

CHAPTER 4. DESIGN & DEVELOPMENT STANDARDS

Development standards set forth minimum requirements and maximum allowances (e.g., minimum setbacks from a street or maximum height of a structure). The SEA Ordinance establishes Development Standards to ensure that development is designed in a manner that supports the long-term sustainability of each SEA. Projects must comply with all Development Standards in order to obtain approval, or they may request modification of Development Standards through a SEA Conditional Use Permit. This chapter provides additional guidance and information to assist applicants with understanding and meeting Development Standards, as well as some best practices for designing development in a way that is compatible with SEA resources.

RECOMMENDED DESIGN GUIDELINES FOR PROJECTS WITHIN SEAS

- ✓ Locate new development as close to existing development and roadways as possible.
- ✓ Cluster structures and infrastructure within 25% or less of the lot area (including roads, utilities, landscaping, and fire management requirements) and maintain the remaining portions of the site in a natural undisturbed state.
- ✓ Place utilities underground and adjacent to roadways (i.e. within the right of way).
- ✓ Avoid placing development on slopes greater than 25%, unless the outcome is biologically superior (e.g. avoids impacts to sensitive biological resources). See the Hillside Management Area Ordinance (Chapter 22.104) for hillside design requirements in areas with 25% or greater natural slopes.
- ✓ Locate development away from wildlife corridors and use only wildlife permeable fencing outside of development to allow wildlife to move easily through the undeveloped portion of the project site.
- ✓ Locate development away from the most sensitive natural resources and protect those resources and contiguous natural areas as open space.
- ✓ Do not alter, grade, build upon, fill or divert water from any wetland area. Maintain minimum buffers around such areas, as specified in the SEA Development Standards.
- ✓ Do not alter, grade, fill or build within any part of the 100-year flood plain of a river or stream.
- ✓ Avoid removal of native trees, such as oak, walnut, sycamore, juniper, and Joshua trees (see SEA Protected Tree List in Appendix A).
- ✓ Landscape with plant materials that are locally indigenous and drought-tolerant. Do not landscape with invasive species listed in the Invasive Species List (Appendix C) or listed as invasive by California Invasive Plant Council.
- ✓ Direct outdoor lighting downward and away from adjacent natural areas.
- ✓ Use non-glare/non-reflective glass and/or other methods for preventing collisions of birds with window glass.

SEA RESOURCES

The SEA Ordinance defines *SEA Resources* as “the biological and physical natural resources that contribute to and support the biodiversity of SEAs and the ecosystem services they provide.” In Chapter 1, the concept of biodiversity and its importance to maintaining the character of LA County was introduced. Biodiversity, at its core, is simply the variety of life that occurs in a particular place. While biodiversity speaks to the diversity of living organisms, it is the combination of those living organisms (plants, animals, fungi, microbes, etc.) and the physical natural resources (non-living resources such as water, rocks, minerals, and air) that make up an *ecosystem*.

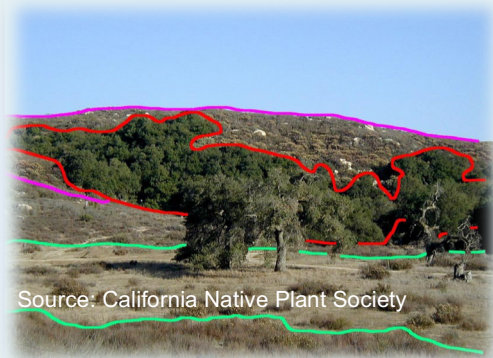
Many interactions take place within an ecosystem between the living organisms and their physical environment, and these chemical, biological, geochemical, or physical interactions provide the ecosystem with the raw materials it needs to continue to thrive. Many of these interactions, or *ecosystem functions*, also provide direct and indirect benefits to people. Such benefits are known as *ecosystem services*, and include things like clean air and water, fertile soils, pollination, raw materials in the form of foods, biofuels, and medicinal resources, protection from natural disasters like floods and droughts, and regulation of temperatures. There are also many social and cultural services provided by healthy, functioning ecosystems, such as scenic views and opportunities for recreation, tourism, culture, art, and design. The continued ability of our local ecosystems to provide the ecosystem services and biodiversity that we enjoy in LA County today depends in large part on ensuring adequate protections for the resources themselves, many of which are concentrated within and adjacent to SEAS.

To that end, the SEA Ordinance divides SEA Resources into five categories, with each category afforded a certain level of protection consistent with its relative abundance in the County and sensitivity to disturbance. Categories 1 through 3 are referred to in the Ordinance as Priority Biological Resources. SEA Resources are divided into categories based on the following factors:

- ❖ sensitivity to impacts of development;
- ❖ relative scarcity within the state, County, or SEA;

NATURAL COMMUNITIES

A natural community is a collection of plants that occur together in a repeating pattern across a landscape. Without even knowing the names of the plants, one can start to detect patterns based solely on their size, shape, and spacing.



By grouping vegetation together in this way, they can be described, mapped, and ranked based on sensitivity and rarity. Mapping natural communities can be used to:

- ✓ predict available habitat for plant and animal species,
- ✓ depict patterns of biodiversity,
- ✓ help predict fuel loads and fire risk, and
- ✓ track and evaluate changes over time.

Examining and protecting natural communities shifts the conservation emphasis from a single-species approach to a landscape approach that encompasses groups of species and ecosystems, as well the interplay between those groups.

This approach recognizes that species never occur in isolation, but rather exist as members of a community of interdependent plants and animals.

- ❖ role in supporting populations of species and ecosystem services;
- ❖ and ability to recover from disturbance (resilience).

The SEA Ordinance relies largely on existing standards, requirements, and thresholds already in use by state, federal, and county resource agencies and authorities. Each category is described in more detail below. The SEA Ordinance includes specific Development Standards for SEA Resource Categories 1 through 4 (TABLE 2). Other area-wide and land use specific Development Standards are intended to preserve valuable elements of Category 5 SEA Resources.

TABLE 2. ALLOWABLE DISTURBANCE & PRESERVATION FOR SEA RESOURCES BY CATEGORIES

| SEA RESOURCE CATEGORY: | DISTURBANCE ALLOWED: | OPEN SPACE PRESERVATION RATIO: |
|------------------------|----------------------|--------------------------------|
| 1 | none | N/A (requires SEA CUP) |
| 2 | ≤ 500 sq ft | 2:1 |
| 3 | ≤ 500 sq ft | 1:1 |
| | > 500 sq ft | 2:1 |
| 4 | ≤ 5,000 sq ft | none |
| | > 5,000 sq ft | 1:1 |
| 5 | any amount | none |

* The total building site area may be no larger than 20,000 square feet.

SEA RESOURCE CATEGORY 1

No amount of disturbance¹⁰ to resources in this category is allowed under a Ministerial SEA Review, as they are of the highest sensitivity and vulnerability in the region. Most of these resources also have state or federal regulations in place to protect them. Development should always strive to avoid resources in this category. Any development proposing impacts to Category 1 SEA Resources will require a SEA CUP with SEATAC review and a public hearing and will likely also trigger permitting requirements from other state or federal agencies (e.g. USFWS, Army Corps, CDFW, etc.). Mitigation for impacts to these resources is sometimes not a viable option because they are so rare, difficult to detect, or have habitats that are next to impossible to re-create. SEA Resources that fall into this category include the following:

ENDANGERED, THREATENED, OR RARE PLANTS AND ANIMALS:

The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (FESA), which provides a process for listing species as endangered and threatened, and provides guidance for protecting those listed species and the habitats upon which they depend. The California Endangered Species Act (CESA) prohibits the take of any fish, wildlife, or plant species designated by the California Fish and Game Commission as endangered, threatened, or candidate species. The California Department of Fish and Wildlife (CDFW) oversees the species protected by CESA. Both the federal and state regulations prohibit the take of any listed endangered or threatened plant or animal species, including the destruction of a listed species' habitat. All species protected under



Figure 11. The arroyo toad (*Anaxyrus californicus*) is both federally and state listed as an endangered species. Photo by Chris Brown, USGS.

¹⁰ Disturbance includes clearing or thinning of vegetation for fuel modification and fire protection purposes.

FESA or CESA are Category 1 SEA Resources. For the purposes of the SEA Program, both the protected species and their occupied habitat are Category 1 SEA Resources.



