San Diego Municipal Code

Land Development Code

Biology Guidelines

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SECTION I

DEFINITIONS

These Guidelines have been formulated by the Development Services Department (DSD) to aid in the implementation and interpretation of the Environmentally Sensitive Lands Regulations (ESL), San Diego Land Development Code (LDC), Chapter 14, Division 1, Section 143.0101 et seq, and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, Section 131.0201 et seq. Section III of the Guidelines (Biological Impact Analysis and Mitigation Procedures) also serve as standards for the determination of impact and mitigation under the California Environmental Quality Act (CEQA) and the Coastal Act.

These Guidelines are the baseline biological standards for processing Neighborhood Development Permits, Site Development Permits and Coastal Development Permits issued pursuant to the ESL. For impacts associated with steep hillsides, please refer to the Steep Hillside Guidelines for the Environmentally Sensitive Lands Regulations.

A. Sensitive Biological Resources

The ESL defines sensitive biological resources as those lands included within the Multi-Habitat Planning Area (MHPA) as identified in the City of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan (City of San Diego 1995) the Vernal Pool Habitat Conservation Plan (VPHCP)(City of San Diego 2018), and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; habitat for rare, endangered or threatened species; or narrow endemic species.

1. The Multi-Habitat Planning Area (MHPA) encompasses those lands that have been included within the preserve for the City of San Diego's MSCP Subarea Plan and VPHCP for habitat conservation. These lands have been determined to provide the necessary habitat quantity, quality and connectivity to support the future viability of San Diego's unique biodiversity and thus are considered to be a Sensitive Biological Resource. The City of San Diego's MHPA contains "hard-lines," with limited development permitted based on the development area allowance of the OR-1-2 zone in order to achieve an overall 90% preservation goal (see Section II.B for discussion of OR-1-2 zone).

   The boundaries of the MHPA are depicted on 1"=2000-feet scale maps and in many areas of the City on 1"= 800-feet scale maps.

2. VPHCP Minor Amendment Areas encompasses the legal boundaries of 1) Montgomery-Gibbs Executive Airport and 2) Brown Field. Allows a modification to the VPHCP resulting in effects on vernal pools and/or vernal pool covered species provided levels of take are not greater than those analyzed in the VPHCP and associated Permits. Minor Amendments shall not require amending the Section 10(a)(1)(B) permit and/or NCCP permit.

For projects located within Montgomery-Gibbs Executive Field and Brown Field that are not processed through the Minor Amendment process, the project(s) would not be afforded the benefits of the streamlined environmental and permit process under VPHCP. Projects would be processed consistent with existing City, State, and Federal regulations for wetlands not covered by the VPHCP.

2. Wetlands support many of the species included in the MSCP and the VPHCP (i.e. Covered Species). The definition of wetlands in ESL is intended to differentiate uplands (terrestrial areas) from wetlands, and furthermore to differentiate naturally occurring wetland areas from those created by human activities. Except for areas created for the purposes of wetland habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, it is not the intent of the City to regulate artificially created wetlands in historically non-wetland areas unless they have been delineated as wetlands by the Army Corps of Engineers, and/or the California Department of Fish and Wildlife. For the purposes of the ESL, artificially created lakes such as Lake Hodges, artificially channeled floodways such as the Carmel Valley Restoration and Enhancement Project (CVREP) and previously dredged tidal areas such as Mission Bay should be considered wetlands under ESL. The following provides guidance for defining wetlands regulated by the City of San Diego under the Land Development Code.

   Naturally occurring wetland vegetation communities are typically characteristic of wetland areas. Examples of wetland vegetation communities include saltmarsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodland, riparian scrub and vernal pools. Common to all wetland vegetation communities is the predominance of hydrophytic plant species (plants adapted for life in anaerobic soils). Many references are available to help identify and classify wetland vegetation communities; Holland (1986), revised Holland (Oberbauer 2005 and 2008), Cowardin et al. (1979), Sawyer and Keeler-Wolf (1996), and Zedler (1987). The U.S. Army Corps of Engineers Wetland Delineation Manual (1987) provides technical information on hydrophytic species.

   Problem areas can occur when delineating wetlands due to previous human activities or naturally occurring events. Areas lacking naturally occurring wetland vegetation communities are still considered wetlands if hydric soil or wetland hydrology is present and past human activities have occurred to remove the historic vegetation (e.g., agricultural grading in floodways, dirt roads bisecting vernal pools, channelized streambeds), or catastrophic or recurring natural events preclude the establishment of wetland vegetation (e.g., areas of scour within streambeds, coastal mudflats and salt pannes that are unvegetated due to tidal duration). The U.S. Army Corps of Engineers Wetland Delineation Manual (1987) provides technical information on hydric soils and wetland hydrology.

   Seasonal drainage patterns that are sufficient enough to etch the landscape (i.e. ephemeral/intermittent drainages) may not be sufficient enough to support

wetland dependent vegetation. These types of drainages would not satisfy the City's wetland definition unless wetland dependent vegetation is either present in the drainage or lacking due to past human activities. Seasonal drainage patterns may constitute "waters of the United States" which are regulated by the Army Corps of Engineers and/or the California Department of Fish and Wildlife.

Areas lacking wetland vegetation communities, hydric soils and wetland hydrology due to non-permitted filling of previously existing wetlands will be considered a wetland under the ESL and regulated accordingly. The removal of the fill and restoration of the wetland may be required as a condition of project approval.

Areas that contain wetland vegetation, soils or hydrology created by human activities in historically non-wetland areas do not qualify as wetlands under this definition unless they have been delineated as wetlands by the Army Corps of Engineers, and/or the California Department of Fish and Wildlife. Artificially created wetlands consist of the following: wetland vegetation growing in brow ditches and similar drainage structures outside of natural drainage courses, wastewater treatment ponds, stock watering, desiltation and retention basins, water ponding on landfill surfaces, road ruts created by vehicles and artificially irrigated areas which would revert to uplands if the irrigation ceased. Areas of historic wetlands can be assessed using historic aerial photographs, existing environmental reports (EIRs, biology surveys, etc.), and other collateral material such as soil surveys.

Some coastal wetlands, vernal pools and riparian areas have been previously mapped. The maps, labeled C-713 and C-740 are available to aid in the identification of wetlands. Additionally, the 1":2000' scale MSCP vegetation maps may also be used as a general reference, as well as the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory maps. These maps, available for viewing at the Development Services Department, should not replace site-specific field mapping.

3. Vegetation Communities within the MSCP study area have been divided into four tiers of sensitivity (the first includes the most sensitive, the fourth the least) based on rarity and ecological importance.

   Tier I habitats include lands classified as southern foredunes, Torrey pines forest, coastal bluff scrub, maritime succulent scrub, maritime chaparral, native grasslands, and oak woodlands. Tier II includes lands classified as coastal sage scrub and coastal sage scrub/chaparral. Tier IIIA includes lands classified as mixed chaparral and chamise chaparral. Tier IIIB includes lands classified as non-native grassland. Tier IV includes lands classified as disturbed, agriculture, and eucalyptus.

Classifications should use the California Department of Fish and Wildlife listing of community associations (Holland 1986) as a reference for classifying vegetation. The City's MSCP and Biology Guidelines are based on vegetation classification provided in Holland and revised Holland (Oberbauer 2005 and 2008). An alternative mapping methodology that is also acceptable to the City of San Diego is Sawyer and Keeler-Wolf (1995).

4. Listed Species: Habitats supporting plant or animal species which have been listed or proposed for listing by the federal or state government as rare, endangered, or threatened ("listed species") are also considered sensitive biological resources under the ESL. Note: Some listed species are considered adequately conserved under the MSCP (Covered Species). Others are not (Listed Non-covered Species).

5. Narrow Endemic and Vernal Pool Species: Species adopted by the City Council under the City's MSCP Subarea Plan as narrow endemic species and under the VPHCP as vernal pool species, identified below, are considered sensitive biological resources that require species specific conservation measures. (Note: Some of these narrow endemic species and all of the vernal pool species are also listed species):

Narrow Endemic Species

Acanthomintha ilicifolia	San Diego thornmint
Agave shawii	Shaw's agave
Ambrosia pumila	San Diego ambrosia
Aphanisma blitoides	Aphanisma
Astragalus tener var. *titi*	Coastal dunes milk vetch
Baccharis vanessae	Encinitas baccharis
Brodiaea filifolia	Thread-leaved brodiaea
Dudleya blochmaniae ssp. brevifolia	Short-leaf live-forever
Dudleya variegata	Variegated dudleya
Hemizonia conjugens	Otay tarplant
Opuntia parryi var. serpentina	Snake cholla

Vernal Pool Species

Eryngium aristulatum var. *parishii*	San Diego button-celery
Navarretia fossalis	Spreading navarretia
Orcuttia californica	Orcutt grass
Pogogyne abramsii	San Diego mesa mint
Pogogyne nudiuscula	Otay Mesa mint
Branchinecta sandiegonensis	San Diego fairy shrimp
Streptocephalus woottoni	Riverside fairy shrimp

6. Covered Species are those species included in the Incidental Take Authorization issued to the City by the federal or state government as part of the City's MSCP Subarea Plan and VPHCP. Exceptions to this are the MSCP covered species that are listed wetlands species. The term "non-covered species" is sometimes used to identify species not included in the Incidental Take Authorization. A list of the Covered Species is provided in Appendix A of the Biology Guidelines.

B. Wetland Buffers

A wetland buffer is an area or feature(s) surrounding and identified wetland that helps to protect the functions and values of the adjacent wetland by reducing physical disturbance from noise, activity and domestic animals, and provides a transition zone where one habitat phases into another. The buffer will also protect other functions and values of wetland areas including absorption and slowing of flood waters for flood and erosion control, sediment filtration, water purification, ground water recharge, and the need for upland transitional habitat. Within the Coastal Overlay Zone, uses permitted within wetland buffers are specified in Section 143.0130(e) of ESL.

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SECTION II

DEVELOPMENT REGULATIONS

Specific development regulations pertaining to sensitive biological resources exist in the Municipal Code in both the Environmentally Sensitive Lands Regulations (Chapter 14, Division 1, Section 143.0141) and the OR-1-2 Zone (Chapter 13, Division 2, Section 131.0230). The following guidelines are provided to supplement these development regulation requirements.

A. Environmentally Sensitive Lands (ESL) Regulations

1. Wetlands and Listed Species Habitat

a. Permits Required

State and federal laws and regulations regulate adverse impacts to *wetlands* and listed species habitat. State and Federal laws and regulations regulate adverse impacts to wetlands and listed species habitat. The City does not have Incidental Take Authorization for listed wetland species that occur within federal jurisdictional waters, except for vernal pool species covered under the VPHCP. Therefore, projects which would impact wetlands would be required to obtain all applicable federal and state permits prior to the issuance of any grading permits. Applicants will be required to confer with the appropriate federal and state agencies prior to the public hearing for the development and incorporate any federal and state requirements into their project design.

The City will condition discretionary permit(s) and any associated subdivision map(s) it issues to restrict the issuance of any construction permit (including but not limited to, Demolition, Grading or Building) until applicants have obtained all necessary federal and state permits. Prior to the issuance of any construction permit(s), the applicant must provide a copy of the permit, authorization letter or other official mode of communication from the Resource Agencies to the City. Although, City public projects do not need a grading permit, these projects will still be required to obtain all necessary federal and state permits prior to the preconstruction meeting or any clearing or grading of the project site.

b. Impacts to Wetlands and Buffer Limits Outside of the Coastal Overlay Zone

Under the ESL, impacts to wetlands should be avoided. Unavoidable impacts should be minimized to the maximum extent practicable. Whether or not an impact is unavoidable will be determined on a case-by-case basis. Examples of unavoidable impacts include those necessary to allow reasonable use of a parcel entirely constrained by wetlands, roads

where the only access to the developable portion of the site results in impacts to wetlands, and essential public facilities (essential roads, sewer, water lines, etc.) where no feasible alternative exists. Unavoidable impacts will need to be mitigated in accordance with Section III.B.1.a of these Guidelines.

A wetland buffer shall be maintained around all wetlands as appropriate to protect the functions and values of the wetland. Section 320.4(b)(2) of the U.S. Army Corps of Engineers General Regulatory Policies (33CFR 320-330) list criteria for consideration when evaluating wetland functions and values. These include wildlife habitat (spawning, nesting, rearing, and foraging), food chain productivity, water quality, ground water recharge, and areas for the protection from storm and floodwaters.

c. Impacts to Wetlands and Buffer Limits Within the Coastal Overlay Zone

Within the Coastal Overlay Zone, both within and outside the MHPA, impacts to wetlands shall be avoided and only those uses identified in Section 143.0130(d) of the ESL shall be permitted which are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects and incidental public service projects. Such impacts to wetlands shall occur only if they are unavoidable, the least environmentally-damaging feasible alternative, and adequate mitigation is provided.

Wetland buffers should be provided at a minimum 100 feet wide adjacent to all identified wetlands within the Coastal Overlay Zone (Section 143.0141(b)). The width of the buffer may be either increased or decreased as determined on a case-by-case basis, in consultation with the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Army Corps of Engineers, taking into consideration the type and size of development, the sensitivity of the wetland resources to detrimental edge effects, natural feature such as topography, the functions and values of the wetland and the need for upland transitional habitat. Examples of functional buffers include areas of native or non-invasive landscaping, rock/boulder barriers, berms, walls, fencing, and similar features that reduce indirect impacts on the wetland. Measures to reduce adverse lighting and noise should also be addressed where appropriate. Section 1.4.3 Land Use Adjacency Guidelines of the City's MSCP Subarea Plan can be used to help determine appropriate measures for wetland buffers. A 100-foot minimum buffer area shall not be reduced when it serves the functions and values of slowing and absorbing flood waters for flood and erosion control, sediment filtration, water purification, and ground water recharge. Deviations from the Environmentally Sensitive Lands Regulations within the Coastal Overlay Zone shall be approved only after the decision maker makes an

economically viable use determination and findings pursuant to Section 126.0708(e).

d. Impacts to Vernal Pools and Buffer Limits Outside of the Coastal Overlay Zone

Impacts to vernal pools outside of the MHPA are authorized provided they are fully mitigated as identified in the VPHCP. Within the MHPA, vernal pools are to be avoided except as authorized under Section IV (*Findings/Deviations*).

