# **EXHIBIT 13**

# **VENTURA COUNTY GENERAL PLAN**

# **GOALS, POLICIES AND PROGRAMS**



Last Amended by the Ventura County Board of Supervisors on

xxxx, 2019

County of Ventura Board of Supervisors PL16-0127

**SR Exhibit 13 -** Amendments to the General Plan - Goals, Policies, and Programs and Resources Appendix

# **Ventura County General Plan GOALS, POLICIES AND PROGRAMS**

# 2019 Decision-Makers and Contributors

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# VENTURA COUNTY GENERAL PLAN

# GOALS, POLICIES AND PROGRAMS

Adopted by the Ventura County Board of Supervisors – May 24, 1988 (GPA #88-1)

All amendments became effective 30 days after approval date, except as otherwise noted below:

Amended	ě	September 13, 1988 (88-2)	Amended	•	December 10, 1996 (96-3) [Effective -
Amended	×	December 20, 1988 (88-3 & 88-4)	Amended	2	May 10, 1997] December 17, 1996
Amended	ë	June 20, 1989 (89-1.1			(96-2)
		through 1.5)	Amended		July 22, 1997 (97-2)
Amended	=	June 20, 1989 (89- 1.6) [Effective -	Amended		September 16, 1997 (97-3 & 97-4)
		November 11, 1989]	Amended	-	October 28, 1997 (97-
Amended		December 19, 1989 (89-2)	Amended	*	5) November 3, 1998
Amended	$\approx$	April 10, 1990 (90-1)			(Voter Approved
Amended	2	October 16, 1990 (90- 2)			SOAR Ordinance) [Adopted by Board of
Amended	Б	December 11, 1990 (90-4) [Effective April 15, 1991]			Supervisors, November 24, 1998 (98-1)/Effective -
Amended	-	April 9, 1991 (91-1)	A was a waller of		December 4, 1998]
Amended	÷.	December 10, 1991	Amended	20	July 13, 1999 (99-1)
		(91-3)	Amended	-	November 19, 1999 (99-2) [SOAR Election
Amended		March 24, 1992 (91-2 & 92-1)			- March 7, 2000/Effective - April
Amended	- 1	November 17, 1992 (92-4)	A ma a mada al		7, 2000]
Amended	-	December 1, 1992 (92-2)	Amended		December 14, 1999 (99-3)
Amended		December 15, 1992	Amended	9	August 8, 2000 (00-1)
Amended		(92-3) [Effective - September 23, 1998]	Amended	-	September 19, 2000 (00-2)
3303706	02	March 2, 1993 (93-1)	Amended	201	December 5, 2000 (00-3A)
Amended		October 19, 1993 (93- 3) [Effective - February 18, 1994]	Amended	<b>=</b> 0	December 5, 2000 & November 20, 2001 (00-3B) [Effective -
Addendum	- 1	January 13, 1994			February 14, 2002]
Amended	-	June 7, 1994 (94-1)	Amended	390.5	June 19, 2001 (01-1)
Amended	-	July 12, 1994 (94-2)	Amended		October 23, 2001 (01-
Amended	-	December 20, 1994 (94-3)	Amended		2) March 26, 2002 (02-1)
Amended	2	July 18, 1995 (95-1)		₩.Y	, , ,
	-	November 14, 1995	Amended	77	May 14, 2002 (02-2)
		(95-2)	Amended	-	November 11, 2003 (03-1)
Amended	6	December 10, 1996 (96-1)	Amended		January 27, 2004 (04- 1)

Amended - November 15, 2005 (05-3)

Amended - December 6, 2005 (05-4)

Amended - May 8, 2007 (07-1) Amended - December 4, 2007

(GP06-0003)

Amended - July 22, 2008 (GP07-

0002)

Amended September 9, 2008 (GP08-0006)

Amended - December 16, 2008 (GP08-0001)

Amended - April 6, 2010 (GP09-0001)