Figure 12. Branton's milkvetch (*Astragalus brauntonii*) is a perennial herb listed as federally endangered and CNPS rare plant rank 1B.1. Photo by Benjamin Smith 2010, from CalPhotos.

CALIFORNIA RARE PLANT RANKS 1A OR B, 2A OR B, AND 3:

CDFW works in collaboration with the California Native Plant Society (CNPS) and with botanical experts to maintain an inventory of California's sensitive plant species. This inventory consists of a ranking system known as the California Rare Plant Ranks (CRPR), which officially defines and categorizes the level of rarity of California's plants based on known information about the rarity, geographic range, and ecological requirements of each species. All the plants ranked 1A, 1B, 2A, 2B, and 3 meet the definitions of the CESA, are eligible for state listing, and are Category 1 SEA Resources. More detailed information about the CNPS Rare Plant Program can be found online at <http://www.cnps.org/cnps/rareplants/>.



Figure 13. *Dudleya greenei*-*Dudleya* spp. Succulent Scrub Herbaceous Alliance is a G1/S1 natural community that is found on the Channel Islands. Photo by Nicole Swabey, NPS.

CRITICALLY IMPERILED NATURAL COMMUNITIES¹¹ (G1/S1):

Natural communities with a global rank of G1 or a state rank of S1 are considered to be "critically imperiled". Critically imperiled natural communities are at very high risk of extinction due to extreme rarity (often with only six or fewer populations remaining worldwide or statewide, and/or up to 1,000 hectares remaining), very steep declines, and other factors. Since they have extremely limited distribution statewide and globally and are highly vulnerable to the impacts of development projects, no amount of disturbance to G1/S1 natural communities is allowed without a SEA CUP.



Figure 14. Wetlands are diverse ecosystems that provide vital services and habitat for broad range of species. Photo by City of Los Angeles Department of Cultural Affairs.

WATER RESOURCES:

Water resources are highly vulnerable and complex hydrologic and biotic systems that are capable of supporting a vast range of important ecosystem functions. The Conservation and Natural Resources Element (Chapter 9) of the General Plan 2035 characterizes local water resources "an invaluable resource" and recognizes that effective management and preservation of water resources are vital to preserving a high quality of life for LA County's residents and sustaining the functioning of watersheds and the natural environment.

¹¹ Since 1999, CDFW has classified and mapped natural communities throughout the state of California. One purpose of this classification is to assist in determining the level of rarity and imperilment of natural communities throughout the state. CDFW's current list rates 350 vegetation alliances and over 2,100 associations with a G (global) and S (state) rank according to their degree of imperilment following NatureServe's Heritage Methodology (www.natureserve.org/conservation-tools/conservation-status-assessment).

Since water resources are so sensitive to changes that occur along their boundaries and within their watersheds, the SEA Ordinance goes beyond prohibiting development within their boundaries, to requiring additional buffers between proposed developments and the water resources. See section “B. Water Resources” below for more details on required buffers.

SEA RESOURCE CATEGORY 2

This category includes species and natural communities that are rare, sensitive, or highly important to maintaining the biodiversity and ecosystem services within SEAs. Only minimal amounts of disturbance may be allowed to these resources, as discussed below.



Figure 15. Desert needlegrass grassland (*Achnotherum speciosum* Herbaceous Alliance) is a S2 natural community. Photo by Todd Keeler-Wolf.

IMPERILED NATURAL COMMUNITIES (G2/S2):

Natural communities with a global rank of G2 or a state rank of S2 are considered “imperiled”. Imperiled natural communities are at high risk of extinction or elimination due to very restricted range, very few populations (6-20 viable occurrences remaining worldwide or statewide, and/or from 1,000 to 2,000 hectares remaining), steep declines, or other factors.

The SEA Ordinance does not allow more than 500 square feet of cumulative disturbance to SEA Resource Category 2. Additionally, any proposed impacts to SEA Resource Category 2 up to 500 square feet must be compensated for through preservation of an area at least twice the size of that being disturbed. Preserved areas must be protected in perpetuity and maintained in a natural condition. All other relevant Development Standards must also be met, including the required setbacks from native trees occurring within the area to be disturbed.

To meet the requirements of the Development Standard, the area to be preserved must be:

1. the same type of SEA Resource(s) as that being disturbed,
2. located entirely outside of the development footprint (including fuel modification zones) of the proposed project,
3. located outside of any existing brush clearance zones of neighboring structures,
4. at least two-times the size of the area disturbed¹², and
5. recorded through a permanent on-site deed restriction or covenant (see Chapter 8).

¹² While applicants are encouraged to go beyond the minimum requirement, particularly when sensitive resources are present, and preserve as much of the sensitive resource as feasible, the Department will not require more than 2 to 1 preservation through a Ministerial SEA Review.

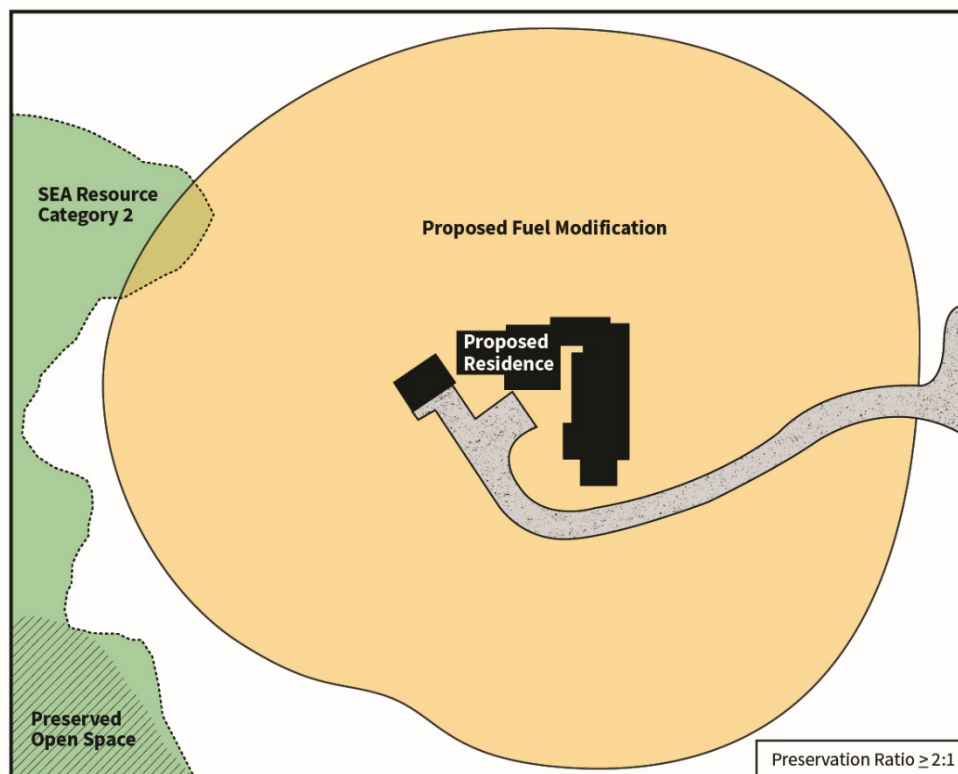


Figure 16. Up to 500 square feet of disturbance to SEA Resource Category 2 is allowed, provided that the applicant preserve at least twice that amount of the same type of habitat on site, through an open space deed restriction or covenant.



Figure 17. The Western Burrowing Owl (*Athene cunicularia hypugea*) is a CA Species of Special Concern. Photo by Andy Long, Audubon Photography Awards.

SPECIES OF SPECIAL CONCERN:

CDFW uses this status for rare and sensitive animals not listed under FESA or CESA, but which nonetheless are declining at a rate that could result in listing, as well as for animals that historically occurred in low numbers that have known threats to their continued presence. More information on Species of Special Concern can be found on the CDFW website at www.wildlife.ca.gov/Conservation/SSC. For the purposes of the SEA Program, both Species of Special Concern and their occupied habitat are Category 2 SEA Resources.