2. Development in the MHPA

For parcels outside of the Coastal Overlay Zone and wholly or partially within the MHPA, development is limited to the development area allowed by the OR-1-2 Zone, as described below (see Section II.B). Zone 2 brush management is considered "impact neutral" and is not considered part of the proposed development area. The development area must be located on the least sensitive portions of the site. The following list, in order of increasing sensitivity, is provided as a guideline for assessing the least sensitive portion of the site. Projects should be designed to avoid impacts to Covered Species where feasible. This list should be used in combination with existing site-specific biological information, such as potential edge-effects from existing and proposed development, preserve configuration, habitat quality, wildlife movement, and topography.

a. Areas devoid of vegetation, including previously graded areas and agricultural fields.

b. Areas of non-native vegetation, disturbed habitats, and eucalyptus woodlands.

c. Areas of chamise or mixed chaparral, and non-native grasslands.

d. Areas containing coastal scrub communities.

e. All other upland communities.

f. Occupied habitat of listed species, narrow endemic species, *Muilla clevelandii* (San Diego goldenstar), non-native grasslands occupied by burrowing owl, and all wetlands.

g. All areas necessary to maintain the viability of wildlife corridors (e.g., linear areas of the MHPA < 1000' wide).

Within each of the previous categories (a-g above), areas containing steep hillsides will be considered more sensitive than those areas without steep hillsides.

Proposed development must be sited on the least sensitive areas and may ~~only~~ encroach into more sensitive areas only to achieve the allowable development area. Within the Coastal Overlay Zone, specific discretionary encroachment limitations into steep hillsides containing sensitive biological resources are established in Section 143.0142(a)(4) of the ESL which shall supersede the allowable development area permitted pursuant to the OR-1-2 zone.

In addition to the previous siting requirements, any development inside the MHPA which identifies the occurrence of the following species must include an impact avoidance area as follows:

- 300 feet from any nesting site of Cooper's hawk (*Accipiter cooperii*).
- 1,500 feet from known locations of the southern pond turtle (*Clemmys marmorata pallida*).
- 900 feet from any nesting sites of northern harriers (*Circus cyaneus*).
- 4,000 feet from any nesting sites of golden eagles (*Aquila chrysaetos*).
- 300 feet from any occupied burrow of burrowing owls (*Speotyto cunicularia hypugaea*).
- Road pools supporting listed fairy shrimp, unless a deviation (e.g., biologically superior option) is approved by the City and Wildlife Agencies as defined in Section III.C.4 below.

These conditions are requirements of the Incidental Take Authorization in order to consider these species adequately conserved.

3. Development Outside of the MHPA

For parcels outside of the Coastal Overlay Zone and the MHPA, there is no limit on encroachments into sensitive biological resources, with the exception of wetlands and listed non-covered species habitat (which are regulated by federal and state agencies and narrow endemic species as described below). However, impacts to sensitive biological resources must be assessed, and mitigation, where necessary, must be provided in conformance with Section III of these Guidelines. Within the Coastal Overlay Zone, specific encroachment limitations into steep hillsides containing sensitive biological resources, and permitted uses within wetlands are established in Section 143.0142(a) and Section 143.0130(d) respectively, which, in case of conflict, shall supersede other regulations of ESL. [*Note*: *Encroachment into areas outside of the MHPA that are designated and zoned as open space would be limited to the encroachment allowed by the underlying zone*].

Outside the MHPA, projects must incorporate additional measures for the protection of covered species as identified in Appendix A of the MSCP Subarea Plan and the VPHCP. These measures can include management (e.g., fencing, signage), enhancements (e.g., removal of exotic species), restoration (e.g., expansion of existing populations) and/or transplantation into areas of protected open space. For burrowing owls, impacts must be avoided to the maximum extent practicable. Mitigation for impacts to occupied burrowing owl habitat must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements. The appropriate measure(s) should be determined on a case-by-case basis, depending on the autecology of the species and the size, type and location of the proposed development.

4. Restrictions on Grading

All clearing, grubbing or grading (inside and outside the MHPA) will be restricted during the breeding season where development may impact the following species:

- Western snowy plover (March 1 – September 15)
- Southwestern willow flycatcher (May 1 – August 30)
- Least tern (April 1 – September 15)
- Cactus wren (February 15 – August 15)
- Least Bell's vireo (March 15 – September 15)
- Tri-colored black bird (March 1 – August 1)
- California gnatcatcher (March 1 – August 15 inside MHPA only. (No restrictions outside MHPA)
- Burrowing Owl (February 1 to August 31)

B. Open Space Residential Zone (OR-1-2)

The OR-1-2 Zone provides for low-density residential, agricultural and passive open space uses. Every parcel zoned OR-1-2 has a development area as follows:

1. Development Area

The allowable development area of a site (premise) within the OR-1-2 zone includes all portions of the site, both developed and undeveloped, that occur outside of the MHPA. If this area is less than 25% of the total size of the site, then the development area would also include the amount of encroachment into the MHPA necessary to achieve development on 25% of the site (see Figure 1). The location of any allowable development into the MHPA would be determined by the ESL, as outlined above (Section II.A.2). No encroachment into the MHPA beyond the development area is allowed. All areas outside of the development area (remainder area) would be left in a natural undeveloped condition, except for those passive uses permitted by the OR-1-2 zone. At the time of development, a

covenant may be recorded or conservation easement granted on property not dedicated to the City (see Section III.B.2).

Premises less than four acres in size that are partially or wholly in the MHPA would be allowed a development area of one acre in areas where the MHPA is of at least 1000 feet in width. The measurement of the MHPA width should be as follows: a straight line drawn through any portion of the premises should be a minimum of 1000 feet from the edges of the MHPA.

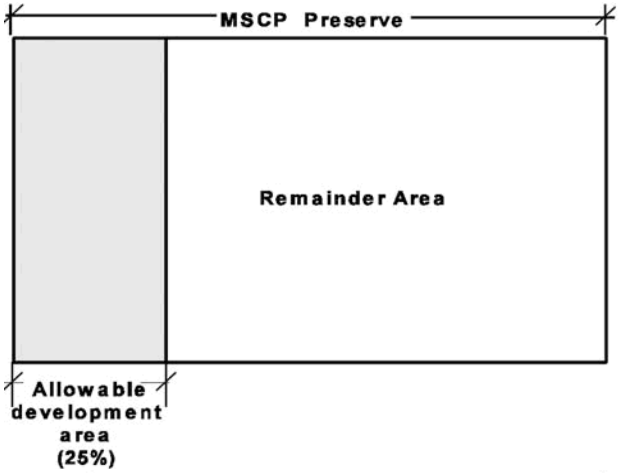
Up to an additional 5% development area inside the MHPA is permitted in order to accommodate essential public facilities, as identified in an adopted Land Use Plan (e.g., Community Plan, Specific Plan). Essential public facilities include identified circulation element roads, major water and sewer lines, publicly owned schools, parks, libraries, and police and fire facilities. Roads, water and sewer lines that service a proposed project, and are not identified on the existing Land Use Plan, previously adopted by City Council, do not qualify for the additional 5% development area. The additional 5% development area will require mitigation pursuant to Section III.

All areas of grading, including cut and fill slopes (even if proposed for revegetation), Zone 1 of brush management, and any temporary staging areas should be considered part of the development area. Zone 2 of brush management may occur outside of the development area. Temporary disruptions of habitat and temporary staging areas that do not alter landform and that will be revegetated are generally not considered to be permanent habitat loss. Staff will work with the applicant to ensure that appropriate revegetation and restoration will be completed as part of the development process.

2. Development Area within the Coastal Overlay Zone

There are specific and discretionary encroachment limitations into steep hillsides containing sensitive biological resources established in Section 143.0142(a)(4) of the ESL. These restrictions are designed to assure that development onto steep hillsides containing sensitive biological resources is minimized. Additionally, development within wetlands shall be avoided to the maximum extent possible. In the event impacts to wetlands are unavoidable, only uses identified in Section 143.0130(d), which include aquaculture, wetlands-related scientific research and education uses, wetland restoration projects and incidental public service projects shall be permitted within wetlands. These uses are permitted only where it has been demonstrated that there is no less environmentally damaging feasible alternative and mitigation has been provided. In case of conflict with the OR-1-2 Zone and/or other regulations, these regulations shall supercede and apply. *[Note: The Development Regulations of the OR-1-2 Zone apply to all property within the MHPA. In some cases, parcels may be zoned other than OR-1-2, but would still be subject to the OR-1-2 development area regulations pursuant to the ESL (Sec. 143.0141(d).]*

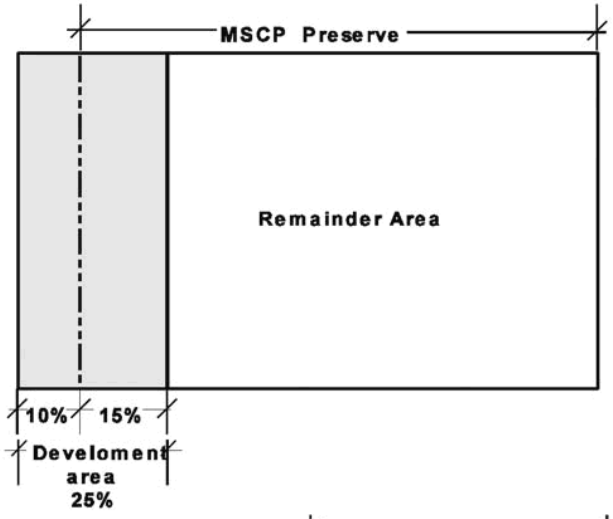
FIGURE 1
OR-1-2 ZONE DEVELOPMENT AREA
(OUTSIDE THE COASTAL OVERLAY ZONE) EXAMPLES



EXAMPLE 1:

Parcels wholly within the MSCP Preserve

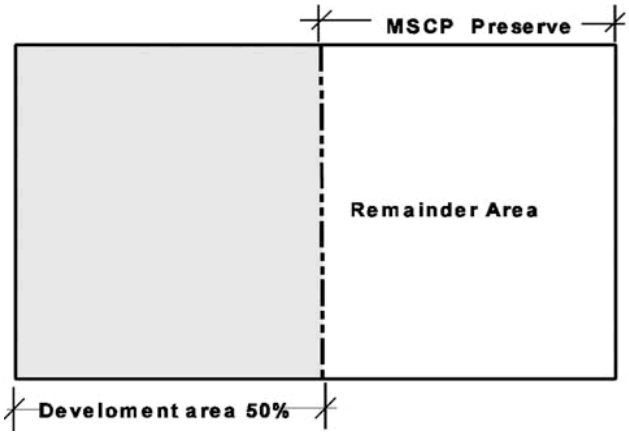
- Development area : 25%
- Encroachment into MSCP Preserve: 25%



EXAMPLE 2:

Parcels straddling the MSCP Preserve (less than 25% outside Preserve)

- Development area : 25%
- Encroachment into MSCP Preserve: 15%



EXAMPLE 3:

Parcels straddling the MSCP Preserve (more than 25% outside Preserve)

- Development area : 50%
- Encroachment into MSCP Preserve: 0%

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SECTION III

BIOLOGICAL IMPACT ANALYSIS AND MITIGATION PROCEDURES

Mitigation is the process of reducing significant impacts to below a level of significance. The process of identifying biological mitigation under the ESL and CEQA consists of two parts;

- The identification of significant biological impacts, and
- The identification of the corresponding mitigation requirements to reduce the impacts to below a level of significance.

The following procedures are to be used for identifying and mitigating impacts to sensitive biological resources.

These Guidelines are provided to establish city-wide consistency and equity among projects. Diversion from these Guidelines may have significant effects on the successful implementation of the MSCP, and thus a possible significant effect on regional biodiversity conservation. Therefore, any significant proposed deviation would require a site-specific analysis in the Biological Survey Report to identify what effects, if any, it would have on the regional MSCP. The City Manager or designee will be the final authority to determine the adequacy of any mitigation that is recommended to the City decision-maker.

A. Identification of Impacts

1. Biological Survey Report

   A biological survey report is required for all proposed development projects which are subject to ESL, and/or where the CEQA review has determined that there may be a significant impact on other biological resources considered sensitive under CEQA. Table 1 outlines the survey requirements for various biological resources inside and outside the MHPA. The Biological Survey Report must identify and map biological resources present on the site, including any portions of the site identified as part of the MHPA and any species considered sensitive pursuant to CEQA (see Table 1 – Summary of Biological Survey Requirements) and in accordance with the Guidelines for Conducting Biological Surveys (Appendix II). Each vegetation community type should be categorized into either wetlands or one of four upland Habitat Tiers. City staff will confirm the adequacy of all maps during the CEQA environmental review process.

   The location and extent of each resource must be clearly identified on a map of an appropriate scale (same scale as development drawings), on which the acreage of each vegetation community must be provided. Individual sensitive species must be depicted on the map and territories identified where they have been determined. It is expected that the mapping scale will vary with size and type of project proposed.

The minimum mapping units should be clearly identified in the text of the report, and should be based on the mapping scale and the vegetation community. A minimum mapping unit for uplands of approximately ¼ acres is generally considered acceptable for the 1"=200' scale.

Surveys, for state or federally listed sensitive or MSCP and VPHCP covered species older than 24 months must be updated, as appropriate, to accurately reflect resources on site. Surveys should be done at the appropriate time of year to detect presence/absence of sensitive species. If surveys are not done at the appropriate time of year, and the potential for occurrence is moderate to high (based on historical knowledge, site records, determination by the biologist, etc.), then it will be concluded that their presence exists on the property. In cases where there is a low potential to impact sensitive species, justification should be provided in order to determine whether additional focused surveys are warranted. Biological surveys that are over 24 months would require that the survey and report be updated to reflect the most current conditions affecting the project site. The U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (e.g., Wildlife Agencies) may require updated survey data during their review of projects.