Amended June 28, 2011 (GP09-0004)

Amended - October 22, 2013 (PL12-0100)

Amended - March 24, 2015 (PL13-0109)

Amended - September 22, 2015 (PL14-0066)

Amended - October 20, 2015 (PL15-0095)

Amended - November 8, 2016 (PL

17-0058; Voter Approved SOAR Ordinance), [Adopted by Board of Supervisors, December 13, 2016/ Effective December

23, 2016]

Amended - XXXX 2019 (PL16-

0127) Habitat Connectivity and Wildlife Corridors

### 1.5 Biological Resources

Biological resources include plant and animal species and their habitats, plant communities and ecosystems.

### Vegetation

The diverse topography and climate of Ventura County provide an environment where a range of vegetation communities (from Coastal sage-scrub to subalpine forest, from desert chaparral to riparian woodland) can maintain successful populations. Native vegetation in Ventura County can be categorized into seven general plant communities: grasslands, coastal sage-scrub, chaparral, oak woodland, riparian, pinyon-juniper, and timber-conifer (see Resources Appendix).

Most native vegetation in the north half of the County has been preserved as a result of the low level of development in this area (outside of Lockwood Valley). The exceptions are the large expanses of native grasslands that were eliminated by cattle ranching operations several decades ago. Development in the Lockwood Valley area has impacted the pinyon-juniper community; however, the higher elevations surrounding the valley contain nearly undisturbed stands of timber-conifer vegetation.

A large portion of the native vegetation in the south half of the County has been displaced as a result of urban and agricultural development. For the most part, this development is confined to the fertile valleys and plains, and along the coastline. Consequently, most of the mountainous areas in the south half still support significant native plant communities.

Chaparral is the most common plant community in the County. This community consists of woody shrubs and herbaceous plants, is generally located on steep slopes with rocky or heavy soils, and is characteristically dense and subject to fires. Large expanses of chaparral are found in the Santa Monica Mountains.

The Coastal sage-scrub community is located below the chaparral community, generally below 3000 feet, on dry, rocky slopes. It consists of woody shrubs, and is a more open community than the Chaparral. Substantial areas of this community remain on South Mountain and in the Simi Hills and Santa Susana Knolls areas; however, these populations are threatened by encroaching residential development.

Grassland vegetation is not common, and as groundcover, is usually associated with oak-woodland or open areas. The La Jolla Valley in Point Mugu State Park is the only area in the County that still contains native bunch grasses in pure stands, and is considered a locally unique habitat.

The oak woodland community in Ventura County contains the easily identifiable valley oaks, with trees 20 to 60 feet tall and grassland and soft shrubs as groundcover, as found in the Thousand Oaks, Lake Casitas, and Hidden Valley areas. A large area of foothill oak woodland is found on Sulphur Mountain.

Riparian vegetation is found in *wetlands* along most of the permanent and ephemeral streams within the County. Typical trees of this community include sycamores, willows, cottonwoods, and alders. Extensive riparian growth now lines Piru, Sespe, and Santa Paula Creeks, and the Santa Clara and Ventura Rivers. These riparian areas provide both essential habitat and migration corridors for wildlife in Ventura County.

#### Fish and Wildlife

The naturally vegetated areas of the County provide shelter, food, and nesting areas to create habitats for a wide variety of animal species. Each plant community has different characteristics which support different species of wildlife, although an animal species may use various habitats at different times of the year or at various stages in the animal's life cycle.

The low-elevation, drier plant communities, such as the grasslands, coastal sage-scrub, and chaparral, support a wildlife population which includes rodents, insectivores, hares, foxes, coyotes, raptors (such as hawks, falcon, owls, and eagles) and numerous perching birds, from hummingbirds to ravens. The upland plant communities, such as the oak woodlands, pinyon-juniper, and timber-conifer, provide habitats for larger animals, and include populations of bobcat and mountain lion, mule deer, and black bear, in addition to a game population of quail, rabbit, tree squirrel, band-tailed pigeon, dove, turkey, and chukar (partridge). Reptiles are commonly found throughout the County.