Since animals move and generally flee or hide when human activity is detected, determination of an animal species' presence cannot rely entirely on direct sightings of the species. Therefore, even if the animal itself has not been directly observed on the project site, its presence or use of an area may be determined by the presence of scat, tracks, and special habitat features such as nests, dens, burrows, and roosts. In the case that a Species of Special Concern is observed within a heavily disturbed or paved area that does not constitute appropriate habitat, the biologist should look to adjacent natural habitat areas to identify nearby natural habitat that may support the species. The disturbed or paved area should not be considered SEA

Resource Category 2 simply because a species of special concern is seen crossing through the area. However, such an observation is likely to result in identification of occupied habitat nearby. The SEA Ordinance prohibits development that results in abandonment or failure of any habitat features that have been identified by a qualified biologist as belonging to a special status species. If a special habitat feature indicates presence of a species of special concern, the consulting biologist should confer with the County Biologist and CDFW to determine the appropriate buffer to maintain between the habitat feature and the proposed development, and this buffer must be shown on the BCM.

SEA RESOURCE CATEGORY 3

This category includes natural communities considered by CDFW to be likely to become imperiled unless the circumstances that are threatening their survival improve. Resources in this category include the following:



Figure 19. Chamise-white sage chaparral (*Adenostoma fasciculatum* - *Salvia apiana* Shrubland Alliance) is a G3/S3 ranked natural community. Photo by Julie M. Evens.

VULNERABLE NATURAL COMMUNITIES (G3/S3):

Natural communities with a global rank of g3 or a state rank of s3 are considered “vulnerable”. Vulnerable communities are at moderate risk of extinction or elimination due to restricted range, relatively few populations (21-80 viable occurrences remaining worldwide or statewide and/or from 2,000 to 50,000 hectares remaining), recent and widespread declines, or other factors.



Figure 18. Joshua Tree Woodland is a Sensitive Local Native Resource in the SEAs in which it occurs (see Appendix B). Photo by Enaid Silverwolf, 2017.

SENSITIVE LOCAL NATIVE RESOURCES:

Some species and natural communities are much rarer or more significant on a local scale than they are on a global, state, or even regional scale. For this reason, the Department maintains a list of native resources that are rare or significant within the County or specific SEAs (Appendix B). Any species included on this list will be treated as a Category 2 resource within the region(s) indicated on the list, regardless of its state and global rankings.)



Figure 20. The County regards oak woodlands as being essential to the maintenance of biodiversity and ecosystem services. Photo by James Keeney.

OAK WOODLANDS:

LA County has long prioritized the protection of oaks, starting with enacting the Oak Tree Ordinance in 1982, and subsequently through the adoption of the LA County Oak Woodlands Conservation Management Plan in 2011. The Oak Woodlands Conservation Management Plan changed the way the Department reviews projects that occur within or near oak woodlands. The main goal of the plan is to conserve oak woodlands in perpetuity with no permanent net loss of existing woodlands. As such, although many natural communities dominated by oak trees are ranked as being less rare or sensitive in the CDFW Natural Communities list, the County regards them as essential to the maintenance of biodiversity and ecosystem services within SEAs and places them in a more protective category.

The SEA Ordinance includes provisions for two tiers of impact to SEA Resource Category 3, namely disturbances under 500 square feet and disturbances over 500 square feet.

1. Development not exceeding 500 square feet of disturbance to SEA Resource Category 3 must preserve an equal area of the same SEA Resource(s) elsewhere on the project site (1:1 preservation ratio).
2. Development that exceeds 500 square feet of impact to SEA Resource Category 3 are required to preserve an area of the same SEA Resource(s) at least two-times the size of that impacted (2:1 preservation ratio).

For both tiers, all other Development Standards must be met, including the maximum total building site area and required setback for native trees. Additionally, to meet the requirements of this Development Standard, the area to be preserved must:

1. consist of the same type of SEA Resource(s) as that being disturbed,
2. be located outside of the development footprint of the proposed project,
3. be located outside of any existing brush clearance zones of neighboring structures, and
4. be recorded through a permanent on-site deed restriction or covenant (see Chapter 8).

WHY ARE OAK WOODLANDS IMPORTANT TO LOS ANGELES COUNTY?

Adapted from the *Los Angeles County Oak Woodlands Conservation Management Plan*:

Oak woodlands are much more than a collection of individual trees. Associated with those trees, are over 300 vertebrate species and more than 5,000 invertebrates, not to mention hundreds of native plant species. Entering oak woodlands, you experience the complex interconnections of the trees, plants, and animals that create a dynamic living system.

Oak woodlands provide essential ecosystem function services, at little to no cost. The canopies of oaks filter out air pollution, absorb carbon dioxide, and create islands of welcome shade and cooler temperatures. Hillsides covered with oaks provide erosion control through roots that hold the soil and foliage that diffuses rainfall, allowing it to percolate into the ground. Stream banks shaded by oaks slow down floodwaters and help filter out water pollutants.

Oak woodlands provide extensive recreational opportunities that are easily accessed by the huge urban population of Los Angeles County. The health benefits provided by access to trails that wind through the oaks are immeasurable. For many people, a walk through the oaks is a welcome stress relief. Real estate prices for homes in or near oak woodlands are consistently higher than those without oaks or other natural spaces.

Oak woodlands are an iconic part of the visual landscape of Los Angeles County. The daily commute of millions is enhanced by views of oak studded hillsides along crowded freeways. Oaks and humans have a long history of inter-dependence. While few people today rely on acorns as a dietary staple, living in and among oak woodlands is clearly still important to many of us.

SEA RESOURCE CATEGORY 4

This category represents the more common natural communities that occur within the County, as well as certain plant species with limited distribution within the state.



Figure 21. Redshank chaparral (*Adenostoma sparsifolium* Shrubland Alliance) is a G4/S4 ranked natural community. Photo by Julie M. Evens.

APPARENTLY SECURE NATURAL COMMUNITIES (G4/S4):

Natural communities with a global rank of G4 or a state rank of S4 are considered to be “apparently secure” within their range. Apparently secure communities may be uncommon within a given geographic range, but they are not rare on a larger scale. Some cause for long-term concern for these communities due to declines and other factors may be warranted regionally. G4/S4 natural communities are defined as having from 81-300 viable occurrences worldwide or statewide, and/or more than 50,000 to 200,000 hectares remaining.



Figure 22. Chamise chaparral (*Adenostoma fasciculatum* Shrubland Alliance) is a G5/S5 ranked natural community. Photo by Todd Keeler-Wolf.

SECURE NATURAL COMMUNITIES (G5/S5):

Natural communities with a global rank of G5 or a state rank of S5 are considered to be “secure” within their range. These are the most common, widespread, and abundant natural communities, and are demonstrably secure due to worldwide and statewide abundance.

The SEA Ordinance allows for up to 5,000 square feet of disturbance to these natural communities without requiring preservation. However, projects proposing to disturb more than 5,000 square feet are required to preserve an area at least equal in size to that which is being disturbed.

To meet the requirements of the Development Standard for disturbance over 5,000 square feet, the area to be preserved must be:

1. the same type(s) of natural community as that being disturbed,
2. located outside of the development footprint of the proposed project,
3. located outside of any existing fuel modification/brush clearance zones of neighboring structures,
4. equal or larger in size to the area of the disturbed natural community, and
5. recorded through a permanent on-site deed restriction or covenant (see Chapter 8 for natural open space preservation requirements).

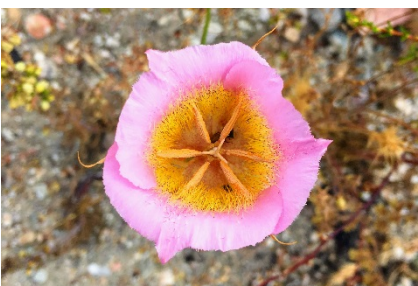


Figure 24. Plummer's mariposa lily (*Calochortus plummerae*) is a CRPR 4 perennial herb. Photo by Jen Mongolo.

CALIFORNIA RARE PLANT RANK 4:

RPR4 plants, as identified by the CNPS Rare Plant Program (available online at www.cnps.org/cnps/rareplants), are “watch list” plants. These plants are of limited distribution and may be locally significant. They warrant regular monitoring and may be transferred to a more protective rank by CNPS should the degree of endangerment or rarity change. This category includes both individual woody plants (for example, tree or shrub species) and habitat containing annual or herbaceous plants.



Figure 23. Southern California Black Walnut (*Juglans californica*) is a CRPR 4 deciduous tree. Photo by Michael O'Brien.