TABLE 1
SUMMARY OF BIOLOGICAL SURVEY REQUIREMENTS

RESOURCE	SURVEY REQUIREMENTS	
	Inside MHPA	Outside MHPA
Vegetation		
Uplands	Confirm/Revise MSCP mapping	Confirm/Revise MSCP mapping
Wetlands	Delineate wetlands per City definition	Delineate wetlands per City definition
Covered spp.[1]		
Listed spp. (e.g. California gnatcatcher)	Focused survey per protocol	Per MSCP conditions of coverage[2]
Narrow endemic (e.g. San Diego thornmint)	Focused survey per protocol	Focused survey per protocol
Other (e.g. San Diego horned lizard, Western burrowing owl)	Survey as necessary to comply with requirements as outlined in Section II.A.2 of these Guidelines	Per MSCP conditions of coverage[2]
Vernal Pool Species	Focused survey per protocol	Focused survey per protocol
Non-Covered spp.[1]		
Listed spp. (e.g. Pacific pocket mouse)	Focused survey per protocol	Focused survey per protocol
"Other Sensitive Species"[3] (e.g. little mouse tail)	Case-by-case determination depending on the spp.	Case-by-case determination depending on the spp.

Notes:

1. Based upon the MSCP and VPHCP mapping, site specific surveys, the NDDB records, previous EIRs and biological surveys and/or discussion with the Wildlife Agencies, the potential for listed species, narrow endemic and CEQA sensitive species will be determined. Where there is a reasonable likelihood that one of these species exists, surveys will follow the above requirements.
2. Survey as necessary to conform to Appendix A of the City of San Diego MSCP Subarea Plan (March 1997) and the VPHCP (2018).
3. "Other Sensitive Species": Those other species that are not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA.

2. Impact Analysis

The Biological Survey Report must identify all potential impacts from the development (both on-site impacts and off-site impacts such as roads, and water and sewer lines) to sensitive biological resources and to other significant biological resources as determined by the CEQA process (i.e., sensitive, non-covered species). The report should evaluate the significance of these impacts. Impact assessments need to include analysis of direct impacts (i.e., grading, Zone 1 brush management), indirect impacts (i.e., noise, lighting) and cumulative impacts. The Development Services Department CEQA Significance Determination Thresholds (City of San Diego) should be used as a reference. Mitigation for direct impacts will be determined in accordance with these Guidelines. Cumulative impacts for Covered Species should be addressed under the MSCP Subarea Plan and the VPHCP and discussed and referenced accordingly. Zone 2 brush management is considered impact neutral (not considered an impact and not considered acceptable as a mitigation area). Indirect impacts to covered species could be mitigated by conformance to the VPHCP; Section 1.4.3, Land Use Adjacency Guidelines; and implementing Section 1.5, Preserve Management Recommendations of the City's MSCP Subarea Plan.

The proposed project must be superimposed onto a map with the biological resources. The area covered by each biological resource, including the boundaries of the MHPA, if applicable, and the proposed area of impact to each resource by the proposed development must be presented in both a graphic and tabular form in the Biological Survey Report.

i. Within the Coastal Overlay Zone - Application of Economically Viable Use Determination

Any applicant that requests a deviation from the Environmentally Sensitive Lands Regulations based on the contention that the uses permitted by the regulations will not provide an economically viable use of the property shall apply for an economic viability determination in conjunction with the Coastal Development Permit application. The application for an economic viability determination shall include the entirety of all parcels that are geographically contiguous and held by the applicant in common ownership at the time of the application. Before any application for a Coastal Development Permit and Economic Viability Determination is accepted for processing, the applicant shall provide the following information:

a. The date the applicant purchased or otherwise acquired the property and from whom it was acquired.

b. The purchase price and the documentary transfer tax paid by the applicant for the property.

c. The fair market value of the property at the time the applicant acquired it, describing the basis upon which the fair market value is derived, including any appraisals done at the time.

d. The general plan, zoning or similar land use designations applicable to the property at the time the applicant acquired it, as well as any changes to these designations that occurred after the acquisition.

e. Any development restrictions or other restrictions on use, other than government regulatory restrictions described (4) above, that applied to the property at the time the applicant acquired it, or which have been imposed after acquisition.

f. Any change in the size of the property since the time the applicant acquired it, including a discussion of the nature of the change, the circumstances, and the relevant dates.

g. A discussion of whether the applicant has sold, leased, or donated a portion of or interest in the property since the time of purchase indicating the relevant dates, sales prices, rents, and nature of the portion or interests in the property that were sold or leased.

h. Any title reports, litigation guarantees or similar documents in connection with all or a portion of the property of which the applicant is aware.

i. Any offers to buy all or a portion of the property which the applicant solicited or received, including the approximate date of the offer and offered price.

j. The applicant's costs associated with the ownership of the property annualized to the extent feasible, for each of the years the applicant has owned the property, including property taxes, property assessments, debt service costs (such as mortgage and interest costs) and operation and management costs.

k. Apart from any rent received from the leasing of all or a portion of the property, any income generated by the use of all or a portion of the property over years of ownership of the property. If there is any such income to report, it should be listed on an annualized basis along with a description of the uses that generate or have generated such income.

l. Topographic, vegetative, hydrologic and soils information prepared by a qualified professional, which identifies the extent of the wetlands on the property.

m. An analysis of alternatives to the proposed project and an assessment of how the proposed project is the least environmentally damaging alternative. The analysis of alternatives shall include an assessment of how the proposed project will impact all adjacent wetlands and environmentally sensitive habitat areas including those within the overall development plan area.

ii. Outside the Coastal Overlay Zone

Impacts to wetland habitat require a deviation from the wetland regulations as outlined in Section IV outside of the Coastal Overlay Zone. Impacts to vernal pools located outside the MHPA would not require a deviation provided they are fully mitigated consistent with the VPHCP. Wetland impacts, including vernal pools within the MHPA, may be considered only pursuant to one of the three following options:

A. Essential Public Projects (EPP) Option

Deviations from wetland requirements in ESL will be considered under the EPP Option when a proposed project(s) meets all the following criteria.

The project must be an EPP (i.e., circulation element road, trunk sewer, water main) that will service the community at large and not just a single development project or property. The project must meet the definition of an EPP as identified in Section IV and must be essential in both location and need. If the City has options on the location of an EPP, the City should not knowingly acquire property for an EPP which would impact wetlands.

The proposed project and all biological alternatives, both practicable and impracticable shall be fully described and analyzed in an appropriate CEQA document. Alternatives to the proposed project shall be comprehensively included in the CEQA document (e.g., Mitigated Negative Declaration) and/or the biological technical report for the CEQA document. Alternatives must include the following: 1) a no project alternative; 2) a wetlands avoidance alternative, including an analysis of alternative sites irrespective of ownership; and 3) an appropriate range of substantive wetland impact minimization alternatives. Public review of the environmental document must occur pursuant to the provisions of CEQA. Projects proposing to utilize this deviation

section of the ESL after initial CEQA public review must include the new information and recirculate the CEQA document.

The potential impacts to wetland resources shall be minimized to the maximum extent practicable and the project shall be the least environmentally damaging practicable biological alternative considering all the technical constraints of the project (e.g., roadway geometry, slope stability, geotechnical hazards, etc). Recognizing the wetland resources involved, minimization to the maximum extent practicable may include, but is not limited to, adequate buffers and/or designs that maintain full hydrologic function and wildlife movement (e.g., pipeline tunneling, bridging, Arizona crossings, arch culverts). The project applicant will solicit input from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (e.g., Wildlife Agencies) prior to the first public hearing.

All impacts shall be mitigated according to the requirements of Table 2a and the project shall not have a significant adverse impact to the MSCP or the VPHCP.

B. Economic Viability Option

It may be necessary to deviate from the strict application of ESL regulation in order to preserve a private property owner's right to an economically viable use of property pursuant to current U.S. Supreme Court takings law. The purpose of this deviation process is intended to ensure that if a deviation is to be granted for economic viability, it will be done only for circumstances not of the applicant's making. A deviation should not be granted to achieve economic viability when the primary reason a project is economically unviable, absent a deviation, is because of a poor investment decision by a land owner. An economic viability deviation should not be based solely on a prospective rezone. Any deviation for economic viability should be the minimum necessary to achieve economically viable use of the property. In the case where three criteria below can be met, it is the intent of the City at is sole discretion to offer to compensate willing sellers at market value for protection of high quality wetlands depending on funding availability and acquisition priorities. Any offers to acquire the property and the results of the offer will be presented to the City decision-maker at the time they consider the deviations findings. Deviation from the Wetland regulations in ESL will be considered under the Economic Viability Option when a proposed project meets all of the following three criteria. However, nothing in these

Guidelines shall be interpreted to alter proscribed uses that were part of an applicant's title to begin with.

1. Applicant shall disclose and provide all information for the City to determine whether the deviation is necessary to achieve an economically viable use of the property, including all of the following required information:

    a. A range of biological alternatives that include the no project alternative, a wetlands avoidance alternative, and alternative(s) that show substantive minimization of impacts to wetlands.

    b. The date the *applicant* purchased or otherwise acquired the property and from whom.

    c. The purchase price and the documentary transfer tax paid by the *applicant* for the property. The *applicant* must provide for an appraisal to establish whether the purchase price was appropriate given market value at the time of purchase. The appraisal shall be prepared by an outside appraiser with recent experience in the type of appraisal being requested, and supervised by the City of San Diego Real Estate Assets Department. The *applicant* will deposit monies into a special fund established by the City to hire, supervise and pay for the appraisal and associated City staff costs. The City will use a revolving list of qualified outside appraisers to prepare appraisals. All appraisals must be prepared by an appraiser licensed in the State of California and be in compliance with current Uniform Standards of Professional Appraisal Practice. All appraisers considered for selection will be required to fully disclose their employment history prior to selection. Any communication between the *applicant* and the appraiser shall occur only in the presence, which includes conference calls, of designated City staff. City staff shall respond to all third party requests within 30 calendar days. For the purposes of this section, *applicant* shall include the *applicant's* employees and shall not include the *applicant*'s consultants, design professionals, contractors, and subcontractors. Comparable land values used for this purpose should have similar restrictions, to the maximum extent possible, to those on the property as identified in 1(d) below.

The final complete appraisal shall be available to the City decision-maker and interested public prior to the discretionary hearing. An appraisal summary statement shall be provided to the City decision-maker for the discretionary hearing.

d. The general plan, zoning, or similar land use designations applicable to the property at the time the *applicant* acquired it, as well as any changes to these designations that occurred after acquisition.

e. Any development restrictions or other restrictions on use, other than government regulatory restrictions described in (d) above, that applied to the property at the time the *applicant* acquired it, or which have been imposed after acquisition.

f. Any change in the size of the property since the time the *applicant* acquired it, including a discussion of the nature of the change, the circumstances and the relevant dates.

g. A discussion of whether the *applicant* has sold, leased, or donated a portion of or interest in, the property since the time of purchase indicating the relevant dates, sales prices, rents, and nature of the portion or interests in the property that were sold or leased.

h. Any title reports, litigation guarantees or similar documents in connection with all or a portion of the property.

i. Any offers to buy all or a portion of the property which the *applicant* solicited or received, including the approximate date of the offer and offered price.

j. The *applicant*'s costs associated with the ownership of the property, annualized to the extent feasible, for each of the years the *applicant* has owned the property, including property taxes, property assessments, debt service costs (such as mortgage and interest costs), and operation and management costs.

k. Any rent received from the leasing of all or a portion of the property and any income generated by the use of all or a portion of the property over years of ownership of the property. If there is any such income to report, it should be

listed on an annualized basis along with a description of the uses that generate or has generated such income.

l. Topographic, vegetative, hydrologic and soils information prepared by a qualified professional, which identifies the extent of the wetlands on the property.

m. As required per CEQA and/or the 404 b(1) guidelines under the Clean Water Act, an analysis of the economic viability of each of the alternatives required by Section III A.2., and an assessment of the economic viability of the project compared to the alternatives which takes into account all project costs, including mitigation for direct, indirect, and cumulative wetland impacts. The analysis of alternatives shall include an assessment of how each alternative will impact all wetlands and environmentally sensitive lands adjacent to and within the overall project plan area.

2. The economic information shall be reviewed by City staff and outside economic consultant, and the City Council shall consider findings that all economically viable use of a property will be removed with strict application of the ESL.

   The application for an economic viability determination shall be reviewed by City Staff, in consultation with a professional outside economic consultant. The economic consultant will provide an opinion to the City on whether any of the CEQA and/or 404 b(1) alternatives that avoid and minimize wetland impacts provide economically viable use of the subject property. The City Real Estate Asset Department will select a qualified outside economic consultant to develop an economic viability analysis. Any communication between the *applicant* and the economic consultant shall occur only in the presence, which includes conference calls, of designated City staff. The *applicant* will deposit monies into a special fund established by the City to hire, supervise and pay for the economic viability analysis and associated City staff costs. All consultants considered for selection will be required to fully disclose their employment history. The economic viability analysis must include an analysis of the project's cost burden (including all mitigation costs associated with the project), a residual land value analysis, market absorption and fiscal impacts analysis. City Manager or designee recommendations to the decision maker shall discuss the economic viability information and

professional opinion of the economic consultant, and reflect the independent judgment of the City Manager or designee.

Pursuant to the Public Records Act (California Government Code section 6250, *et seq*.), the full economic viability findings analysis, including the supplemental findings for ESL deviations, City Manager or designee recommendations, and the economic consultant's professional opinion, including documentation provided by the economic consultant that reveals all calculations and variable assumptions contained therein, and that is not proprietary ("trade secret") shall be available to the City decision-maker and interested public prior to the discretionary hearing. A summary report of the economic viability findings, City Manager or designee recommendations, and professional opinion of the economic consultant shall be provided to the City decision-maker for the discretionary hearing showing that the proposed project has avoided, minimized and mitigated to the maximum extent practicable, given the economic viability of the project.

3. The project mitigation must conform to Table 2a. While it is not the intent of the wetland deviation process to be used to reduce or eliminate mitigation as required by the City's Biology Guidelines, any project that proposes less than full mitigation compliance under this option must include supporting information as part of the economic viability determination and receive written concurrence from the Wildlife Agencies prior to distribution of the projects draft CEQA document. For projects providing full mitigation the project applicant will solicit input from the Wildlife Agencies prior to the first public hearing.

C. Biologically Superior Option

Deviations from the Wetland regulations in ESL will be considered under the biologically superior option when a project meets all the following four criteria.