Several hundred species of vertebrates find permanent and transitory range in the varied habitats and topography of the Los Padres National Forest. These species are listed in the U.S. Forest Service Wildlife Survey of 1982. The number of individuals of many of these species is below optimum replacement levels, a result of the declining quality of habitats and deficient vegetation management.

Riparian areas support a great intensity and diversity of species. These species include the bank swallow, western yellow-billed cuckoo, southern rubber boa, and migratory waterfowl. Populations of these species have greatly diminished as a result of human intrusion and degradation of their habitats.

### **Locally Unique Habitats**

Ventura County contains several unique habitats that support a variety of plants and animals found nowhere else in the country.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources.

Ventura County also has two large areas set aside as sanctuaries for the California condor. Although there are (as of 1986) no longer any of these birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources Map in the Resources Appendix.

The Hopper Mountain National Wildlife Refuge is just outside of the Los Padres National Forest, east and south of, and adjacent to, the Sespe Condor Sanctuary. It is a traditional feeding site for the California condor, and is currently operated as a cattle ranch. In addition, a variety of raptors, including prairie falcons, and red-tailed and Cooper's hawks, populate this area.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous fish, also uses the Sespe Creek and the Santa Clara River for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a significant biological resource.

# **Habitat Connectivity and Wildlife Corridors**

Habitat connectivity is the degree to which the natural landscape facilitates or impedes movement of species among habitat areas. Movement is essential to the survival of animals and plants because it allows seasonal migrations, access to resources, dispersal of offspring, genetic diversity, and allows for long-term changes in species' range in response to climate change. A high degree of connectivity among habitat types is also important for maintaining biodiversity and ecosystem functions.

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, including within Southern California. Loss of habitat connectivity or habitat fragmentation has occurred due to urban sprawl, roads, conversion of wildlands to intensive agricultural uses, installation of fencing that restricts or prevents wildlife movement, and other human and natural influences. Urbanization can result in the following effects on wildlife corridors:

- <u>Decreased abundance and diversity of native species and replacement by non-native species.</u>
- Removal and fragmentation of natural vegetation lowering habitat quality.
- <u>Increased rates of roadkill and habitat fragmentation due to the development of a local road network.</u>
- Spread of exotic plants through disturbance or introduction by humans that results in loss of biodiversity and habitat quality.
- Increase in perennial water which favors non-native aquatic organisms such as bullfrogs, and non-native terrestrial organism such as Argentinean ants which outcompete native species.
- Artificial night lighting which can impair the ability of nocturnal animals to navigate through a corridor.
- <u>Increased noise, which disturbs or repels many animals and presents a barrier to movement.</u>
- <u>Disruption of the natural fire regime by either increasing the number of fires or suppressing fires that maintain natural ecosystem structure.</u>

Biological diversity benefits both the natural and built environments in several ways. It benefits wildlife and plant species by fostering vigor and resiliency. For example, In the urban and agricultural environments, biological diversity supports a variety of pollinators necessary for crop health, and it helps to ensure healthy populations of predators that control vermin (e.g., rodents).

Within Ventura County, the following Habitat Connectivity and Wildlife Corridors have been identified:

- Santa Monica-Sierra Madre Connection Connections between the Santa Monica Mountains to the Santa Susana and Sierra Madre mountain ranges. This Connection incorporates the Santa Clara River;
- <u>Sierra Madre-Castaic Connection Connections between the Sierra Madre to the Castaic ranges; and</u>
- Ventura River Corridor.

