance should identify the purpose of the buffer zone, specify its size and nature, and call for protection and enhancement of biological resources, particularly wetlands, riparian streams, and creeks.

Action Program [13]: Provide hiking trails to connect Tubb Lake with the ridge top, Larkspur Landing, and Sir Francis Drake Boulevard.

Other Goals, Policies, and Programs relating to trails and paths are found in the Chapter 8, Trails and Paths, on pages 158-163.

Goal 4: Protect open space and shoreline/marsh conservation areas from degradation as a result of public facility needs such as roads, sewers or flood control.

Policy i: Seek to balance the needs for community safety with the goal of protection of the environment.

Action Program [14]: When dredging Corte Madera Creek, protect the wetlands along the creek.

Action Program [15]: Plan future development of the ferry terminal so as to minimize impact on nearby creek and marshland habitats.

WATER CONSERVATION AND WATER QUALITY

The City of Larkspur receives its water from the Marin Municipal Water District (MMWD) which serves central and southern Marin County. Most water consumers in Larkspur are connected to MMWD's Ross Valley distribution system. This distribution system is fed by three transmission lines which channel water chiefly from reservoirs on the slopes of Mount Tamalpais but also from the Russian River through pipelines of the Sonoma

County Water Agency. Two of the lines come from Kentfield and run through Larkspur along Magnolia Avenue. The third comes from Kentfield along Sir Francis Drake Boulevard through Larkspur and on to San Rafael. There are few problems with water service in Larkspur (Ron Theisen, Principal Engineer, Marin Municipal Water District, May 1989).

The quality of water delivered by the MMWD is considered excellent. All district water supplies meet current Environmental Protection Agency and State of California health standards after treatment. In 1989, the MMWD was planning some modifications to its two treatment plants to meet proposed new federal and State standards. Larkspur's water is treated at the Bon Tempe Treatment Plant above Phoenix Lake.

Water shortages are a perennial problem in central and southern Marin County. The drought of 1987-89 drew further attention to the need for intensive water conservation efforts. The MMWD developed public awareness and voluntary water reduction campaigns. A computer assisted program designed to help conserve water at sites with two or more acres of turf and an automatic irrigation system produced significant results. A majority of the households served by the district conserve water with low flow showers and toilets, and low-water-use landscaping. Despite these efforts, per capita water use has been increasing by about 0.6 percent per year since the early 1970s (*Water Supply Master Plan*, Marin Municipal Water District, October 1989).

In 1989, the MMWD placed a restriction on new water hook-ups as it searched for additional long-term water supplies outside the area. A water supply Master Plan, published in October 1989, recommended that the district try to obtain additional supplies from Lake Sonoma on the Russian River and the New Bullards Bar Reservoir on the Yuba River. This would require agreements with the local water agencies and approval of the State Water Resources Control Board.

Water Goals, Policies, and Programs

Goal 5: Reduce water consumption.

Policy j: Support the efforts of the Marin Municipal Water District to reduce water consumption.

Action Program [16]: Require new and replacement public and private landscaping to use drought tolerant plantings

Standards will be developed in an implementing ordinance.

Action Program [17]: Require the installation of water-conserving plumbing fixtures in new buildings and when existing fixtures are replaced.

SOLID WASTE AND RECYCLING

Garbage service in Larkspur is provided by Marin Sanitary Service. Garbage is hauled to a landfill in Novato, but only after newspaper, cardboard, glass,

and metal have been removed for recycling. Recycling services are provided by Marin Recycling, which is under the same ownership as the garbage company. Marin Recycling picks up separated recyclable materials in residential neighborhoods on the same day as regular garbage pickup. In addition, Marin Recycling manually separates recyclable materials from debris boxes and dumpsters delivered to its indoor resource recovery plant in San Rafael. As a result of these aggressive recycling programs, 25 percent of the County's waste stream is now diverted from landfill (Joe Garbarino, Marin Sanitary Service and Marin Recycling, November 1989). Thus the County is already in compliance with new state legislation that requires 25 percent diversion by 1995. By 2000, 50 percent must be diverted.

Wood and brush are also separated from the garbage and reduced to woodchips and sawdust. The woodchips are transferred to a co-generation plant and burned to produce energy. Sawdust and sand are mixed to produce topsoil.

Solid Waste Goals, Policies, and Programs

Goal 6: Reduce the total volume of the City's waste stream.

Policy k: Support programs to recycle paper, cardboard, glass, metal, plastics, motor oil, and to compost or generate energy from tree prunings, brush, and other vegetation.

Action Program [18]: Promote the use of goods containing recycled materials through City purchasing policies and other efforts.