1. The proposed project, a no project alternative, a wetlands avoidance alternative, and a biologically superior alternative shall be fully described and analyzed in the biology report and an appropriate CEQA document. The biology report must fully analyze and describe the rationale for why the biologically superior option (this could be the proposed project) would result in the conservation of a biologically superior resource compared to strict compliance with the provisions of the ESL.

Public review of the environmental document must occur pursuant to the provisions of CEQA. Projects proposing to utilize this option after initial CEQA public review must include the new information and recirculate the CEQA document.

2. The wetland resources being impacted by the project shall be limited to wetlands of low biological quality. The assessment of low biological quality will be specific to the resource type impacted (e.g., vernal pools, non-tidal-salt marsh, riparian, and unvegetated channels), and shall include consideration of the factors identified in I and II below:

   I. Criteria to determine biological quality of all wetland types include, but are not limited to, the following:

      a. use of the wetland by federal and/or state endangered, threatened, sensitive, rare and/or other indigenous species;

      b. diversity of native flora and fauna present (characterizations of flora and fauna must be accomplished during the proper season, and surveys must be done at the most appropriate time to characterize the resident and migratory species);

      c. enhancement or restoration potential;

      d. habitat function/ecological role of the wetland in the surrounding landscape, considering
         - the current functioning of the wetland in relation to historical functioning of the system; and.
         - rarity of the wetland community in light of the historic loss and remaining resource;

      e. connectivity to other wetland or upland systems (including use as a stopover or stepping stone by mobile species), considering
         - proximity of the wetland resource to larger natural open spaces, and
         - long-term viability of resource, if avoided and managed;

      f. hydrologic function, considering

- whether the volume and retention time of water within the wetland is sufficient to aid in water quality improvements, and
- whether there is significant flood control value or velocity reduction function; and,
- whether there is an opportunity to restore the hydrologic functions;

g. status of watershed considering whether the watershed is partially developed, irrevocably altered, or inadequate to supply water for wetland viability; and

h. source and quality of water, considering
- whether the urban runoff is from a partially developed watershed;
- whether the water source is in part or exclusively from human-caused runoff which could be eliminated by diversion; and,
- whether there is an opportunity to restore the water quality or flood control value.

II. Additional habitat-specific factors, requirements, and/or examples (by habitat type) to determine biological quality include the following:

Vernal Pools

a. Characterizations of vernal pool flora and fauna must be accomplished during the proper seasons. Surveys must be done between December and May to ensure adequate characterization of the vernal pools. Adequate surveys should be done to determine ponding and vernal pool flora and fauna. Surveys for fairy shrimp must be done in accordance with current U.S. Fish and Wildlife Service fairy shrimp survey protocol.

b. Timing of the first rainfall and subsequent filling of the pools should be determined during the evaluation process. Rainfall and ponding should be monitored throughout the wet season.

Endangered, threatened, and sensitive species to consider include: *Brodiaea orcuttii* (when within vernal pools and/or their watershed), *Downingia cuspidata, Eryngium aristulatum* ssp. *parishii, Myosurus minimus* var. *apus, Navarettia fossalis,*

Orcuttia californica, Pogogyne abramsii, Pogogyne nudiuscula, Streptocephalus woottoni, and *Branchinecta sandiegonensis* (when within vernal pools).

c. Determination of habitat function can include an assessment of number of pools with a cumulatively small amount of habitat (pool surface area) relative to other nearby vernal pool complexes (i.e., an isolated complex with two small pools would be considered lower quality than a complex adjacent to the MHPA with ten pools).

d. Restoration potential should include an analysis of compaction of watershed, presence of historic pools, and status of hardpan or clay substrate.

Salt Marsh, Salt Panne, and Mudflats

a. Wetlands with either surface or sub-surface tidal influence (e.g., coastal salt marsh, salt panne and mudflats) will never be considered low quality and are excluded from the deviation process for a biologically superior option. A deviation for a biologically superior option must not be granted for tidally influenced wetlands.

b. Water and soil salinity testing should be conducted in areas of questionable tidal influence. Evaluations of tidal influence must include the highest spring and lowest neap tides.

c. Low feasibility for restoration of tidal influence should be determined based on distance from existing tidal influence (e.g., > 1/4 mile).

d. Determine whether there is little or no function as coastal salt marsh, salt panne, or mudflat habitat, including habitat for migratory birds.

Freshwater, Riparian, or Brackish Wetlands

a. Tidally influenced brackish wetlands will never be considered low quality and are excluded from the deviation process for a biologically superior option.

b. Hydrologic evaluations of the effects of any impacts on the upstream and downstream biota and flooding must be conducted as part of the review process.

Wetland quality shall be thoroughly analyzed in the project's biological technical report using the criteria listed above and based on best available scientific information. Wetland quality determinations shall be a discretionary action made on a case-by-case basis, with not all low-quality criteria required to make a low quality determination. Alternatively, the presence of any factor to any significant amount or degree may preclude a determination of low quality. All criteria shall be carefully considered when making a wetland quality determination. The City will seek input and concurrence from the Wildlife Agencies on this determination, and will use the input to develop the biologically superior option (this could be the proposed project) described and analyzed in the CEQA document.

During the CEQA process, the City's Wetlands Advisory Board shall review information provided by the applicant and provide an opinion to City staff and the City Manager on the biologically superior project design and analyses. The opinion of the Wetlands Advisory Board shall be included in the City Manager report to the City decision maker; however, the project process should not be delayed if the Wetlands Advisory Board does not provide a response or cannot provide a response due to lack of quorum.

3. The project and proposed mitigation shall conform to the requirements for this option as detailed in Section III B.

4. The Wildlife Agencies have concurred with the biologically superior project design and analyses. The concurrence shall be in writing and be provided prior to or during the public review of the CEQA document in which the biologically superior project design has been fully described and analyzed. Lack of unequivocal response during the CEQA public review period is deemed to be concurrence.

B. Identification of the Mitigation Program

The Biological Survey Report will include a program which identifies a plan of action to reduce significant impacts to below a level of significance. The Mitigation Program will consist of three required elements: 1) Mitigation Element, 2) Protection and Notice Element, and 3) Management Element. Each element is further described below. This mitigation program must be incorporated in the permit conditions and/or subdivision map, the construction specifications for public projects, and shown on the construction plans as appropriate.

The Biological Survey Report must also provide evidence that the nature and extent of the mitigation proposed is reasonably related (nexus) and proportional to the adverse biological impacts of the proposed development.

1. Mitigation Element

Mitigation must be determined on a case-by-case basis. Mitigation refers to actions to help sustain the viability and persistence of biological resources, as exemplified below. Mitigation will consist of actions that either compensate for impacts by replacing or providing substitute habitats, or rectify the impact by restoring the affected habitats. The requirements of the mitigation will be based on the type and location of the impacted habitat, and additionally for uplands, on the location of the mitigation site. The Mitigation Element will consist of a discussion of the amount (e.g., quantity) and the type (e.g., method) of mitigation.

The following guidelines are provided to achieve consistency and equity among projects. Mitigation for specific projects may differ depending on site-specific conditions as supported by the project-level analysis.

a. Mitigation for Wetlands Impacts

ESL requires that impacts to wetlands be avoided, unless approved through the deviation process. Unavoidable impacts should be minimized to the maximum extent practicable, and mitigated as follows:

As part of the project-specific environmental review pursuant to CEQA, all unavoidable wetlands impacts (both temporary and permanent) will need to be analyzed and mitigation will be required in accordance with Table 2a and/or Table 2b; mitigation should be based on the impacted type of wetland habitat and project design. Mitigation should prevent any net loss of wetland functions and values of the impacted wetland.

For the Biologically Superior Option the project and proposed mitigation shall include avoidance, minimization, and compensatory measures which would result in a biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the

biological resources to be conserved; and the Biologically superior mitigation shall include either:

(1) Standard mitigation per Table 2a including wetland creation or restoration of the same type of wetland resource that is being impacted) that results in high quality wetlands; AND a biologically superior project design whose avoided area(s) (i) is in a configuration or alignment that optimizes the potential long-term biological viability of the on-site sensitive biological resources, and/or (ii) conserves the rarest and highest quality on-site biological resources (see Figure 2 for an example); or

(2) For a project not consistent with 1.a (1) Above, extraordinary mitigation per Table 2b is required.

Examples of increased function and value include, but are not limited to, an increase in the availability of habitat for native fauna, an increase in native flora diversity, a decrease in invasive species, an increase in ground water recharge, water quality improvements and sedimentation deposition rates. Success criteria using the best currently available information for the particular mitigation habitat shall be required as part of the restoration or creation plan.

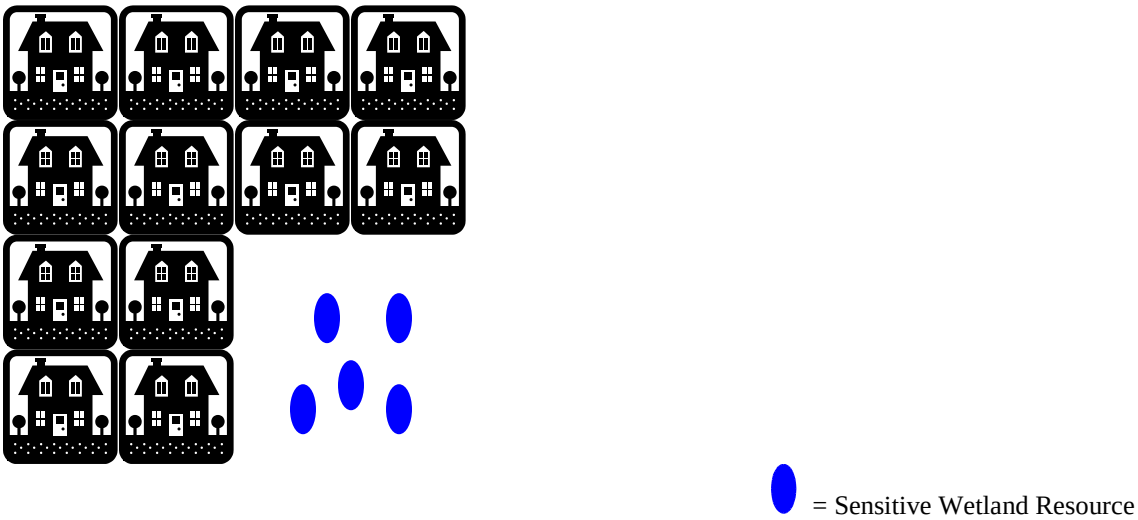
Additional Requirements for Vernal Pool or VPHCP Covered Species Mitigation:

Mitigation for projects impacting vernal pools or VPHCP covered species shall conform to the VPHCP including salvage of sensitive species from vernal pools to be impacted, introduction of salvaged material into restored vernal pool habitat where appropriate (e.g., same vernal pool series), and maintenance of salvaged material pending successful restoration of the vernal pools. Salvaged material shall not be introduced to existing vernal pools containing the same species outside the vernal pool series absent consultation with and endorsement by vernal pool species experts not associated with the project (e.g., independent expert). The mitigation sites shall include preservation of the entire vernal pool watershed and a buffer based on functions and values; however, if such an analysis is not conducted, there shall be a default of a 100-foot buffer from the watershed.

FIGURE 2
EXAMPLE OF BIOLOGICAL SUPERIOR PROJECT DESIGN

Project Design A has a lower level of edge, the avoided sensitive resource is less fragmented, and the potential for long-term biological viability of the sensitive resource is higher relative to the Project Design B. For projects designed in accordance with Project Design A, use Mitigation Table 2a. For all other project designs, Mitigation Table 2b should be used.

Project Design A – Biologically Superior Project Design



Project Design B – Not a biologically superior project design

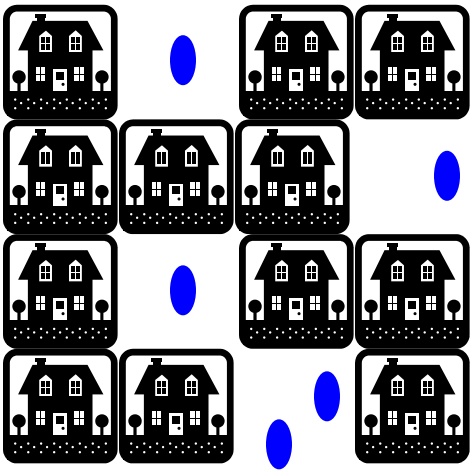


TABLE 2A
WETLAND MITIGATION RATIOS
INCLUDING BIOLOGICALLY SUPERIOR DESIGN

HABITAT TYPE	MITIGATION RATIO
Coastal Wetlands:	
- Salt marsh	4:1
- Salt panne	4:1
Riparian Habitats:	
- Oak riparian forest	3:1
- Riparian forest or woodland	3:1
- Riparian scrub	2:1
- Riparian scrub in the Coastal Overlay Zone	3:1
Freshwater Marsh	2:1
Freshwater Marsh in the Coastal Overlay Zone	4:1
Natural Flood Channel	2:1
Disturbed Wetland	2:1
Vernal Pools	2:1 to 4:1*
Marine Habitats	2:1
Eelgrass Beds	2:1

Notes:
Any impacts to wetlands must be mitigated "in-kind" and achieve a "no-net loss" of wetland function and values except as provided for in Section 3B (Economic Viability Option).

* Mitigation for vernal pool impacts consistent with the VPHCP shall be 2:1 for listed fairy shrimp or when no listed plant species are present, 3:1 for San Diego button celery, and 4:1 when listed species with very limited distributions (e.g., *Spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint*) are present. While ratio is applied to the basin area, the mitigation site must include appropriate watershed to support restored and/or enhanced basins.

TABLE 2B
EXTRAORDINARY WETLAND MITIGATION RATIOS
OUTSIDE OF THE COASTAL ZONE

HABITAT TYPE	MITIGATION RATIO
Coastal Wetlands (salt marsh, salt panne)	8:1
Riparian Forest or Woodland (oak, sycamore, or willow)	6:1
Riparian Scrub	4:1
Freshwater Marsh	4:1
*Natural Flood Channel (NFC)	4:1
*Disturbed Wetlands	4:1
Vernal Pools	4:1 to 8:1

Notes:
Mitigation must be provided within or adjacent to the MHPA.

Any impacts to wetlands must be mitigated "in-kind" and achieve a "no-net loss" of wetland functions and values. Mitigation for vernal pools can range from 4:1 when no listed species are present, and up to 8:1 when listed species with very limited distributions (e.g. *Pogogyne abramsii)* are present.