These habitat linkages and wildlife corridors are shown in Figure 1.5.5 of the Resources Appendix and are referred to as Habitat Connectivity and Wildlife Corridors. Within the mapped Habitat Connectivity and Wildlife Corridors, there are three geographic areas referred to as Critical Wildlife Passage Areas (CWPAs). The three areas identified as CWPAs are portions of Oak View, the Simi Hills, and Tierra Rejada Valley, as depicted on Figures 1.5.6, 1.5.7, and 1.5.8 of the Resources Appendix.

# Endangered, Threatened and Rare Species

Ventura County is host to numerous species of plants and animals that are *endangered*, threatened, rare, or considered to be a candidate species for one of those designations. A full listing of these species, with their State and Federal designations, and a general description of their locations is found in the Resources Appendix. The areas where these species are located are also designated on the Significant Biological Resources Map in the Resources Appendix.

Although fish and wildlife are generally renewable resources, the rates of renewal are usually very slow and are often impeded by the disruptive forces or urbanization, human harassment, predator control, and pollution. The species and ecosystems in this County are of aesthetic, ecological, educational, historic, recreational and scientific value to the people of Ventura County and the nation as a whole.

The goal, policies and programs which apply to biological resources are as follows:

### 1.5.1 Goal

Identify, preserve and protect significant biological resources in Ventura County from incompatible land uses and development. Significant biological resources include endangered, threatened or rare species and their habitats, wetland habitats, coastal habitats, wildlife migration corridors that facilitate habitat connectivity and wildlife movement, and locally important species/communities.

#### 1.5.2 Policies

- 1. Discretionary development which could potentially impact biological resources shall be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures.
- Discretionary development shall be sited and designed to incorporate all feasible
  measures to mitigate any significant impacts to biological resources. If the impacts
  cannot be reduced to a less than significant level, findings of overriding
  considerations must be made by the decision-making body.
- 3. Discretionary development that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on wetland habitats. Discretionary development that would have a significant impact on significant wetland habitats

- shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community", a statement of overriding considerations is adopted by the decision-making body.
- 4. Discretionary development shall be sited a minimum of 100 feet from significant wetland habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100-foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.
- 5. The California Department of Fish and Game, the U.S. Fish and Wildlife Service, National Audubon Society and the California Native Plant Society shall be consulted when discretionary development may affect significant biological resources. The National Park Service shall also be consulted regarding discretionary development within the Santa Monica Mountains or Oak Park Area.
- 6. Based on the review and recommendation of a qualified biologist, the design <u>and maintenance</u> of road and floodplain improvements, <u>including culverts and bridges</u> shall incorporate all feasible measures to accommodate wildlife passage.
- 7. When considering proposed <u>discretionary development</u>, <u>County decision-makers shall consider the development's potential project-specific and cumulative impacts on the movement of wildlife at a range of spatial scales including local scales (e.g., hundreds of feet) and regional scales (e.g., tens of miles).</u>
- 8. <u>Development within the Habitat Connectivity and Wildlife Corridors and the Critical Wildlife Passage Areas shown in Figures 1.5.5 1.5.8 of the Resources Appendix, shall be subject to the provisions and standards of the Habitat Connectivity and Wildlife Corridor overlay zone (HCWC overlay zone) and the Critical Wildlife Passage Areas overlay zone (CWPA overlay zone) as set forth in the Non-Coastal Zoning Ordinance.</u>

# 1.5.3 Programs

- 1. The Planning Division, in conjunction with State and Federal agencies, will identify those areas of the County that are considered to be critical habitats of *endangered*, threatened or rare species as well as for other significant biological resources.
- 2. The Planning Division will retain a list of qualified biological consultants for the purpose of providing information to complete Initial Studies and Environmental Impact Reports.
- 3. The Fire Protection District, in conjunction with the California Department of Forestry (CDF), will, under the California Vegetation Management Program, continue the use of prescribed burning to mimic the effects of natural fires in order to reduce the fire hazard to human residents and to enhance the health of biotic communities.