Similar to Category 4 Natural Communities, the SEA Ordinance allows for up to 5,000 square feet of disturbance to habitat containing RPR4 annual or herbaceous plants without natural open space preservation. It also allows for disturbance of up to 10 individual woody plants ranked RPR4 without preservation. If disturbance to more than 5,000 square feet of occupied habitat of annual or herbaceous species or disturbance to 10 individuals of woody species is proposed, the applicant must be able to preserve an area containing an equal amount of habitat for the species (or an equal number of individuals if woody species), elsewhere on the property.

SEA RESOURCE CATEGORY 5

All SEA lands and resources that are not included in one of the categories listed above but that nonetheless contribute to the biodiversity, ecosystem services, wildlife corridors, migration pathways, and preservation of the SEAs are included in this category. Examples of such resources include vegetation dominated by non-native species, agricultural fields, hedges, early successional vegetation that has yet to form into a distinct natural community, cleared or disturbed areas, and non-native trees and shrubs. Although disturbed, such areas still contribute to the preservation of SEAs and often play a vital role in wildlife movement (see Appendix E) and the protection of SEA Resources listed above in Categories 1 through 4.

Since SEA Resource Category 5 has already been impacted in some way by development, it is not considered to be as sensitive to additional impacts of development as natural habitat areas. For this reason, the SEA Ordinance does not include a disturbance threshold or preservation ratio for impacts to this Category. However, the value of biotic resources, connectivity, and buffers provided by SEA Resource Category 5 will be taken into consideration during discretionary review, as these areas may play a role in meeting the SEA Findings.

SEA PROTECTED TREES

Subsection 22.102.090(B) establishes minimum setbacks for SEA Protected Trees (listed in Appendix A). This setback, or buffer, is known as the Tree Protected Zone (“TPZ”), and it extends a minimum of five feet out from the dripline of a protected tree or 15 feet from the trunk, whichever distance is greater.

ENCROACHMENTS

Any intrusion, disturbance or construction activity occurring within the protected zone of a SEA Protected Tree is considered an encroachment. Development is limited to the following encroachments:

- ✓ a maximum of four SEA Protected Trees may have encroachments; and
- ✓ for those trees impacted, development must not encroach more than 10 percent into their TPZ.

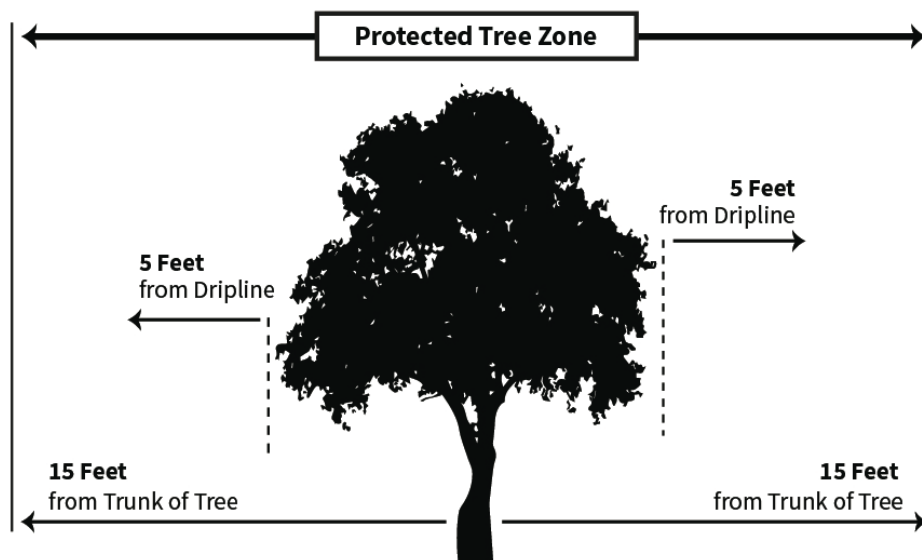


Figure 25. Development must be set back a minimum of 5-feet from the dripline or 15-feet from the trunk of a SEA Protected Tree, whichever distance is greater.

REMOVALS

Development may remove one SEA Protected Tree, provided it is not designated as a Heritage Tree. If the tree to be removed is an oak tree protected by the County Oak Tree Ordinance (all trees of the genus *Quercus* greater than eight inches DBH or with two trunks totaling 12-inches DBH), an Oak Tree Permit will still be required.

See Chapter 3 for more information on SEA Protected Trees and permitting requirements.

WATER RESOURCES

No direct disturbance to our County's limited water resources is allowed within SEAs. Furthermore, since water resources are highly vulnerable to changes that occur within their watersheds, and especially to activities that occur around their edges, all development (as defined in the SEA Ordinance), including fuel modification, is required to be set back a minimum distance from water resources identified in the vicinity of the project, as shown in **TABLE 3** below.

While the Ordinance requires minimum setbacks, applicants are encouraged to plan their developments as far from water resources as possible (beyond required setbacks) to ensure that the development does not have adverse inhibitory effects on wildlife using the water sources. The year-round water supplied by marshes, seeps, and springs is of the utmost importance for wildlife, and intermittent and ephemeral waters play a vital role in the lifecycles of countless indigenous plants and animals, as well as migrating birds. It is vital that access to and use of these resources remain unfettered by further human disturbance. Human uses, such as stables and animal keeping, may have adverse inhibitory effects on the wildlife using the water sources.

In the SEA Program, the term water resource is used to identify all forms of surface water protected by the SEA Ordinance and may differ from the definitions used by other agencies. The various types of water resources referenced in the SEA Ordinance include lakes, reservoirs, ponds, rivers, streams, marshes, springs, vernal pools, and playas (see Glossary for definitions of each type of water resource). For the purpose of the SEA Ordinance, all water resources within SEAs are protected, even in instances where the resource was initially created artificially by human activities. Similarly, ephemeral and intermittent water resources are protected in equal measure to perennial water resources.

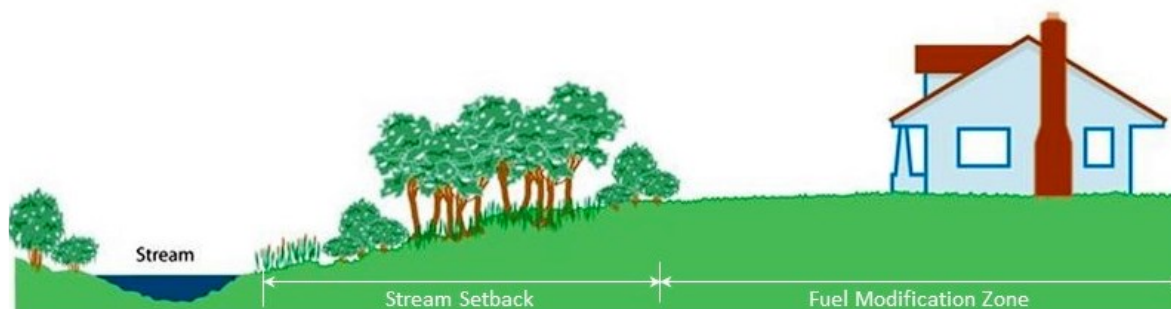


Figure 26. Fuel modification and brush clearance required by the Fire Department or Agricultural Commission for fire protection is considered development within SEAs, and therefore must be located entirely outside of required water resource setbacks.

There are other state and federal laws and regulations governing the use of and impacts to water resources, such as the Clean Water Act, the Lake and Streambed Alteration Program, and the Endangered Species Act (in the case of habitat for listed species), to name a few. Applicants should contact all appropriate resource management agencies (e.g. US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), USFWS, and CDFW) to determine what additional permits may be needed. In general, if a development meets the required setbacks from water resources, the need for additional permits is unlikely. If a development is not able to meet setbacks from water resources, a jurisdictional waters delineation may be needed to determine if proposed activities fall within the jurisdiction of any such agencies. The applicant should work directly with the appropriate agency to obtain necessary permits.