* Preference for these habitats is out-of-kind mitigation with better habitat. In-kind (e.g., NFC for NFC) could be considered where it would clearly benefit sensitive species and results in a biologically superior alternative.

The following list provides operational definitions of the four types of activities that constitute wetland mitigation under ESL:

Wetland creation is an activity that results in the formation of new wetlands in an upland area. An example is excavation of uplands adjacent to existing wetlands and the establishment of native wetland vegetation.

Wetland restoration is an activity that re-establishes the habitat functions of a former wetland. An example is the excavation of agricultural fill from historic wetlands and the re-establishment of native wetland vegetation.

Wetland enhancement is an activity that improves the self-sustaining habitat functions of an existing wetland. An example is removal of exotic species from existing riparian habitat.

Wetland acquisition may be considered in combination with any of the three mitigation activities above.

Wetland enhancement and wetland acquisition focus on the preservation or the improvement of existing wetland habitat and function, and do not result in an increase in wetland area; therefore, a net loss of wetland may result. As such, acquisition and/or enhancement of existing wetlands may be considered as partial mitigation only, for any balance of the remaining mitigation requirement after restoration or creation if wetland acreage is provided at a minimum of a 1:1 ratio. For permanent wetland impacts that are unavoidable and minimized to the maximum extent feasible, mitigation shall consist of creation of new, in-kind habitat to the fullest extent possible and at the appropriate ratios. In addition, unavoidable impacts to wetlands located within the Coastal Overlay Zone shall be mitigated on-site, if feasible. If on-site mitigation is not feasible, then mitigation shall occur within the same watershed. All mitigation for unavoidable wetland impacts within the Coastal Overlay Zone shall occur within the Coastal Overlay Zone.

For example, satisfaction of the mitigation requirement may be considered for a 3:1 mitigation ratio, with two parts consisting of acquisition and/or enhancement of existing acres, and one part restoration or creation.

Restoration of illegally filled historic wetland areas will not be considered for mitigation, and may result in code enforcement actions and/or may require restoration as a condition of project approval. All restoration proposals should evaluate the reason for the historic wetland loss (e.g., placement of fill, changes in upstream or groundwater hydrology), the approximate date of the loss, and to the maximum extent possible, provide a determination as to whether the historic loss was legally conducted based upon the regulatory requirements at the time of the loss and the property ownership at the time of the loss.

The wetland mitigation ratios, set forth in Tables 2a and 2b, in combination with the requirements for no-net-loss of functions and values and in-kind mitigation, are adequate to achieve the conservation goals of the City's MSCP Subarea Plan for wetland habitats and the Covered Species which utilize those habitats.

Wetland mitigation required as part of any federal (404) or state (1601/1603) wetland permit will supersede and will not be in addition to any mitigation identified in the CEQA document for those wetland areas covered under any federal or state wetland permit. Wetland habitat outside the jurisdiction of the federal and state permits will be mitigated in accordance with the CEQA document. Wetland habitat outside the jurisdiction of the federal and state permits will be mitigated in accordance with the CEQA document.

b. Mitigation for Upland Impacts

The City of San Diego has developed a MSCP Subarea Plan which identifies the conservation and management of a City-wide system of interconnected open space. The habitat based level of protection afforded by the implementation of the MHPA is intended to meet the mitigation obligations of Covered Species and most likely the majority of species determined to be sensitive pursuant to the CEQA review process. The City has adopted a policy that development should be conserved. While this would result in the depletion (net loss) of the existing inventory of sensitive biological resources, the successful implementation of the MSCP would retain the long-term viability, and avoid further extirpation of many of San Diego's sensitive species. Therefore, for upland habitats, measures that contribute towards overall implementation of the MSCP may be considered as mitigation, even when a net loss of the existing inventory of sensitive biological resources occurs. These methods, described below, allow for greater flexibility in mitigation methodology, including off-site acquisition, on-site preservation, habitat restoration and in limited cases, monetary compensation.

(1) Upland Impacts Within the MHPA (Outside the Coastal Overlay Zone)

Where the MHPA covers more than 75% of a premise, development will be limited to that amount necessary to achieve a development area of 25% of the premise, based upon the development area regulations of the OR-1-2 Zone (see Section II.B.1). No mitigation will be required for the direct impacts to uplands associated with this development area.

City linear utility projects (i.e., sewer and water pipelines) are exempt from the development area limitation but need to mitigate all direct impacts in accordance with Table 3. Likewise, all projects processed through a deviation would need to provide mitigation in accordance with Table 3 for impacts beyond the allowable development area of the OR-1-2 Zone.

(2) Upland Impacts Outside of the MHPA (Outside the Coastal Overlay Zone)

Where the MHPA covers less than 75% of a premises, no development will be allowed within the MHPA. Upland mitigation, based upon the ratios set forth in Table 3, will be required for all significant biological impacts. These ratios are based upon the rarity of the upland resources as characterized by one of four Habitat Tiers. Due to the critical nature and high biological value of the MHPA, mitigation should be directed to the MHPA. Thus, a lower mitigation ratio may be applied for projects

that propose to mitigate inside of the MHPA. Lands outside the MHPA containing narrow endemic species will be treated as if the land was inside the MHPA for purposes of mitigation.

The mitigation requirement would be evaluated against any portion of the premise within the MHPA that is left undeveloped as a condition of the permit. If the portion of the premise containing the MHPA is equal to or greater than the mitigation requirement, then no further mitigation would be required. Any acreage of the mitigation requirement not satisfied on-site will be required to be mitigated off-site.

Thus, by way of example, if a project is impacting 60 acres of coastal sage scrub (Tier II) outside of the MHPA and preserving 40 acres of viable habitat on-site within the MHPA, then the remaining uncompensated acreage is 20 acres [60 ac – (1:1 x 40 ac) = 20 ac]. This would require the preservation of 20 acres (20 x 1:1) of mitigation within the MHPA, or 30 acres (20 x 1.5:1) outside (see Figure 3).

Mitigation located inside the MHPA for all Tier I impacts must be in-tier, but may be out-of-kind. For impacts to Tier II, IIIA or IIIB habitats (excluding occupied burrowing owl habitat), the mitigation could (1) include any Tier I, II, IIIA or IIIB habitats (out-of-kind) within the MHPA, or (2) occur outside of the MHPA within the affected habitat type (in-kind). Mitigation for impacts to occupied burrowing owl habitat (at the subarea plan specified ratio/Table 3 of the Biology Guidelines) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management and enhancement of burrowing owl nesting and foraging requirements.

Any outstanding mitigation may be satisfied by one, or a combination, of the following methods, or other methods determined on a case-by-case basis to reduce impacts to below a level-of-significance. *In all cases, mitigation sites must have long-term viability.* Viability will be assessed by the connectivity of the site to larger planned open space, surrounding land uses, and sensitivity of the MHPA resources to environmental change.

TABLE 3
UPLAND MITIGATION RATIOS[1]

<table>
<tr><th>TIER</th><th>HABITAT TYPE</th><th>MITIGATION RATIOS</th></tr>
<tr><td>TIER 1[2]
(rare uplands)</td><td>Southern Foredunes
Torrey Pines Forest
Coastal Bluff Scrub
Maritime Succulent Scrub
Maritime Chaparral
Scrub Oak Chaparral
Native Grassland
Oak Woodlands</td><td>Location of Preservation
<table><tr><td></td><td></td><td>Inside</td><td>Outside</td></tr><tr><td rowspan="2">Location of Impact</td><td>Inside</td><td>2:1</td><td>3:1</td></tr><tr><td>Outside</td><td>1:1</td><td>2:1</td></tr></table></td></tr>
<tr><td>TIER II[3]
(uncommon uplands)</td><td>Coastal Sage Scrub (CSS)
CSS/Chaparral</td><td>Location of Preservation
<table><tr><td></td><td></td><td>Inside</td><td>Outside</td></tr><tr><td rowspan="2">Location of Impact</td><td>Inside</td><td>1:1</td><td>2:1</td></tr><tr><td>Outside</td><td>1:1</td><td>1.5:1</td></tr></table></td></tr>
<tr><td>TIER IIIA[3]
(common uplands)</td><td>Mixed Chaparral
Chamise Chaparral</td><td>Location of Preservation
<table><tr><td></td><td></td><td>Inside</td><td>Outside</td></tr><tr><td rowspan="2">Location of Impact</td><td>Inside</td><td>1:1</td><td>1.5:1</td></tr><tr><td>Outside</td><td>0.5:1</td><td>1:1</td></tr></table></td></tr>
<tr><td>TIER IIIB[3]
(common uplands)</td><td>Non-Native Grasslands[4]</td><td>Location of Preservation
<table><tr><td></td><td></td><td>Inside</td><td>Outside</td></tr><tr><td rowspan="2">Location of Impact</td><td>Inside</td><td>1:1</td><td>1.5:1</td></tr><tr><td>Outside</td><td>0.5:1</td><td>1:1</td></tr></table></td></tr>
<tr><td>TIER IV
(other uplands)</td><td>Disturbed Land
Agriculture
Eucalyptus Woodland
Ornamental Plantings</td><td>Location of Preservation
<table><tr><td></td><td></td><td>Inside</td><td>Outside</td></tr><tr><td rowspan="2">Location of Impact</td><td>Inside</td><td>0:1</td><td>0:1</td></tr><tr><td>Outside</td><td>0:1</td><td>0:1</td></tr></table></td></tr>
</table>

NOTES:

1. No mitigation would be required for impacts within the base development area (25%) occurring inside the MHPA. Mitigation for any impacts from development in excess of the 25% base development area for community plan public facilities or for projects processed through the deviation process would be required at the indicated ratios.

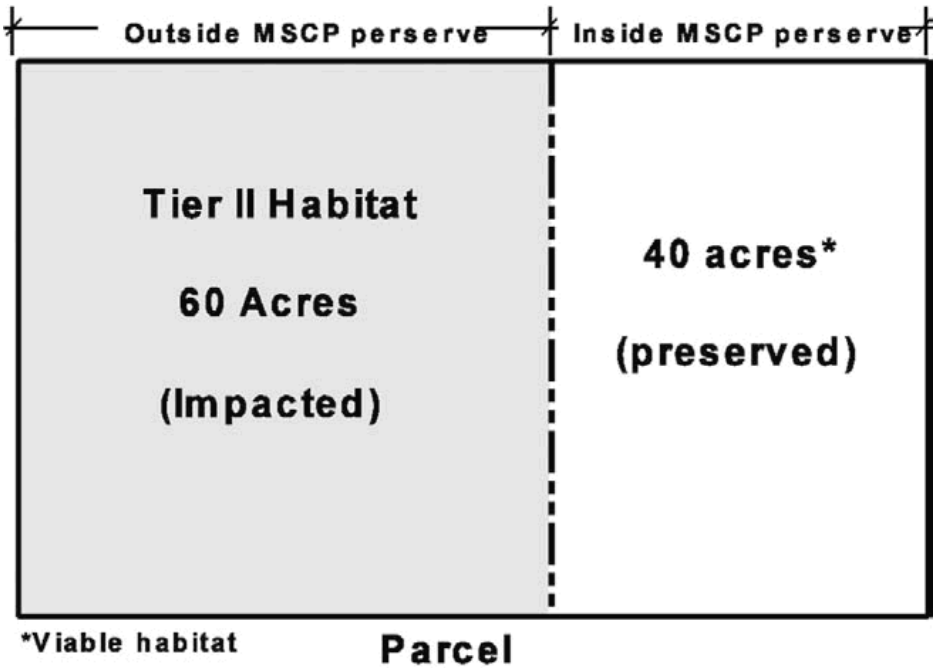
2. For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in Tier) or (2) occur outside of the MHPA within the affected habitat type (in-kind).

3. For impacts to Tier II, III A and III B habitats, the mitigation could (1) occur within the MHPA portion of Tiers I – III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).

4. Mitigation for impacts to occupied burrowing owl habitat (at the subarea plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements.

In general, areas within the MHPA are considered to have long-term viability. Areas outside of the MHPA proposed for mitigation may require additional biological studies to support the determination of long-term viability.

FIGURE 3
MITIGATION EXAMPLE



MITIGATION:

1. On-site preservation: [60 acres – (40 acres x 1:1)] = 20 acres 20 **acres uncompensated**
2. Off-site preservation: (20 acres x 1:1) = 20 acres Inside MSCP Preserve
   or
   (20 acres x 1.5:1) = 30 acres Outside MSCP Preserve

(3) Upland Impacts Within the Coastal Overlay Zone

Within the Coastal Overlay Zone, encroachment into steep hillsides containing sensitive biological resources shall be avoided to the maximum extent possible, and permitted only when in conformance with the encroachment limitations set forth in Section 143.0142(a)(4). Mitigation for permitted impacts shall be required pursuant to Section III.B.1.b(1) and (2) above.

c. Mitigation Methods

(1) Off-site Acquisition: The purchase or dedication of land with equal or greater habitat value can be considered as a method of mitigation. Impacts within the City of San Diego must be mitigated within the City of San Diego's jurisdiction, preferably in the MHPA.

Mitigation Banks" are privately or publicly held lands that sell mitigation credits instead of fee title for habitat areas on which a conservation easement has been placed. Under this method, a large site can be acquired over time by multiple projects requiring small mitigation needs. Purchase of areas of "credits" from an established bank can be acceptable, as long as the required acreage is subtracted from the remaining credits in the bank and is not available for future projects. All banks must have provisions approved for long-term management, can be part of a regional habitat preserve system, and upon request can provide an updated record of the areas (credits) purchased from the bank and those that are remaining.

New mitigation banks must be established pursuant to the "Official Policy on Conservation Banks" (California Resource Agencies 1995) and the "Supplemental Policy Regarding Conservation Banks within the NCCP Area of Southern California" (USFWS 1996). In general, the purchase of credits from mitigation banks located outside of the City of San Diego's jurisdiction will not be allowed.