4. The Planning Division shall prepare a program proposal, for Board of Supervisors' consideration, to map significant wetland habitat areas and amend the General Plan and Zoning Ordinance in order to establish a Biological Resource Protection Overlay designation/zone which would require all development in said overlay areas to be evaluated for impacts on significant wetland habitat areas.

### Glossary

An attempt has been made to define all technical words contained in the text. If a technical word is not defined, often the word can be found in a standard dictionary. In using the glossary, the reader will note that many technical words appear within the definitions themselves. Definitions of these words can also be found in this glossary.

. . . .

<u>Core Habitat Areas – Extensive areas of habitat, usually containing more than one habitat type and supporting multiple wildlife species.</u>

Critical Wildlife Passage Areas – Areas of land identified within a Habitat Connectivity and Wildlife Corridor that are especially valuable due to the existence of one or more of the following elements: 1) intact, native habitat or higher habitat values; 2) proximity to water bodies or ridgelines; 3) proximity of critical roadway crossings; 4) likelihood of encroachment by future development, and within which wildlife movement and plant dispersal could be easily disturbed by development; or 5) presence of non-urbanized or undeveloped lands within a geographic location that connects core habitats at a regional scale.

Functional Connectivity - Describes the degree to which a physical setting (i.e., natural landscape and built environment) facilitates or impedes the movement of organisms. Functional connectivity is a product of both the features of the physical setting (e.g., vegetation, physical development) and the behavioral response of plants and animals to these physical features.

<u>Habitat Connectivity and Wildlife Corridors – Areas of contiguous natural habitats or undeveloped land of sufficient width to facilitate the movement, migration, foraging, breeding, and dispersal of multiple wildlife or plant species between two or more core habitat areas.</u> The boundaries of the Habitat Connectivity and Wildlife Corridor areas and the Habitat Connectivity and Wildlife Corridors overlay zone are coterminous.

Wildlife Migration Corridor. Linear spaces that connect the various areas of an animal's habitat, and serve as links between feeding, watering, resting and breeding places. These corridors are especially important to larger, wider-ranging animal species.

# **VENTURA COUNTY GENERAL PLAN**

# **RESOURCES APPENDIX**



Last Amended by the Ventura xxxx, 2019

# VENTURA COUNTY GENERAL PLAN RESOURCES APPENDIX

# 2019 Decision-Makers and Contributors

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# **VENTURA COUNTY GENERAL PLAN**

# **RESOURCES APPENDIX**

Adopted by the Ventura County Board of Supervisors - May 24, 1988

Amended - June 20, 1989

Amended - December 19, 1989

Amended - December 11, 1990

Amended - December 10, 1991

Amended - December 1, 1992

Amended - July 12, 1994

Amended - September 19, 2000

Amended - September 9, 2008

Amended - April 6, 2010

Amended - June 28, 2011

Amended - XXXX, 2019

# 1.5.5 Locally Unique Habitats

Ventura County contains several areas that are of *unique* significance due to their ability to provide habitat for endangered, rare and threatened species or because they constitute an example of a unique plant community.

The coastal wetlands and lagoons found along the south coast of the County provide shelter, forage, and nesting areas for thousands of birds, fish, mollusks, crabs, seals, and many other marine organisms and plants. The wetland area with the richest diversity is the Mugu Lagoon, which shelters the remnants of many plant, bird, fish, and insect populations which once inhabited the coast from the Ventura River to the Santa Monica Mountains. Other wetlands include the McGrath Lake and Ormond Beach areas, and the mouths of the Ventura and Santa Clara Rivers. These areas are considered significant biological resources (see Significant Biological Resources Map, Figure 1.5.2).

The Pothole in the Devil's Potrero, on the Agua Blanca Creek, is an inland freshwater marsh that contains several small species of plants that are unique to freshwater marshes. It is located in the Los Padres National Forest, and is within the Sespe Condor Sanctuary.