TABLE 3. REQUIRED SETBACKS FOR WATER RESOURCES IN SEAs.

| WATER RESOURCE: | SIZE | REQUIRED SETBACK* | MEASURED FROM** |
|---------------------------------|--------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lakes, reservoirs, ponds | Any Size | 150 feet or the watershed boundary, whichever is greater | High water mark |
| Marshes, seeps, springs | <0.5 acre | 100 ft | Edge of saturated soil |
| | 0.5 – 1 acre | 150 ft | |
| | >1 acre | 300 ft | |
| Vernal pools, playas | Any Size | 150 ft or the watershed boundary, whichever is greater | Maximum pool extent |
| Rivers and streams | <50 ft wide during or immediately following a 10-yr storm | 100 ft | Outside edge of riparian vegetation (i.e. dripline) on either side of the active channel. If riparian vegetation is absent or sparse, use bed and bank of the active channel inclusive of any braided channel conditions. |
| | 50-100 ft wide during or immediately following a 10-yr storm | 150 ft | |
| | >100 ft wide during or immediately following a 10-yr storm | 300 ft | |

* All setbacks should be measured horizontally, in plan view, since they are intended to serve as spatial buffers. For SEA CUPs, a lesser setback may be considered if topography and/or other physical features in combination with best management practices are determined to provide adequate screening and buffering.

**All wetland delineations should follow the methodology described in the US Fish and Wildlife Service Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979). The Mapping Episodic Stream Activity (MESA) protocol (Vyverberg and Brady, 2013) developed by CDFW and the California Energy Commission should be employed to accurately document episodic streams when water is absent.

OTHER DEVELOPMENT STANDARDS

The following Development Standards apply to all projects within SEAs. The primary purpose of these Development Standards is to ensure the preservation of natural habitat and wildlife movement opportunities within SEAs.

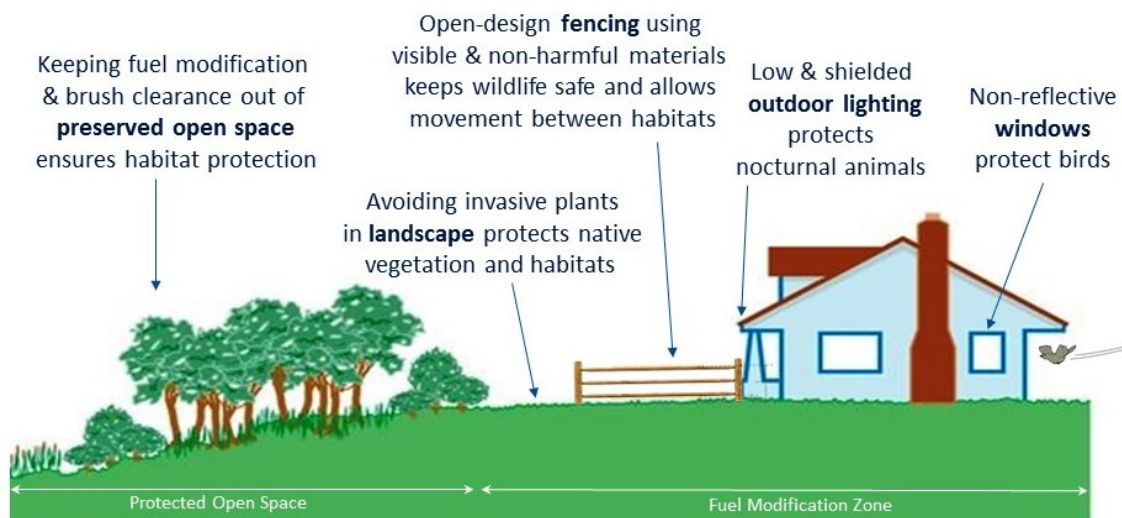


Figure 27. Area-wide Development Standards focus on ensuring the preservation of natural habitat and wildlife movement opportunities.

IMPERMEABLE FENCING, WALLS OR ENCLOSURES

Fencing within SEAs is generally discouraged, as fences can create hazards and barriers for wildlife movement, seasonal migrations, and access to food and water. When used, fencing should be designed and sited in such a way as to not restrict wildlife movement within the SEA.

Wildlife impermeable fencing is fencing that prevents or creates a barrier for the passage of wildlife from one side to the other. In SEAs, impermeable fencing, walls, and enclosures are only allowed within the development footprint, and should only be used around the immediate vicinity of residences and associated yards, for the control and safety of domestic animals¹³, and where public health and safety dictates their use. Impermeable fencing, walls, or enclosures should never be constructed around areas that contain natural habitat, except where temporary exclusion fencing is needed to keep wildlife away from habitat restoration areas while they become established.

A FENCE MAY BE PROBLEMATIC FOR WILDLIFE IF...

- ✓ it is too high to jump over
- ✓ it is too low to crawl under
- ✓ it is too wide and creates a three-dimensional obstacle
- ✓ there are loose or broken wires
- ✓ its wires or boards are spaced too closely together
- ✓ it has elements that can impale or snag a leaping or flying animal
- ✓ it is not readily visible to running animals or flying birds

¹³ Within the urban-wildland interface, it is strongly recommended that livestock and domesticated animals are provided with appropriate fencing to provide protection against predation by mountain lions and other predatory wildlife.

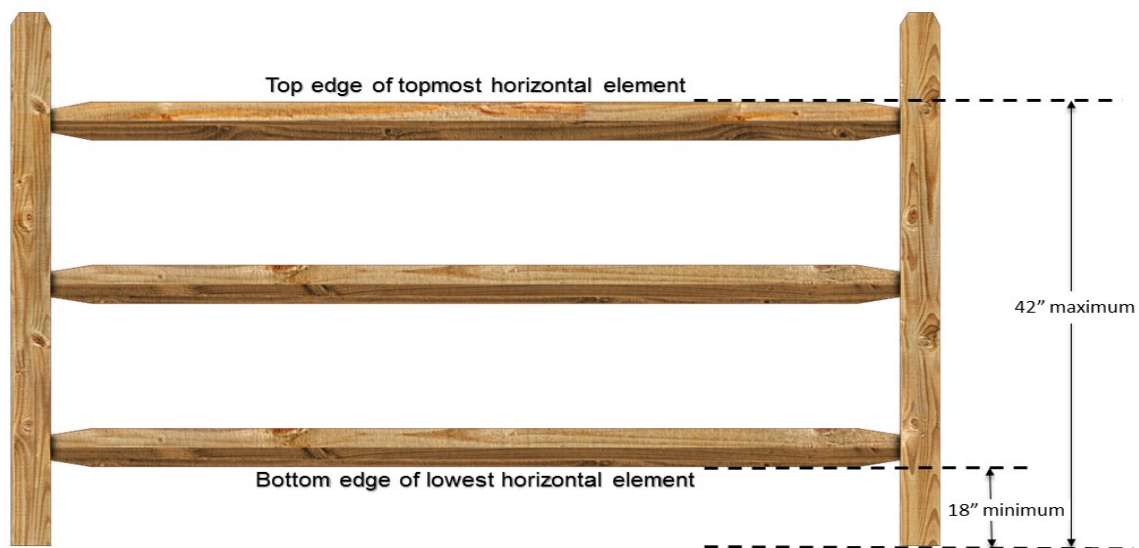


Figure 28. Wildlife permeable fencing must be of open design and constructed of materials that are readily visible to wildlife. Height of top rail may be no more than 42-inches above ground-level, and the bottom rail must be at least 18-inches above ground-level to permit movement of wildlife both under and over the fence.

PERMEABLE FENCING

Wildlife permeable fencing may be utilized elsewhere on the property to delineate property lines or to section off development features. A wildlife permeable fence is one that incorporates, at minimum, the following principles:

- ❖ Wildlife should be able to easily see all fence posts and horizontal elements. Materials that are visible to wildlife include wooden rails, steel pipes, vinyl rails, PVC pipes, recycled plastic rails, coated wires, or smooth wires covered with PVC or clearly marked with flagging.
- ❖ The top edge of the uppermost horizontal elements shall be no more than 42 inches above ground level to allow wildlife to jump over the fence.
- ❖ The bottom edge of the lowest horizontal elements shall be no lower than 18 inches above ground level to allow wildlife to pass under the fence.