(2) On-Site Preservation: The following provides guidance for evaluating the acceptability of on-site preservation as mitigation with respect to the long-term viability of the site:

(a) Inside MHPA: For premises that straddle the MHPA, the on-site preservation of lands inside the MHPA, outside of brush management zones, are considered to have long-term viability due to their connectivity to larger planned open space and their

contribution toward regional biodiversity preservation. Areas containing brush management Zone 2 will be considered impact neutral (not considered an impact and not considered acceptable as a mitigation area); see Figure 3. Lands inside the MHPA, outside of brush management zones, will be considered acceptable as mitigation and no additional studies to support this determination will be required. [Note: Lands outside the MHPA containing narrow endemic species would be considered acceptable as mitigation and would be treated as if the land was inside the MHPA for purposes of mitigation].

(b) Outside MHPA: The on-site preservation of lands outside the MHPA may be considered acceptable as mitigation provided they have long-term biological value. Long-term biological value should be assessed in terms of connectivity to larger areas of planned open space, and any potential current or future indirect impacts associated with the urban interface. As indicated above, areas containing brush management Zone 2 will be considered "impact neutral" (not considered an impact and not considered as acceptable as a mitigation area).

(i) Connectivity: Isolated habitat patches have been shown to lack the diversity and resilience of connected systems (Noss 1983, Soule et al. 1988, Temple 1983, Wright and Hubbell 1983). In most cases, the species first to extirpate (disappear) from these isolated areas are rare species that do not adapt well to human influenced environments. Unfortunately, these species are those targeted for conservation by the MSCP.

Areas preserved on-site, but outside of the MHPA, will generally be considered to be acceptable as mitigation only if connected to the MHPA. As a general guideline, areas completely surrounded by development and areas connected by native vegetation of less than 400 feet wide for greater than 500 feet long will be considered isolated, and will not count as mitigation (see Figure 5).

Site-specific studies with field observations which incorporate the best available scientific information and methods would be necessary to provide a basis for any modification to these standards at the project level. Other factors such as topography (steep slopes), major road systems or other large public facility and habitat patch size will also be considered in assessing potential isolation of a site.

Isolated areas may, on a case-by-case basis, be considered for use as mitigation where it can be reasonably demonstrated that the resource can persist in isolation (e.g., narrow endemic species or unique habitats such as vernal pools) or act as "stepping stones" for wildlife movement between portions of the MHPA.

(ii) Urban Interface: The interface (edge) between native plant communities and human-modified areas are considered to be adverse to many native species. Many wildlife species decrease along the edge of habitat due to detrimental conditions, such as increased parasitism (by species such as the brown-headed cowbird), increased nest predation (by species such as jays, raccoons, opossums, and domestic cats and dogs), and increased competition for nesting areas (by starlings and other non-native exotic species) (Brettingham and Temple 1983, Gates and Gysel 1978, Noss 1993, Temple 1987). Invasion by exotic plants (such as escaped ornamental landscaping) and off-road vehicles also increases along habitat edges (Noss 1983, Alberts et al 1993, Sauvajot and Buechner 1993, Scott 1993). Other factors such as increased noise and night-time lighting may also contribute to the adverse conditions. These conditions are collectively called "edge effects."

Few studies have attempted to quantify the distance of edge effects. The MSCP Plan indicated that edge conditions range from 200 to 600 feet depending on adjacent land uses. A 1994 article on avian nest success indicates that the most conclusive studies suggest that edge effects are most predominantly documented within fifty meters of an edge (Patron 1994).

FIGURE 4
URBAN INTERFACE

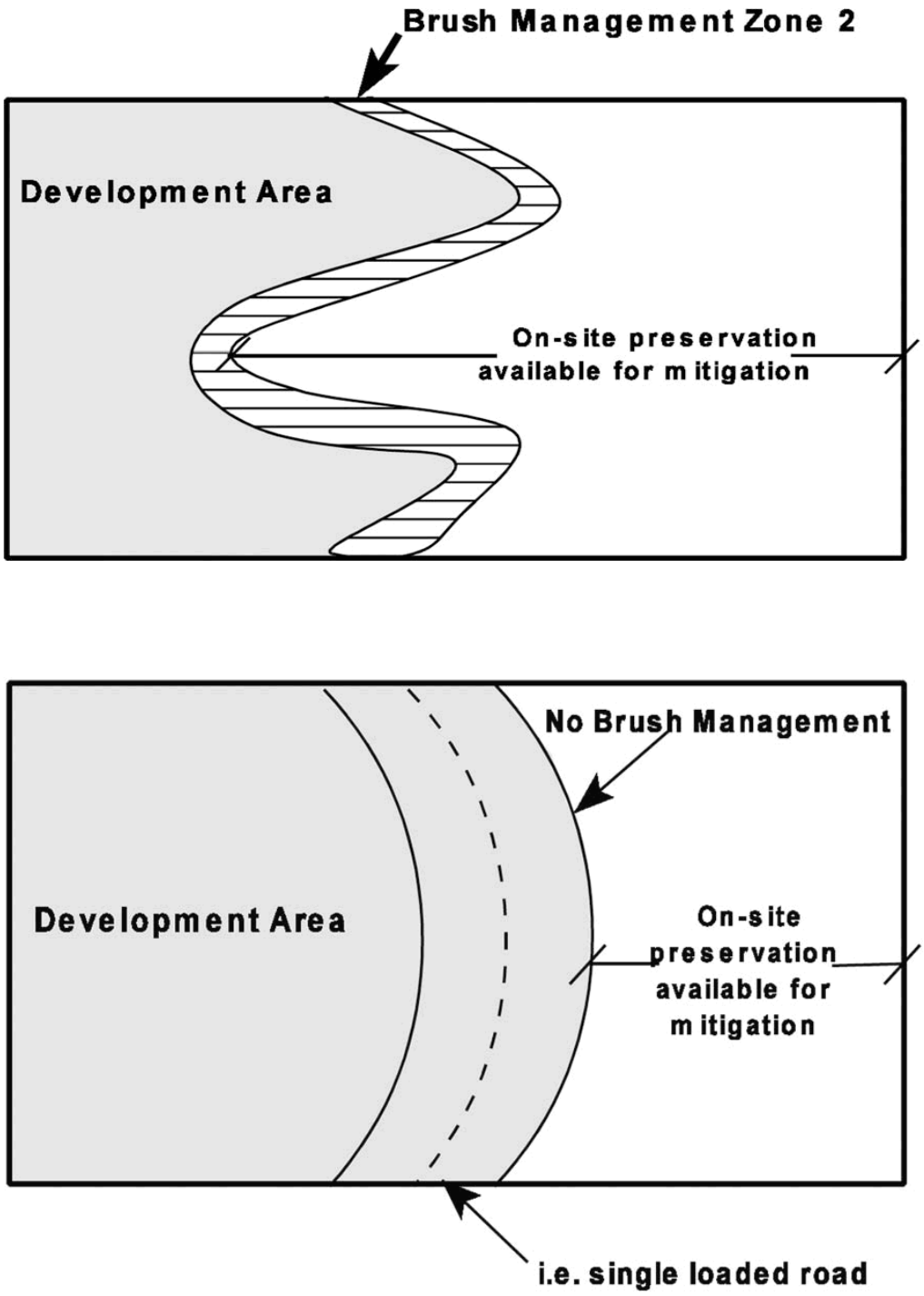
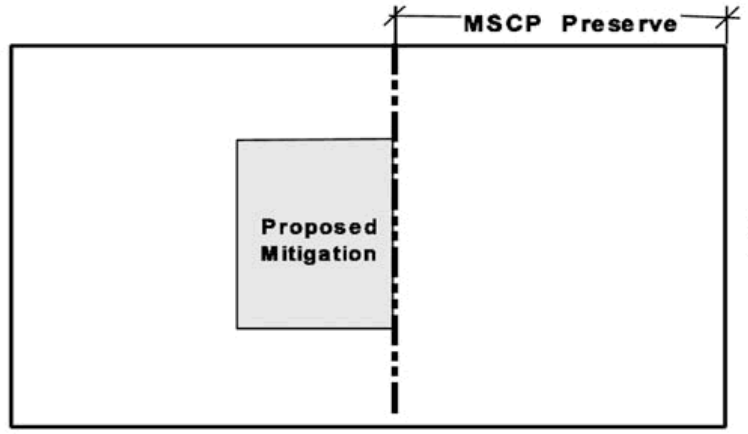
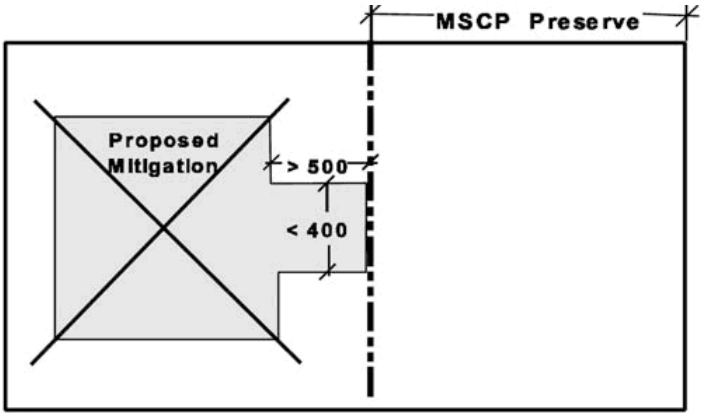


FIGURE 5
DETERMINATION OF CONNECTIVITY



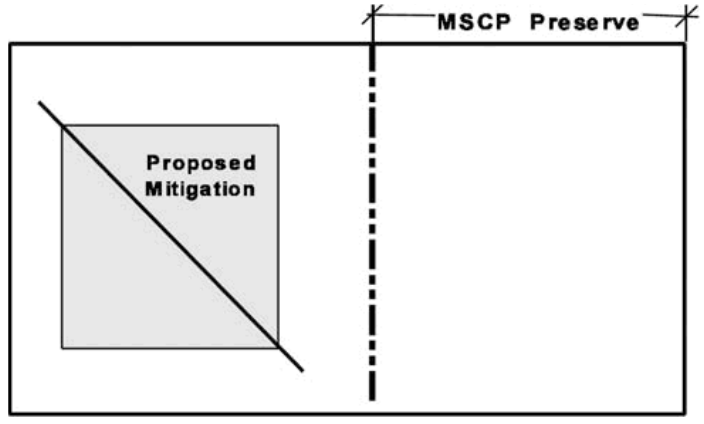
CONNECTED
Generally acceptable for mitigation



ISOLATED
Generally not acceptable as mitigation

Factors for consideration:

- Size of habitat patch
- Species and habitat type
- Adjacent land uses
- Proximity to larger habitat patches
- Topography



ISOLATED
Generally not acceptable as mitigation

Factors for consideration:

- Size of habitat patch
- Species and habitat type
- Adjacent land uses
- Proximity to larger habitat patches
- Topography

(3) Habitat Restoration: The restoration of degraded habitat may be considered as mitigation. Habitat restoration may include creation of habitat that was previously converted by human activities, and/or the enhancement of existing degraded habitat, where the proposed enhancement increases the habitat quality and biological function of the site.

Decompaction and revegetation of existing roads and trails, removal of exotic invasive species in conjunction with the establishment of native species, and the conversion of agricultural and disturbed lands back to native habitat are examples of acceptable restoration efforts. The removal of trash from a site does not constitute restoration in and of itself, but may be a component of the restoration. Any area that will continue to be subjected to periodic clearing (e.g. pipeline maintenance) would not be considered as mitigation. Areas proposed for restoration must contain the appropriate site conditions (e.g. hydrology, slope aspect, soils) for the proposed habitat.

All restoration will be required to have a restoration plan that outlines specific species for planting/hydroseeding, timing, irrigation and grading requirements, if any, a long-term maintenance, monitoring and reporting program, and criteria for success, as well as contingency measures in case of failure (see Attachment B). It is expected that monitoring of the restoration would be no less than five years, but could be completed earlier if the five-year success criteria were met.

The restoration plan will establish appropriate monitoring and reporting periods. In general, it is expected that quarterly reports will be prepared by the applicant's consultant for the first year and annual reports thereafter to document the status of the restoration effort until deemed complete by the City Manager or designee. These reports will identify any necessary remedial measures to be implemented by the applicant upon approval by the City.

A surety bond is required to assure implementation of all restoration efforts. The surety bond can be structured to return certain portions of the bond after demonstrating the successful completion of major restoration milestones (e.g. meeting the success criteria for year three).

The restoration plan should clearly identify the milestones. Further details on CEQA mitigation monitoring can be obtained from the City of San Diego Mitigation, Monitoring and Reporting Program.

(4) Monetary Compensation: In some cases, developments with small impacts may compensate by payment into a fund used to acquire, maintain and administer the preservation of sensitive biological resources. This fund is intended to be used only for the mitigation of impacts to small, isolated sites with lower long-term conservation value. For purposes of this fund, small is generally considered less than 5 acres, but could, in some cases, be considered up to 10 acres.

Mitigation monies will be deposited in the City of San Diego's Habitat Acquisition Fund (Fund #10571), as established by City Council Resolution R-275129, adopted on February 12, 1990.

Monetary compensation must also include an amount equal to ten percent of the total administrative costs.

Administration of the fund is the responsibility of the City of San Diego's Development Services Department, with cooperation from other City departments including: Park and Recreation (for maintenance), Auditor (for accounting), and Real Estate Assets (for estimates of land cost). Staff costs will not be charged to the fund except to cover appraisal and administrative expenses (from the 10% administrative fee).

The process for utilizing this type of mitigation is as follows:

Staff members from the Development Services Department will request from the Real Estate Assets Department an estimate of average land costs of the focused acquisition area closest to the project site. Focused acquisition areas have been identified by the MSCP as large areas of habitat critical for biodiversity preservation and the success of the MSCP (e.g., Carmel Mountain, Del Mar Mesa, East Elliott, Western Otay Mesa). The Real Estate Assets Department will base the estimate on previous appraisals and comparable land costs of lands within the focused acquisition area. The applicant will be required to contribute the estimated average per acre land cost multiplied by the mitigation ratio plus the additional amount for administration.

A two million dollar "cap" has been placed on the amount of money that may accumulate in the Habitat Acquisition Fund. The purpose of this cap is to insure that funds are spent in a timely manner. After the cap has been reached, no other funds may be accepted until the money is expended.

d. Species Specific Mitigation

In general, it is accepted that securing comparable habitat at the required ratio will mitigate for the direct impact to most sensitive species. While this is true for species with wide geographic distributions and/or large territory sizes, species with very limited geographic ranges (narrow endemic species) would require additional efforts designed to protect these species. A list of narrow endemic species is provided on Section I of these Guidelines.