The Sespe Creek is designated as a "Wild Trout Stream" by the State of California. The steelhead trout, an anadromous fish, uses this stream as its spawning area. The Pacific lamprey, an anadromous vertebrate, also uses the Sespe Creek (and the Santa Clara River) for its spawning area. The creek also supports a significant population of rainbow trout, cousin to the steelhead. The "Wild Trout Stream" designation affords some protection of water flows and riparian vegetation, both threatened by water development projects. In addition, the Forest Service has proposed that a 28½ mile portion of Sespe Creek receive a "Wild and Scenic River" designation. The Sespe is also mapped as a Significant Biological Resource.

The Santa Clara River east of Piru is the last remnant of relatively undisturbed riverine habitat in the county. Several endangered, threatened, and rare species of birds have been sighted in this area, and nowhere else in the County, over the past few years.

The Ventura River deserves mention as it currently supports a limited population of rainbow trout in the Foster Park area and a limited steelhead run in the River and San Antonio Creek. According to the State Department of Fish and Game, the River has the potential for the introduction of a steelhead and chinook salmon fishery in the future. Local populations of steelhead and rainbow trout along the Ventura River have nearly been eliminated, a result of dam construction and water pollution from agricultural operations and septic system leachate.

Ventura County has two large areas set aside as sanctuaries for the California Condor. Although there are (as of 1986) no longer any of these rare and majestic birds living in the wild, the U.S. Fish and Wildlife Service remains hopeful that its Condor Recovery program, involving captive breeding and eventual release, will again allow the condor to safely exist and repopulate in Southern California. As a result, both Matilija and Sespe Condor Sanctuaries remain as significant biological habitats, as shown on the Biological Resources Map.

The Sespe Condor Sanctuary was dedicated in 1947 and consists of 53,000 acres (see <u>Figure 1.5.3</u>). The majority of known sites historically used for nesting (25 of 33) are located within its boundaries. The sanctuary contains extensive rocky canyons, cliffs and areas of bare sandstone interspersed with dense chaparral. Big-cone Douglas fir and incense cedar found in scattered locations are used for roosting. The area is closed to public entry, although there are two north-south travel corridors-one along Sespe Creek and the other along Forest Service Trail 20W11 through Squaw Flats. There is no shooting allowed within the Sanctuary and in some surrounding critical condor habitat.

The Sanctuary is surrounded on the west, north and east by critical condor habitat and the Hopper Mountain National Wildlife Refuge is to the south of the Hopper Mountain area. "Critical" condor habitat was described for three areas in Ventura County: Mount Pinos, Matilija and Sespe-Piru (Federal Register, Vol. 41, No. 187, September 24, 1976). All Federal agencies must ensure that actions authorized, funded, or carried out by them do not result in the destruction or modification of these critical habitat areas.

"Essential" habitat are those areas intended to supplement the officially designated critical habitat. These areas have no legal status (a "Critical Habitat" is a legal status); however, the habitat

management recommendations are intended to be applied with equal emphasis in these areas. Both areas in Ventura County extend the Sespe-Piru critical habitat -- on the northeast to Liebre Mountain in Los Angeles County and the west to Madulce Peak in Santa Barbara County. The boundaries will be updated as needed.

Hopper Mountain National Wildlife Refuge (N.W.R.) lies adjacent to the Sespe Condor Sanctuary on the east and south just outside the Los Padres National Forest. The 1,871 acres is comprised of rugged mountains, rock out-croppings, chaparral, hardwood groves, stands of Douglas fir and open grasslands. The area is a traditional working cattle ranch. A variety of raptorial birds reside there year-round. Condor use was infrequent--probably due to the surrounding land uses, especially oil and gas exploration.

### 1.5.6 Habitat Connectivity and Wildlife Corridor

Habitat connectivity is the degree to which the natural landscape facilitates or impedes movement of species among habitat areas. Movement is essential to the survival of biota because it allows seasonal migrations, access to resources, dispersal of offspring, genetic diversity, and allows for long-term changes in species' range in response to climate change. A high degree of connectivity among habitat types is also important for maintaining biodiversity and ecosystem functions.