FENCING MATERIALS

Never construct or top fences, gates, and walls with spikes, glass, razors, nets, or other such materials that may be harmful to wildlife. To prevent the entrapment of birds, fence and signposts should not be hollow at the top or have unfilled bolt holes. Wildlife friendly fences are those constructed of materials that are

ALTERNATIVES TO FENCING

SINCE FENCES CAN POSE SERIOUS PROBLEMS FOR WILDLIFE IN WAYS THAT WE DO NOT ALWAYS SEE OR ANTICIPATE, ALTERNATIVE DESIGN FEATURES THAT COULD SERVE THE SAME PURPOSE SHOULD BE CONSIDERED. BARRIERS OR DESIGNS USING NATURAL MATERIALS ARE OFTEN VERY EFFECTIVE AT PREVENTING ACCESS OR PROVIDING PRIVACY, WHILE SIMULTANEOUSLY PROVIDING A MORE NATURAL APPEARANCE AND MINIMIZING MAINTENANCE REQUIREMENTS. CLOSELY SPACED NATURAL VEGETATION (E.G. HEDGES) CAN SERVE AS A PRIVACY FENCE, FOR EXAMPLE, OR A ROW OF TREES OR BOULDERS COULD SERVE AS BOUNDARY MARKERS.

readily visible to wildlife, preventing unfortunate accidents such as collisions, entanglement, entrapment, or impaling of unsuspecting animals. Barbed wire may be used on the interior horizontal elements of the fence, but may not be used as the top- or bottom-most elements.

WINDOW REFLECTIVITY

Windows can be a big problem for birds. A 2014 study published by the American Ornithological Society found that between 365 and 988 million birds are killed each year in the United States by building collisions¹⁴. Reflective windows, sometimes in combination with artificial outdoor lighting, are the major cause of such collisions. The vast majority of structures that birds collide with are residences and low-rise buildings. A single home may kill a dozen or more birds each year without the owner being aware. Birds typically collide with windows because they see the reflection of surrounding habitat and fly full-speed into it, or they attempt to fly past reflected buildings or through reflected passageways, with fatal results. Even if the initial impact does not kill the bird immediately, it may hemorrhage after flying away from the site or be left injured and vulnerable to predation.

The Ordinance requires that all windows in SEAs be comprised of non-glare/non-reflective glass or utilize methods to achieve non-reflectivity. Additional methods for preventing collisions of birds with window glass include:

- ❖ incorporating elements in the building design that preclude collisions without completely obscuring vision, for example the use of decorative facades, recessed windows, shutters, grilles, or exterior shades;
- ❖ using UV Patterned, Opaque, or Translucent Glass;
- ❖ applying patterns on glass (particularly on the external surface) to block glass reflections, acting like a screen;
- ❖ applying external window films or decals; and
- ❖ avoiding plantings in front of glass windows.

OUTDOOR LIGHTING

Outdoor lighting can be very disruptive to natural animal behavior. According to a research article by Travis Longcore and Catherine Rich, “light pollution has demonstrable effects on the behavioral and population ecology of organisms in natural settings. As a whole, these effects derive from changes in orientation, disorientation, or misorientation, and attraction or repulsion from the altered light environment, which in turn may affect foraging, reproduction, migration, and communication.”¹⁵ For example, lighting the night sky can disrupt bird migration and nocturnal foraging by bats and birds, while lighting terrestrial habitat areas can disturb foraging patterns of other nocturnal animals.

Chapter 22.80 (Rural Outdoor Lighting District) of the County Code is a supplemental zoning district that encompasses rural areas of LA County. The Rural Outdoor Lighting District “promotes and maintains dark skies for the health and enjoyment of individuals and wildlife.” The majority of SEAs are already included in the Rural Outdoor Lighting District, and the current SEA Ordinance essentially expands the district to

¹⁴ Loss, Scott R., Tom Will, Sara S. Loss, and Peter P. Marra. 2014. Bird–building collisions in the United States: Estimates of annual mortality and species vulnerability. *The Condor* 116(1):8-23. doi.org/10.1650/CONDOR-13-090.1

¹⁵ Longcore, T. and Rich, C. (2004), Ecological light pollution. *Frontiers in Ecology and the Environment*, 2: 191-198. [doi:10.1890/1540-9295\(2004\)002\[0191:ELP\]2.0.CO;2](https://doi.org/10.1890/1540-9295(2004)002[0191:ELP]2.0.CO;2)

include any parts of SEAs that were not originally covered by the supplemental district, by requiring those areas to abide by the same standards. Further, the Ordinance prohibits outdoor lights to be directed upwards into the night sky or to be directed onto natural habitat.

Applicants can meet this Development Standard and protect habitat and dark skies by following these general guidelines for outside lighting:

KEEP IT LOW



Mount light fixtures as low as possible to minimize light trespass (see Part 9 of Chapter 22.44 for specific height requirements by use).



Use the lowest amount of light needed for the task. Consider using motion sensors to avoid steady-burning lights, or timers to ensure that lights aren't left on longer than necessary.

KEEP IT SHIELDED



Use fixtures that are shielded so that the bulbs and/or glowing lenses are not visible, minimizing light trespass into natural habitat areas or skywards.

KEEP IT WARM



Use only warm light sources for outdoor lighting. Blue light is now known to brighten the night sky more than any other color of light, so minimizing the amount of blue light emitted is important. Exposure to blue light at night has been shown to harm human health and endanger wildlife. Warm (or subdued) light sources recommended for use outdoors include LPS, HPS and low-color-temperature LEDs.

Per Section 22.44.530, the following types of outdoor lighting are prohibited: drop-down lenses, mercury vapor lights, ultraviolet lights, and searchlights, laser lights, or other outdoor lighting that flashes, blinks, alternates, or moves.

NATURAL OPEN SPACE BUFFER

In order to minimize edge effects and reduce the impacts of fuel modification, brush clearance, or other vegetation disturbing activities within protected natural open space (i.e. state or county park, conservation easement, open space deed restriction, etc.), the SEA Ordinance requires that all new habitable structures be set back a minimum of 200 feet from the boundary of any such lands. A 200-foot buffer is the standard distance required by the LA County Fire Department and Agricultural Commission for fuel modification and brush clearance to protect a habitable structure. If the Fire Department approves a fuel modification plan with non-standard distances for fuel modification zones, the setback for habitable structures from natural open space should be based on those approved in the Fire Department approved fuel modification plan. Department Staff can assist in identifying protected natural open space in the project vicinity.

Additionally, since dedication of natural open space will be a requirement for many projects within SEAs, it is important to remember that this requirement will also apply to those proposed natural open space areas. Any natural open space proposed for dedication in association with the development must be located at least 200-feet from any existing or proposed structure.

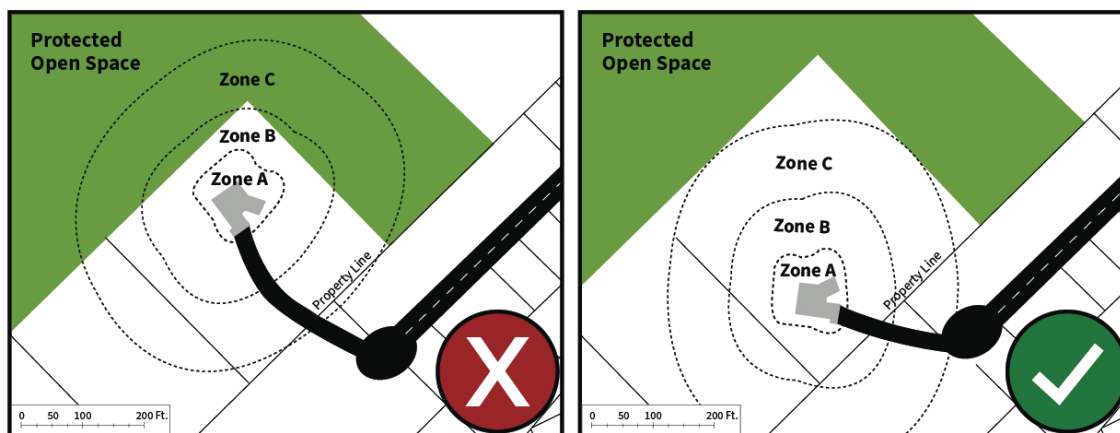


Figure 29. All new habitable structures must be set back a minimum of 200 feet from the boundary of any preserved natural open space.

LANDSCAPING AND FUEL MODIFICATION

Any development requiring new landscaping and/or fuel modification will need to submit landscape plans. Landscape plans will be reviewed by the Case Planner and County Biologist for compliance with the Development Standards, and they may also require review by the Fire Department for approval along with the Fuel Modification Plan.