The specific actions necessary to protect narrow endemics must be determined on a case-by-case basis. Transplantation and/or soil salvage are examples of acceptable mitigation methods for some of these species. Fencing, signage and management are other examples of mitigation. The Mitigation Program in the Biological Program in the Biological Survey Report should identify all specific actions related to the mitigation of these narrow endemic species, in addition to any other requirements necessary for the mitigation of their habitats.

In addition to the protection of narrow endemics required by the MSCP, certain species are only considered adequately conserved as part of the MSCP (e.g., Covered Species) only if translocation/restoration of the species is provided at the project-level (see Table 3-5 of MSCP Plan and Section 1.3 of the City's Subarea Plan). These species are *Ceanothus verrucosus* (coast white lilac, aka, wart-stemmed ceanothus), *Opuntia parryi var. serpentine* (snake cholla), *Speotyto cunicularia hypugaea* (burrowing owl). This also applies to the restoration/transplantation of any impacted habitat of the *Camylorhynchus brunneicapillus* (coastal cactus wren). The first two of these species are plants and may be transplanted, or incorporated into any revegetation plan proposed for the site.

Restoration of impacted coastal cactus wren habitat shall include salvage and transplantation of *Cylindropuntia californica var. californica* (Snake cholla), *Cylindropuntia prolifera* (Coast cholla), *Dudleya spp.* (Live-forevers), *Ferocactus viridescens* (Barrel cactus), *Mammillaria dioica* (Fish-hook cactus), *Opuntia littoralis* (Coastal prickly pear), *Opuntia oricola* (Chaparral prickly pear), *Yucca whipplei* (Our Lord's candle), *Yucca schidigera* (Mojave yucca) to an on-site or off-site restoration site or a receiver site approved by the City.

Within the MHPA, impacts to burrowing owls must be avoided; outside the MHPA, any impacted individuals must be relocated out of the impact area using passive or active methodologies approved by the Wildlife Agencies.

Impacts to road pools supporting listed fairy shrimp outside the MHPA are authorized provided they are mitigated at a 2:1 ratio consistent with the VPHCP. Within the MHPA, road pools supporting listed fairy shrimp must be avoided, unless a deviation (e.g., biologically superior option) is approved by the City and Wildlife Agencies as defined in Section III.C.4. Impacts will be mitigated at a 2:1 ratio consistent with the VPHCP.

Species specific analysis for sensitive species not covered by the MSCP may be required as part of the CEQA process. It is expected that the majority of CEQA sensitive species not covered by the MSCP will be adequately mitigated through the habitat based mitigation described in Section III of these Guidelines. A rare circumstance may arise, however, when mitigation actions specific to a particular species may be required. The project-level biological survey report will justify why such actions are necessary in light of the habitat level protection provided by the MSCP.

2. Protection and Notice Element

The Mitigation Program must provide assurances that areas offered for mitigation or remainder areas in the OR-1-2 Zone not developed, but indirectly impacted by the proposed development will be adequately protected from future development. Additionally, adequate notice must be recorded against the title of the property to memorialize the status of mitigation and remainder areas. The Protection Element will identify the specific actions incorporated into the project to protect any areas offered as mitigation. The following methods are considered to adequately protect mitigation and remainder areas:

a. Dedication

Dedication in fee title to the City is the preferred method of protecting mitigation areas. It is the City's policy to accept lands being offered for dedication unless certain circumstances prohibit the acceptance, such as the presence of hazardous materials, title problems, unpaid taxes or unacceptable encumbrances including liens. The City Manager or designee must recommend, and the City Council must accept, all proposed dedications on a case-by-case basis. Dedication of mitigation sites to other conservation entities, such as the U.S. Fish and Wildlife Service, Nature Conservancy, Trust for Public Lands, may also be permissible, if acceptable to the City Manager or designee.

For vernal pool properties that are dedicated to the City as part of the VPHCP, a deed restriction consistent with California Civil Code section 815, et seq. and acceptable to the Wildlife Agencies will be recorded over the mitigation areas.

b. Covenant of Easement

In lieu of dedication in fee title, or granting of a conservation easement, where a project has utilized all of its development area potential as allowed under the OR-1-2 Zone, then as a condition of permit approval, a covenant of easement would be required to be recorded against the title of the property for the remainder area, with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife named as third party beneficiaries. A covenant of easement is a legally binding promise made by the property owner with respect to future use of the land. Identification of those permissible passive activities and other conditions of the permit would be incorporated into the covenant. The covenant would be recorded against the title of the property and would run with the land. The applicant will allow the City limited right of entry to the remainder area to monitor the applicant's management of the area.

3. Management Element

Mitigation Program must provide assurances that the mitigation or remainder areas in the OR-1-2 Zone will be adequately managed and monitored in a manner consistent with Section 1.5, Preserve Management of the City's MSCP Subarea Plan and/or Section 5.3.2 and Chapter 7 of the VPHCP, as appropriate. The Mitigation Program should identify how the objectives of the City's MSCP and VPHCP Preserve Management recommendations will be met for the area, as well as provide any additional management recommendations resulting from site-specific information (area specific management directives). The plan must also identify the responsible entity and funding source for the long-term maintenance and management.

a. Management by the City

In general, the entity that holds the fee title or is granted a conservation easement will be responsible for the management of the mitigation area. If the City of San Diego is the responsible party, then upon acceptance of the property, the area will be managed in accordance with the MSCP Framework Management Plan as modified by the area specific management directives and the Vernal Pool Management and Monitoring Plan, as appropriate. The project applicant would not be responsible for future monitoring reports or maintenance activities.

For all wetland mitigation sites, funding must be provided to cover the costs of the in-perpetuity management and monitoring. Funding may be provided by a variety of means including, but not limited to, the establishment of an endowment or Community Facilities District. The amount of funding shall be calculated through the use of a Property Analysis Record (PAR) or other similar method. For properties that are

deeded to the City in fee title, the PAR or equivalent shall be approved by the Park and Recreation Department prior to City's acceptance of the land.

In no case will the City be required to accept any brush management functions that are made a condition of a discretionary project. It is expected that a homeowners association or similar group will be established for any brush management responsibilities.

b. Private Party Management

If the City does not hold fee title, or a covenant of easement is not granted, then the project applicant must provide for the management of the mitigation area. For properties that remain in private ownership or that would be managed by a third party, Development Services Department shall approve the managing entity and the PAR or equivalent to ensure adequate funding for the long-term management and monitoring of the site. The Mitigation Program must include documentation on how the project would implement the objectives of the MSCP Preserve Management and the area specific management directives. The Mitigation Program must identify the responsible entity for long-term maintenance and management, the requirements for future management and monitoring reports, and a secure funding source to pay for the management in perpetuity.

SECTION IV

FINDINGS/DEVIATIONS

A. Permit Findings for Environmental Sensitive Lands (ESL) Regulations

Development on a site containing sensitive biological resources requires the approval of a Neighborhood Development Permit or Site Development Permit, unless exempted pursuant to LDC Section 143.0110(c). The required findings for a Neighborhood Development Permit or Site Development Permit are listed in C Section 126.0504(a). In addition to the general findings for a Neighborhood Development Permit or Site Development Permit, approval of a development on a site containing sensitive biological resources requires that an additional set of six supplemental findings be made, as listed in Section 126.0504(b) as follows:

§126.0504(b) – Supplemental Findings Environmentally Sensitive Lands

1. *The site is physically suitable for the design and siting of the proposed development and the development will result in minimum disturbance to environmentally sensitive lands;*

2. *The proposed development will minimize the alteration of natural landforms and will not result in undue risk from geologic and erosional forces, flood hazards, and fire hazards;*

   [This finding is primarily applicable to sites that contain steep hillsides; refer to Steep Hillside Guidelines]

3. *The proposed development will be sited and designed to prevent adverse impacts on any adjacent environmentally sensitive lands;*

4. *The proposed development will be consistent with the City of San Diego MSCP Subarea Plan and Vernal Pool Habitat Conservation Plan (VPHCP);*

5. *The proposed development will not contribute to the erosion of public beaches or adversely impact local shoreline sand supply; and*

   [This finding is applicable if the site contains sensitive coastal bluffs or coastal beaches; drainage from the site should not significantly impact these environmentally sensitive lands]

6. *The nature and extent of mitigation required as a condition of the permit is reasonably related to and calculated to alleviate negative impacts created by the proposed development.*

ESL Wetland Deviations Outside of the Coastal Overlay Zone

Impacts to wetland habitat require a deviation from ESL with the exception of vernal pools located outside of the MHPA if mitigation is provided consistent with the VPHCP, which ensures that the MSCP Subarea Plan's conservation requirement for vernal pools is achieved. Outside of the Coastal Overlay Zone, requests to deviate from the wetland regulations may be considered only if the proposed *development* falls within one of the three options as defined by LDC Section 143.0510(d). The code section is as follows:

§143.0510(d) – Deviations from Environmentally Sensitive Lands Regulations

(d) Deviations to the wetland regulations of this division for *development* located outside of the Coastal Overlay Zone shall not be granted unless the *development* qualifies to be processed as one of the three options set forth in the following regulations and in accordance with the Biology Guidelines in the Land Development Manual:

(1) Essential Public Projects Option

(A) A deviation may only be requested for an Essential Public Project where no feasible alternative exists that would avoid impacts to wetlands.

(B) For the purpose of this section, Essential Public Projects shall include:

(i) Any public project identified in an adopted l*and use plan* or implementing document and identified on the Essential Public Projects List adopted by Resolution No.[insert No.] as Appendix III to the Biology Guidelines; or

(ii) Linear infrastructure, including but not limited to major roads and *land use plan* circulation element roads and facilities including bike lanes, water and sewer pipelines including appurtenances, and stormwater conveyance systems including appurtenances; or

(iii) Maintenance of existing public infrastructure; or

(iv) State and federally mandated projects.

(2) Economic Viability Option

A deviation may be requested to preserve economically viable use of a property that would otherwise be deprived by a strict application of the regulations. Such a deviation shall be the minimum necessary to achieve

economically viable use of the property and shall avoid wetland resources to the maximum extent practicable.

(3) Biologically Superior Option

(A) A deviation may be requested to achieve a superior biological result which would provide a net increase in quality and viability (functions and value), relative to existing conditions or the project originally proposed by the applicant, and long term biological benefit.

(B) Wetland resources that would be impacted by the project shall be demonstrated to be of low biological quality.

Additionally, when a deviation from the wetland regulations in ESL is requested pursuant to LDC Section 143.0510(d), LDC Section 126.0504(c) specifies that two additional supplemental findings be made. They are as follows:

§126.054(c) – Supplemental Findings – Environmentally Lands Deviations

1. *There are no feasible measures that can further minimize the potential adverse effects on environmentally sensitive lands.*

2. *The proposed deviation is the minimum necessary to afford relief from special circumstance or conditions applicable to the land and not of the applicant's making.*

B. Deviations from Within the Coastal Overlay Zone

Pursuant to LDC Section 126.0708(b) deviations from ESL require a Coastal Development Permit in addition to a Site Development Permit even if the proposed *development* is exempt per LDC Section 126.0704. Also pursuant to LDC Section 126.0708(b), deviations from ESL require that five supplemental *findings* be made. They are as follows:

§126.0708(b) – Supplemental *Findings* – Environmentally Sensitive Lands Within the Coastal Overlay Zone

When a deviation is requested from the Environmentally Sensitive Lands Regulations because the applicant contends that application of the regulations would result in denial of all economically viable use, the Coastal Development Permit shall include a determination of economically viable use:

A Coastal Development Permit, or a Site Development Permit in the Coastal Overlay Zone, required in accordance with Section 143.0110 because of potential impacts to *environmentally sensitive lands* where a deviation is requested in accordance with Section 143.0150 may be approved or conditionally approved only if the decision maker

makes the following supplemental *findings* in addition to the *findings* in Section 126.0708 (a) and the supplemental *findings* in Section 126.0504 (b).

The decision maker shall hold a public hearing on any application on a Coastal Development Permit that includes a deviation from Environmentally Sensitive Lands Regulations in the Coastal Overlay Zone.

Such a hearing shall address the economically viable use determination. Prior to approving a Coastal Development Permit for development within the Coastal Overlay Zone that requires a deviation from the Environmentally Sensitive Lands Regulations, the decision maker shall make all of the following *findings*:

i. *Based on the economic information provided by the applicant, as well as any other relevant evidence, each use provided for in the Environmentally Sensitive Lands Regulations would not provide any economically viable use of the applicant's property; and*

ii. *Application of the Environmentally Sensitive Lands Regulations would interfere with the applicant's reasonable investment-backed expectations; and*

iii. *The use proposed by the applicant is consistent with the applicable zoning; and*

iv. *The use and project design, siting, and size are the minimum necessary to provide the applicant with an economically viable use of the premises; and*

v. *The project is the least environmentally damaging alternative and is consistent with all provisions of the certified Local Coastal Program with the exception of the provision for which the deviation is requested.*

The *findings* adopted by the decision-making authority shall identify the evidence supporting the *findings*.