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, including within Southern California. Loss of habitat connectivity or habitat fragmentation has occurred due to urban sprawl, roads, conversion of wildlands to other uses, installation of fencing that restricts or prevents wildlife movement, and other human and natural influences. Urbanization can result in the following effects on wildlife corridors:

- Decreased <u>abundance</u> and <u>diversity</u> of <u>native</u> <u>species</u> and <u>replacement</u> <u>by non-native</u> <u>species</u>.
- Removal and fragmentation of natural vegetation lowering habitat quality.
- <u>Increased rates of roadkill and habitat fragmentation due to the development of a local road network.</u>
- Spread of exotic plants through disturbance or introduction by humans that results in loss of biodiversity and habitat quality.
- <u>Increase in perennial water which favors non-native aquatic organisms such as bullfrogs, and non-native terrestrial organism such as Argentinean ants which outcompete native species.</u>
- Artificial night lighting which can impair the ability of nocturnal animals to navigate through a corridor.
- Increased noise, which disturbs or repels many animals and presents a barrier to movement.
- <u>Disruption of the natural fire regime by either increasing the number of fires or suppressing fires that maintain natural ecosystem structure.</u>

Biological diversity benefits both the natural and built environments in several ways. It benefits wildlife and plant species by fostering vigor and resiliency. For example, In the urban and agricultural environments, biological diversity supports a variety of pollinators necessary for crop health, and it helps to ensure healthy populations of predators that control vermin (e.g., rodents).

Within Ventura County, the following Habitat Connectivity and Wildlife Corridors have been identified:

- Santa Monica-Sierra Madre Connection Connections between the Santa Monica Mountains to the Santa Susana and Sierra Madre mountain ranges. This Connection incorporates the Santa Clara River;
- Sierra Madre-Castaic Connection Connections between the Sierra Madre to the Castaic ranges; and
- Ventura River Corridor.

These habitat linkages and wildlife corridors are shown in Figure 1.5.5 and are referred to as Habitat Connectivity and Wildlife Corridors. They enable the migration and dispersal of wildlife and plant species, which are critical to the long-term survival of these species in an urbanizing environment. The corridors provide: (1) buffers to mitigate for "edge effects" where dissimilar habitats meet; (2) viable habitat for species needing multiple generations to achieve gene flow through the linkage; (3) needed resources (e.g., food, water, specific habitat, breeding partners, etc.); and (4) needed habitat to allow natural processes to operate and allow for species and natural communities to respond to climate change.

Ventura County recognizes that individual development projects have the potential to impact habitat connectivity. The County encourages development that enables wildlife movement by integrating design features to assist wildlife movement, such as limiting wildlife impermeable fencing, use of nighttime lighting that is directed away from natural areas, clustering development to preserve larger intact areas, and maintaining buffers between developed uses and natural habitats used by wildlife to move safely through the landscape.

Within the mapped Habitat Connectivity and Wildlife Corridors, there are three geographic area referred to as Critical Wildlife Passage Areas (CWPAs). The three geographic areas identified as CWPAs are portions of Oak View, the Simi Hills, and Tierra Rejada Valley, as depicted on Figures 1.5.6, 1.5.7, and 1.5.8.

These areas were identified as particularly vulnerable to loss of functional connectivity based on a variety of factors including, but not limited to:

- Width of the corridor;
- Existing habitat value;
- Extent of existing development and land use; and
- Proximity to important features such as water bodies and road crossing structures.

# 1.5.6 Conclusions

Various governmental agencies provide for the protection and preservation of the County's plant and animal communities. The State Department of Agriculture has the power to regulate and control the use of fertilizers, herbicides and pesticides. The County Agricultural Commissioner, governed by the State Agricultural Code, is responsible for the protection of the public from harmful plant diseases and pests.