LANDSCAPE & FUEL MODIFICATION REQUIREMENTS

- ❖ Minimize removal of natural vegetation to minimize erosion and sedimentation, minimize impacts to biological and scenic resources, and reduce the need for supplemental irrigation.
- ❖ Landscape or revegetate all cut and fill slopes and other areas disturbed by construction activities.
- ❖ Fuel Modification Zones A and B may utilize a mix of locally-indigenous, drought-tolerant plant species and non-invasive, drought tolerant ornamental plants and gardens.¹⁶ These zones require irrigation, per Fire Department regulations.
- ❖ Fuel Modification Zone C should consist exclusively of native vegetation. In order to meet Fire Department regulations, existing vegetation in this zone may need to be thinned to provide defensible space for fire suppression.
- ❖ For necessary landscaping or revegetation in Zone C or outside of fuel modification areas, use only locally-indigenous, drought-tolerant plant species that blend with the existing natural vegetation and habitats in the area. Locally-indigenous plants are adapted to the local climate and natural rainfall patterns, and have adaptations to survive diminished rainfall, so landscapes with local natives minimize irrigation needs and remain healthy during times of drought.
- ❖ In all Fuel Modification Zones, use only plant species that are consistent with Fire Department requirements.
- ❖ Check the Invasive Plant List in Appendix C to ensure that none of the plants proposed for use are invasive plants, and therefore prohibited within SEAs.

¹⁶ Use your address to identify locally appropriate plants at Calscape.org, and find out what plant nurseries may have them available.

- ❖ Tilling and disking are not acceptable methods of vegetation removal or maintenance for fuel modification or brush clearance.

All landscaping activities occurring within SEAs should employ current best practices (such as watershed-wise landscape design and hydrozones) to the greatest extent possible, avoid unnecessary direct impacts to habitat, utilize low impact design principles, and conform to legal standards for all pesticide, herbicide, and fertilizer applications. The use of chemical fertilizers or herbicides is strongly discouraged, particularly in native plant areas; amendments such as native plant mulch should be used instead.

INVASIVE PLANTS

THE SEA ORDINANCE PROHIBITS THE USE OF INVASIVE PLANTS WITHIN SEAs, INCLUDING ANY HORTICULTURAL PLANT SPECIES LISTED IN APPENDIX C OF THIS GUIDE AND ANY OTHER SPECIES THAT IS LISTED AS INVASIVE BY THE CALIFORNIA INVASIVE PLANT COUNCIL (CAL-IPC). THE MAJORITY OF SPECIES LISTED IN APPENDIX C ARE PLANTS THAT WERE ORIGINALLY INTRODUCED TO THE REGION FOR HORTICULTURAL PURPOSES OR EROSION CONTROL THAT HAVE DEMONSTRATED AN ABILITY TO ESCAPE FROM CULTIVATION AND SPREAD INTO NATURAL ECOSYSTEMS, DEVELOPING SELF-SUSTAINING POPULATIONS AND BECOMING DOMINANT OR DISRUPTIVE TO THOSE ECOSYSTEMS. GIVEN THE IMPACTS THAT INVASIVE PLANTS CAN HAVE ON NATIVE SPECIES, THE PREVENTION OF NEW INTRODUCTIONS OF INVASIVE PLANTS INTO SEAs IS VITAL TO THE PRESERVATION OF BIODIVERSITY AND ECOSYSTEM SERVICES.

NATURAL OPEN SPACE

Any required natural open space preservation areas as described above must be located outside of the development footprint. The natural open space area should not include any existing or proposed driveways, streets, roads, or highways.

LAND USE SPECIFIC DEVELOPMENT STANDARDS

The following Development Standards relate to specific types of land use.

CROPS

The SEA Ordinance divides crops into two categories: 1) crops as an accessory use, and 2) crops as a primary use. For both categories, use of plant species recognized in Appendix C or by the California Invasive Plant Council (CAL-IPC) as invasive are prohibited. Invasive plants are defined as plants that are not native to a region or ecosystem that, once introduced, tend to spread aggressively, disrupting native species occurring in the area, and even changing ecosystem processes such as hydrology, fire regimes, and soil chemistry.

All agricultural activities occurring within SEAs should employ current best management practices (BMPs) recognized in the industry, avoid unnecessary direct impacts to natural habitat, utilize low impact design principles, and conform to legal standards for all pesticide, herbicide, and fertilizer applications.

CROPS AS AN ACCESSORY USE

Within zoning and land use areas that permit them as an accessory use, crops may be cultivated within the required irrigated fuel modification zones of a permitted development. The irrigated fuel modification zones include zones A and B, which typically extend out to 100 feet from permitted structures. New crops proposed as a primary use outside of an irrigated fuel modification zone may require a SEA CUP, except in the Antelope Valley where they occur on previously disturbed farmland, as defined by Section 22.102.020 (see Chapter 5 for more information on this exemption).

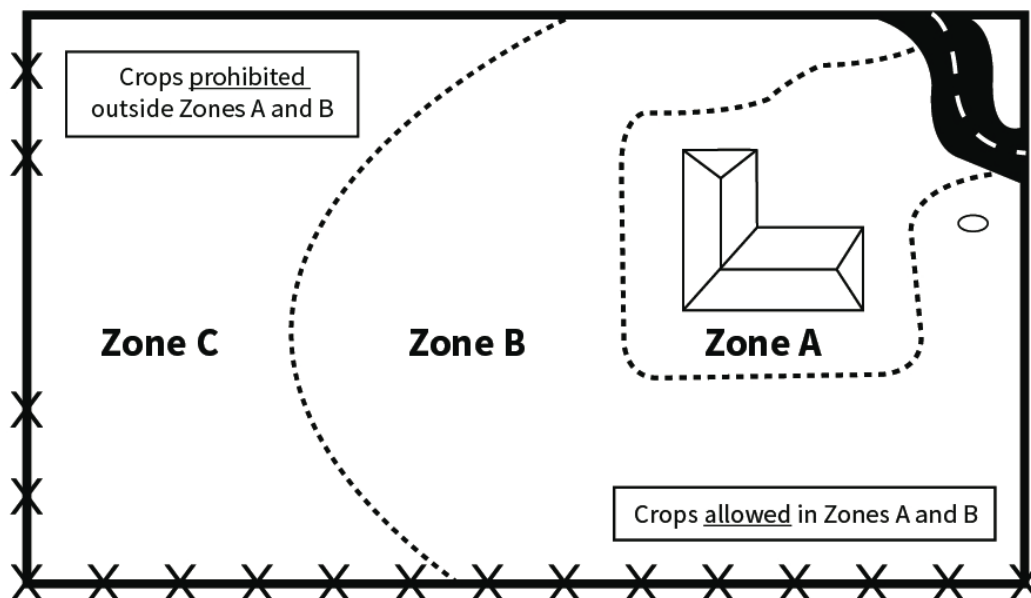


Figure 30. Crops as an accessory use must be located entirely within the irrigated fuel modification zones (Zones A & B).

CROPS AS A PRIMARY USE

Within zoning and land use areas that permit them as a primary use, crops may be cultivated within areas classified as SEA Resource Category 5, as determined by a qualified biologist in preparation of the BCM. Such areas would typically consist of previously disturbed or fallow farmland that has not recovered to a recognizable natural community and is not occupied by sensitive species. Additionally, crops may be cultivated within any irrigated fuel modification zones associated with legally established buildings on the project site.

EXPLORATORY TESTING

Exploratory testing and geotechnical investigations are often a necessary step in the project design process that provide necessary information for completing detailed engineering and architectural designs of access roads, bridges, septic systems, and structures. However, these activities can also cause a great deal of disturbance to the landscape. For this reason, exploratory testing, in and of itself, within SEAs is considered

a permitted use, and requires an application for Ministerial SEA Review. All exploratory testing must comply with the following practices:

- ❖ utilize existing roads and previously graded or disturbed areas, wherever possible. If the area occurs away from existing roads and previously graded or disturbed areas, the use of track mounted vehicles is required in order to create the least amount of impact to the vegetation possible.
- ❖ If it is necessary to disturb vegetation in order to provide access for the testing equipment, plants should be selectively cut above the soil, and soil left intact so that seeds and roots that are already present in the soil may resprout and revegetate the area naturally after testing is complete.
- ❖ Exploratory testing for development that is exempt from the SEA Ordinance is also exempt from this Development Standard. However, such development is strongly encouraged to follow practices described herein to reduce impacts to SEA Resources and protect the aesthetic qualities of the property being tested.
- ❖ A restoration plan is required to be submitted along with the application for exploratory testing. This plan should meet the requirements for Restoration or Enhancement Plans detailed in Chapter 6 of this Guide, and should incorporate basic principles and best management practices detailed in Chapter 7.

EXPLORATORY TESTING STABILIZATION

Any areas disturbed by exploratory testing are likely to be vulnerable to soil erosion and invasion by nonnative, invasive plants. For this reason, the SEA Ordinance requires that immediate action be taken to stabilize soils and reestablish native vegetative cover following the disturbance event. Such actions may consist of installation of temporary erosion control measures and application of seed from locally indigenous plants. These temporary stabilization activities should take place **as soon as possible** after disturbance of soil, and must be implemented within 90 days of completing or terminating the exploratory testing.

EXPLORATORY TESTING RESTORATION

Based on the results of the exploratory testing, the project will either move forward with site plans and submittal of a land use application, or any area disturbed by exploratory testing will be required to be returned to its natural state, per the restoration plan that was approved at the time of exploratory testing application submittal. Applications submitted within one year following exploratory testing activities must include provisions to stabilize all disturbed soil within the proposed development footprint and to restore any areas outside of the proposed development footprint to their natural condition. Site plans should show exploratory testing restoration areas, and a restoration or enhancement plan should be included with the application materials.

For any disturbance to natural areas caused by exploratory testing that is not followed by a land use application within one year, as well as for applications that are subsequently withdrawn by the applicant or denied by the Commission or Board, full restoration of the disturbed area is required. See Chapter 6 of this Guide for what to include in the restoration plan and Chapter 7 for guidance on conducting habitat restoration in SEAs.

Restoration of natural areas impacted by exploratory testing that are outside of the proposed development footprint of a pending or approved land use application must begin within one year of the disturbance.

LAND DIVISIONS

Land divisions have a high degree of potential to negatively affect SEA Resources, interrupt wildlife corridors, and create habitat fragmentation. Yet a great deal of opportunity also exists for land divisions to result in long-term preservation of previously unprotected SEA Resources, wildlife corridors, and ecosystem services. Since land divisions within SEAs typically concern large areas of undeveloped land, the opportunities for both resource disturbance and resource protection are great.

The SEA Ordinance requires land division projects to focus on configurations and designs that result in the least amount of disturbance to SEA Resources and wildlife movement by requiring development to be grouped together in a single area and restricting it to 25% or less of the project site, with 75% of the project site preserved as natural open space. Development areas should be sited in locations that are overall least impactful to SEA functions and values. Previously, all proposed land divisions in SEAs needed a SEA CUP. Under the new Ordinance, a land division could potentially qualify for Ministerial SEA Review if it can be demonstrated to meet all Development Standards, though it may still be subject to other discretionary reviews by the County.

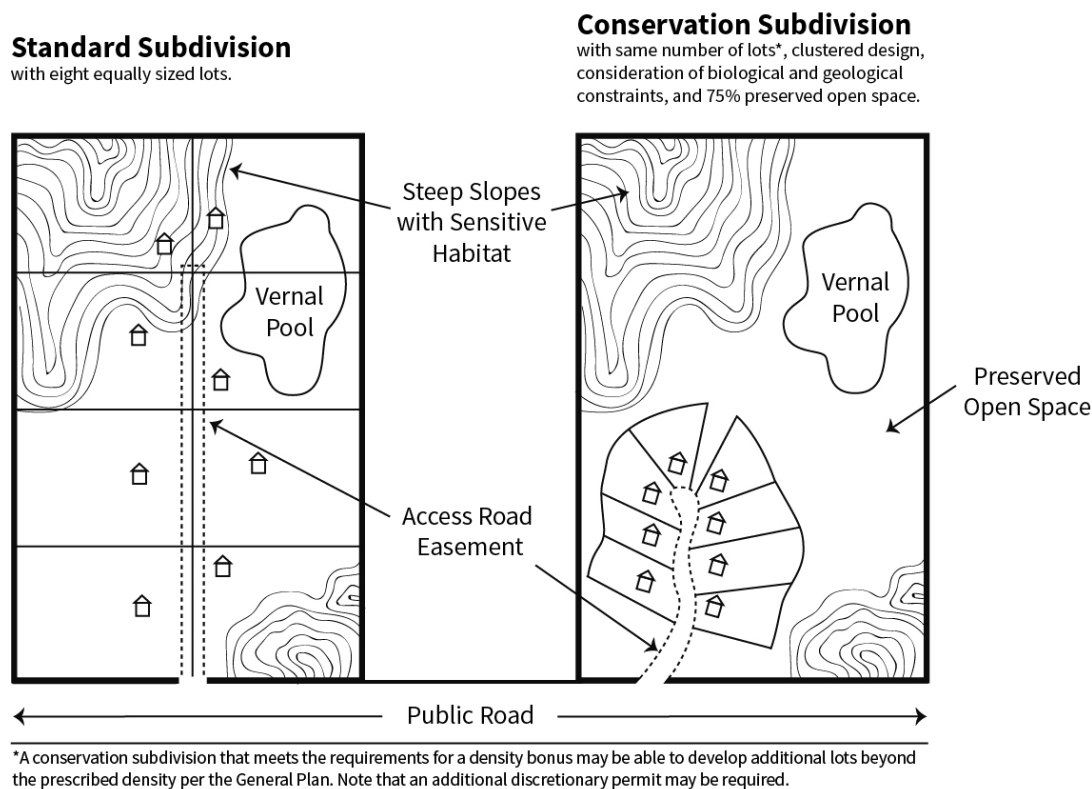


Figure 31. Land divisions shall not exceed a maximum development footprint of 25 percent of the project site (i.e. the original undivided parcels), and development areas shall be designed in one contiguous location and result in the largest, intact blocks of habitat with the lowest perimeter to area ratio. §22.102.090(E)(3)(b)

Land divisions should be designed as follows:

- ✓ With the lowest amount of interface between development and preserved areas (also known as the lowest perimeter to area ratio). A shorter perimeter will translate to less potential for edge effects to degrade the natural open space.

- ✓ The shape, size, and location of the area to be preserved as natural open space should create the maximum amount of habitat connectivity between on and off-site natural areas, preserve wildlife movement (see Appendix E for guidance on evaluating wildlife movement opportunities), and maximize the amount of resources available for resident wildlife.

LARGE LOT PARCEL MAP

This Development Standard allows for a “big picture” biological review of large lot parcel map land divisions that are strictly for the purposes of sale, lease, financing, or transfer. This type of land division is not required to specify the location of development or prepare site plans. As such, the intent of this Development Standard is to ensure that when parcels are created without site planning, future proposed development on the resultant parcels has a potential to meet SEA Development Standards. The process will allow for large contiguous parcels of sensitive habitats to remain intact, while also providing that individual parcels created through the land division have a reasonable opportunity to undergo a Ministerial SEA Review (per Section 22.102.060) when future development is proposed.

Large lot parcel map projects will be required to submit an Informational Exhibit and a BCM. The Informational Exhibit should consist of materials that show areas of development feasibility on the proposed lots and show open space amount and configuration. The BCM for a Large Lot Parcel Map subdivision project can be based on a desktop analysis of the area using the best available data and most recent aerial imagery available as supplemented by field surveys, if directed by Staff, such as for field verification of SEA Resource Categories. Subsequent development on the created parcels will require a site specific BCM and SEA Counseling to determine the appropriate SEA permit needed.

At the Large Lot Parcel Map phase, each parcel created by the subdivision must have at least 20,000 square feet of SEA Resource Category 4 and/or 5 on which a potential future development could occur. The potential developable area should be located a minimum of 200 feet (to account for fuel modification) from the required setback(s) of any identified water resources (see Water Resources Development Standard section above). Any Category 4 habitat beyond 500 square feet located in the potential developable area should be matched elsewhere on the same parcel by an equivalent or greater area of Category 4 habitat. As a land division, these projects do require a 75% set aside of natural open space. For complying with this open space requirement, and to maintain unit count, one or more dedicated open space lots may be created, or “pie shaped” lots utilized to effectively cluster development at the apex of these lots.