Among the agencies which help protect and preserve the County's fish and wildlife are the U.S. Department of the Interior and the State Department of Fish and Game. The U.S. Navy controls all research activities within the Mugu Lagoon, and the U.S. Forest Service is responsible for the preservation of wildlife habitats within the Los Padres National Forest. The Forest Service has plans to reintroduce a number of wildlife species into the forest. Peregrine falcons will be introduced over time as animals and funds are available. Bighorn sheep from Cattle Canyon on the Angeles National Forest and Lytle Creek on the San Bernardino National Forest are to be transplanted in upper Piru Canyon. Turkeys, once common on Sulphur Mountain, are also to be reintroduced.

Both the Forest Service and Ventura County Fire Department (through the California Vegetation Management Program) are conducting prescribed burns, primarily in the chaparral. Mosaic blocks of perhaps 2,000 - 4,000 acres will be burned every 20-30 years. This burning will allow a rejuvenation of the vegetation beneficial to wildlife.

Among the issues raised in the "Biological Resources" discussion are management and land use practices which conflict with the protection and preservation of the County's plant and animal species. The use of poisons and traps has led to the indiscriminate killing of many animals. However, the greatest threats to the survival of the various biological communities are urbanization and other forms of human intrusion. Problems related to urbanizing pressures, such as increased fire danger, as well as water, air and noise pollution, have contributed to the degradation and/or destruction of many habitats. Introduction of predators and human harassment have affected wildlife and introduction of invasive nonnative species has disrupted plant communities.

Local agencies such as the County Planning Division and the Public Works Agency can aid tremendously in protecting sensitive areas and species. Protection can usually be accomplished through appropriate project design after a site survey and project review have been performed by a qualified biologist.

General Plan Goals, Policies and Programs should foster adequate project review and protection of biological resources. Controlled burning should be promoted by the Fire Protection District.

The interdependence of all life forms and the ecological needs for a stable and well-balanced environment must be recognized so that a healthy coexistence between human and natural biological communities can be assured.

# References:

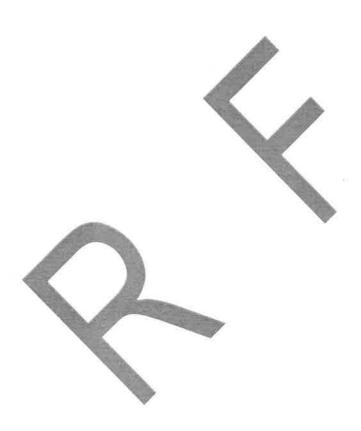
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Figure 1.5.5
Habitat Connectivity and Wildlife Corridors



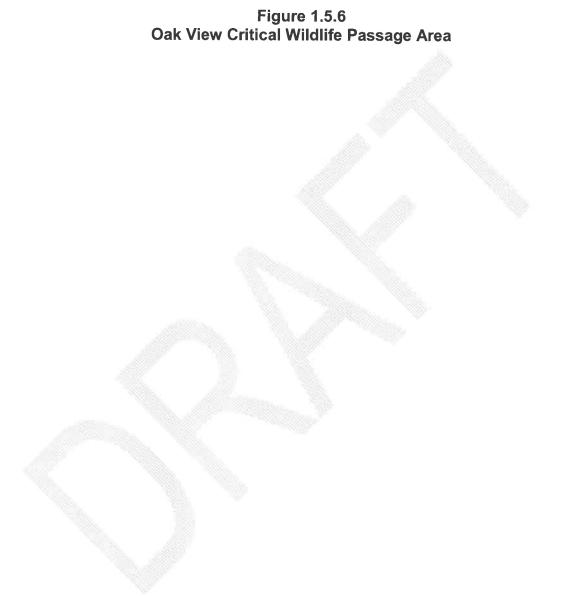




Figure 1.5.7 Simi Hills Critical Wildlife Passage Area