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ATTACHMENT A

Flora and Fauna Covered by the Multiple Species Conservation Program
and Vernal Pool Habitat Conservation Plan*

Scientific Name	Common Name	Designation (FS/CNPS/RED)
FLORA:		
Acanthomintha ilicifolia	San Diego thornmint	PE/SE/1B/232
Agave shawii	Shaw's agave	--/--/2/333
Ambrosia pumila	San Diego ambrosia	--/--/1B/322
Aphanisma blitoides	Aphanisma	--/S2/3/222
Arctostaphylos glandulosa var. Crassifolia	Del Mar manzanita	FE/--/1B/332
Arctostaphylos otayenais	Otay manzanita	--/--/1B/323
Astragalus tener var. titi	Coastal dunes milk vetch	F1/SE/1B/333
Baccharis vanessae	Encinitas coyote brush	FE/SE/1B/333
Berberis nevinii	Nevin's barberry	F1/SE/1B/333
Brodiaea filifolia	Thread-leaved brodiaea	PT/SE/1B/333
Brodiaea orccuttii	Orcutt's brodiaea	--/--/1B/132
Calamagrostis koelerioides	Dense reed grass	F3C/--/4/122
Calochortus dunnii	Dunn's mariposa lily	--/SR/1B/222
Caulanthus stenocarpus	Slender-pod jewel flower	--/SR/--/--
Ceanothus cyaneus	Lakeside ceanothus	--/--/1B/322
Ceanothus verrucosus	Wart-stemmed ceanothus/coast white lilac	--/--/2/121
Cordylanthus maritimus ssp. maritimus	Salt marsh bird's beak	FE/SE/1B/222
Cordylanthus orcuttianus	Orcutt's bird's beak	--/--/2/331
Corethrogyne filaginifolia var. linifolia	Del Mar sand aster	--/--/1B/323
Cupressus forbesii	Tecate cypress	--/--/1B/322
Deinandra (Hemizonia) conjugens	Otay tarplant	PE/SE/1B/322
Dudleya blochmaniae ssp. brevifolia	Short-leaved live-forever	--/SE/1B/333
Dudleya variegata	Variegated dudleya	--/--/4/122
Dudleya viscida	Sticky dudleya	F1/--/1B/323
Ericameria palmeri ssp. palmeri	Palmer's ericameria	--/--/2/221
Erysimum ammophilum	Coast wallflower	--/--/4/123
Eryngium aristulatum ssp. parishii*	San Diego button-celery	FE/SE/1B/232
Ferocactus viridescens	San Diego barrel cactus	--/--/2/131
Lepechinia cariophylla	Heart-leaved pitcher sage	--/--/1B/322
Lepechinia ganderi	Gander's pitcher sage	--/--/1B/312
Lotus nuttallianus	Nuttall's lotus	--/--/1B/332
Monardella hypoleuca ssp. lanata	Felt-leaved monardella	--/--/1B/223

Monardella linoides ssp. viminea	Willowy monardella	PE/SE/1B/232
Muilla clevelandii	San Diego goldenstar	--/--/1B/222
Navarretia fossalis*	Spreading navarretia	--/--/1B/232
Nolina interrata	Dehesa bear-grass	F1/SE/1B/332
Opuntia parryi var. serpentina	Snake cholla	--/--/1B/332
Orcuttia californica*	California Orcutt grass	FE/SE/1B/332
Pogogyne abramsii*	San Diego Mesa mint	FE/SE/1B/233
Pogogyne nudiuscula*	Otay Mesa mint	FE/SE/1B/332
Pinus torreyana ssp. torreyana	Torrey pine (native populations)	--/--/1B/323
Rosa minutifolia	Small-leaved rose	--/SE/2/331
Satureja chandleri	San Miguel savory	F3C/--/4/122
Senecio ganderi	Gander's butterweed	--/SR/1B/232
Solanum tenuilobatum	Narrow-leaved nightshade	--/--/--/--
Tetracoccus dioicus	Parry's tetracoccus	--/--/1B/322
FAUNA:		
Panoquina errans	Saltmarsh/wandering skipper	--/--
Callophrys (Mitoura) thornei	Thorne's hairstreak	--/S2
Branchinecta sandiegonensis*	San Diego fairy shrimp	FE/--
Streptocephalus woottoni*	Riverside fairy shrimp	FE/--
Bufo microscaphus ssp. californicus	Arroyo southwestern toad	FE/SSC
Rana aurora ssp. draytoni	California red-legged frog	FT/SSC
Clemmys marmorata ssp. pallida	Southwestern pond turtle	--/SSC
Cnemidorphorus hyperythrus ssp. beldingi	Orange-throated whiptail	--/SSC
Phrynosoma coronatum ssp. blainvillei	San Diego horned lizard	--/SSC
Accipiter cooperii	Cooper's hawk	--/SSC
Agelaius tricolor	Tricolored blackbird	--/SSC
Aquila chrysaetos	Golden eagle	--/SSC
Aimophila ruficeps ssp. canescens	Southern California rufous crowned sparrow	
Branta canadensis ssp. moffitti	Canada goose	--/--
Buteo swainsoni	Swainson's hawk	--CT
Buteo regalis	Ferruginous hawk	--/SSC
Campylorhynchus brunneicapillus ssp. cousei	Coastal cactus wren	--/SSC
Charadrius alexandrinus ssp. nivosus	Western snowy plover	FT/SSC
Charadrius montanus	Mountain plover	--/SSC
Circus cyaneus	Northern harrier	--/SSC
Egretta rufescens	Reddish egret	--/--
Empidonax traillii ssp. extimus	Southwestern willow flycatcher	FE/SE
Falco peregrinus anatum	American peregrine falcon	--/ST
Haliaeetus leucocephalus	Bald eagle	FE/SE
Numenius americanus	Long-billed curlew	F3C/SSC

Passerculus sandwichensis ssp. belding	Belding's savannah sparrow	--/SE
Passerculus sandwichensis	Large-billed savannah sparrow	--/SSC
Pelecanus occidentalis ssp. californicus	California brown pelican	FE/SE
Plegadis chihi	White-faced ibis	--/SSC
Polioptila californica ssp. californica	California gnatcatcher	FT/SSC
Rallus longirostris ssp. Levipes (Rallus obsoletus levipes)	Light-footed clapper rail (Light-footed Ridgway's rail)	FE/SE
Sialia mexicana	Western bluebird	--/--
Speotyto (Athene) cunicularia ssp. hypugaea	Western burrowing owl	--/SSC
Sterna elegans	Elegant tern	--/SSC
Sterna antillarum ssp. browni	California least tern	FE/SE
Vireo bellii ssp. pusillus	Least Bell's vireo	FE/SE
Taxidea taxus	American badger	--/SSC
Felis concolor	Mountain lion	--/--
Odocoileus hemionus fuliginata	Southern mule deer	--/--

Federal Listing
State of California Listing
CNPS – California's Native Plant Society List
RED – CNPS's Rarity, Endangerment and Distribution Code

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ATTACHMENT B

General Outline for Revegetation / Restoration Plans

The following outline is intended to provide guidance in the preparation and review of conceptual revegetation/ restoration plans. This outline is not intended as an exhaustive list of all design elements to consider when planning a revegetation effort. Consideration must also be given to the City's Land Development Code Landscape regulations (Chapter 14, Article 2, Division 4) and Landscape Standards when preparing conceptual revegetation plans and detailed revegetation construction drawings. All vernal pool restoration plans shall be consistent with the VPHCP and Vernal Pool Management and Monitoring Plan.

Introduction
- Background – Purpose
- Project location(s) with maps (regional, vicinity, site plan)
- Restoration goals and objectives/Mitigation requirements

Existing Conditions
- Environmental setting of impacted areas – vegetation & wildlife affected, functions and values, impact acreages, reference sites for development of revegetation specifications (can be in intro)
- Environmental setting of revegetation areas – land ownership, existing land uses
- Revegetation site characteristics: description/evaluation of topography, vegetation, soils, hydrology/drainage, access, site constraints (figures/maps)
- Regulatory requirements

Mitigation Roles & Responsibilities
- Financially responsible party – Performance bonds
- Revegetation team: Applicant, Landscape Architect, Revegetation Installation Contractor, Revegetation Maintenance Contractor (if different), Project Biologist, Nursery (seed/plant procurement)

Site Preparation
- Site and resource protection – staking/flagging/fencing of sensitive habitat areas/limits of work
- Weed eradication
- Topsoil/plant salvage (if needed)
- Clearing/grubbing
- Grading/recontouring

Irrigation
- Water source and supply
- Temporary or permanent installation
- Manual or automatic

Plant Installation Specifications

- Species composition lists – container plants/seed mixes/quantities and sizes
- Planting arrangement/design (include conceptual planting plan)
- Planting procedure – interim storage methods, seed application methods, cuttings, special handling
- Timing of plant installation
- Irrigation requirements – frequency and duration

Maintenance Program

120-Day Plant Establishment Period (PEP)

- Weed Control
- Horticultural treatments (pruning, mulching, disease control)
- Erosion control
- Trash & debris removal
- Replacement planting and reseeding
- Site protection and signage
- Pest management
- Vandalism
- Irrigation maintenance

Five-Year Maintenance Period for Each Year Following the 120-Day PEP

- See 120-day plant establishment items above

Biological Monitoring

- Reference sites for development of performance criteria
- Monitoring procedures – qualitative (photo documentation) and quantitative (vegetation sampling methods)
- Monitoring frequency
    1. 120-Day Plant Establishment – Does revegetation meet intended design requirement?
    2. 5-Year monitoring requirement – or until 5th year performance/success criteria met.
- Performance/success criteria including diversity and coverage requirements
- Reporting program

Schedule of Activities

Remediation Measures

Completion of Mitigation Notification

Literature/Reference Citations

APPENDIX I

Development Services Department

Significance Determination Thresholds Under CEQA

Biological Resources

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BIOLOGICAL RESOURCES

INTRODUCTION

The California Environmental Quality Act (CEQA) Guidelines define "significant effect on the environment" as a "substantial or potentially substantial adverse change in the environment". The CEQA Guidelines (Appendix G) further indicate that there may be a significant effect on biological resources if the project will:

A. Substantially affect an endangered, rare, or threatened species of animal or plant or the habitat of the species;

B. Interfere substantially with the movement of any resident or migratory fish or wildlife species; or

C. Substantially diminish habitat for fish, wildlife, or plants.

Impacts to biological resources are evaluated by City staff through the CEQA review process, the Environmentally Sensitive Lands Regulations and Biology Guidelines, and through the review of the project's consistency with the City's Multiple Species Conservation Program (MSCP) Subarea Plan and the Vernal Pool Habitat Conservation Plan (VPHCP). Before a determination of the significance of an impact can be made, the presence and nature of the biological resources must be established. If biological resources may be present, a survey should be conducted pursuant to the City of San Diego's Biology Guidelines (Appendix II, Guidelines for Conducting Biological Surveys).

Sensitive biological resources are defined by the City of San Diego Municipal Code as:

- Lands that have been included in the Multi-Habitat Planning Area (MHPA) as identified in the City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan (City of San Diego, 1997) and Vernal Pool Habitat Conservation Plan (VPHCP);
- Wetlands (as defined by the Municipal Code, Section 113.0103);
- Lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual.
- Lands supporting species or subspecies listed as rare, endangered, or threatened;
- Lands containing habitats with narrow endemic or vernal pool species as listed in the Biology Guidelines of the Land Development manual; and
- Lands containing habitats of Covered Species as listed in the Biology Guidelines of the Land Development manual.

For projects within the City of San Diego or carried out by the City of San Diego which may affect sensitive biological resources, potential impacts to such sensitive biological resources must be evaluated using the following criteria and information.

INITIAL STUDY CHECKLIST QUESTIONS

The following are from the City's Initial Study Checklist and provides guidance to determine potential significance to Biological Resources:

Would the proposal result in:

1. A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP, VPHCP, or other local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

2. A substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

3. A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means?

4. Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, VPHCP, or impede the use of native wildlife nursery sites?

5. A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP or VPHCP plan area or in the surrounding region?

6. Introducing land use within an area adjacent to the MHPA that would result in adverse edge effects?

7. A conflict with any local policies or ordinances protecting biological resources?

8. An introduction of invasive species of plants into a natural open space area?

SIGNIFICANCE THRESHOLDS

Impacts to biological resources are assessed by City staff through the CEQA review process, and through review of the project's consistency with the Environmentally Sensitive Lands (ESL) regulations, the current version of the Biology Guidelines, and with the City's MSCP Subarea Plan and VPHCP. Before a determination of the significance of an impact can be made, the presence and nature of the biological resources must be established.

The following two steps summarize the procedure for collecting the necessary information.

STEP 1:

Determine the extent of biological resources and values present on the site. The analyst needs to visit the site and review existing biological information (e.g. MSCP vegetation maps and VPHCP Interactive Map). If there is any evidence that the site supports or recently supported biological resources, significant biological resources (see clarification in Step 2), a survey or letter report is necessary.

A factor in making this determination is whether or not the site has been illegally graded or grubbed. In some cases it is appropriate to consider the biological values on the site before a disturbance such as grading or fire. In general, if the site has been legally graded or grubbed and/or is characterized by ruderal species, is not included in the City's MHPA, and does not support wetlands or Tier I, II or III habitat, it probably does not support significant biological resources.

Note: *The presence of trash and debris on a site does not indicate a lack of biological habitat. In addition, lack of vegetation due to fire, clearing of vegetation for brush management (Zone 2 is impact neutral), unauthorized off-road vehicle use or other uses also does not preclude the presence of potential habitat.*

An affirmative answer to any of the following questions indicates that significant biological resources MAY be present:

a. The site has been identified as part of the MHPA by the City's MSCP Subarea Plan or VPHCP.

b. The site supports or could support (e.g. in different seasons/rainfall conditions, etc.) Tier I, II, or IIIA & B vegetation communities (such as grassland, chaparral, coastal sage scrub, etc.). The CEQA determination of significant impacts may be based on what was on the site (e.g. if illegal grading or vegetation removal occurred, etc.), as appropriate.

c. The site contains, or comes within 100 feet of a natural or manufactured drainage (determine whether it is vegetated with wetland vegetation). The site occurs within the 100-year flood plain established by the Federal Emergency Management Agency (FEMA) or the Flood Plain (FP)/ Flood Way (FW) zones.

d. The site does not support a vegetation community identified in Tables 2a, 2b or 3 (Tier I, II, IIIA or IIIB) of the Biology Guidelines; however, wildlife species listed as threatened or endangered or other protected species may use the site (e.g. California least terns on dredge spoil, wildlife using agricultural land as a wildlife corridor, etc.).

STEP 2:

Based on Step 1, if significant biological resources are present, then a survey to determine the nature and extent of the biological resources on the site is warranted (See Guidelines for Conducting Biology Surveys). The survey should identify which biological resources are present on the site and its immediately surrounding area, and the number and extent of each type. As appropriate and when relevant to the biological resources found on site, the survey should also discuss the nature and quality of the biological resources in the immediate vicinity of the project site.

The significance and/or sensitivity of the resource can be determined at this stage; however, a resource may be more vulnerable to some kinds of development than to others. Sensitivity and/or significance of impacts are, therefore, more appropriately considered in the context of the proposed project, as discussed below.

Direct impacts to wetland habitat, except for vernal pools covered under the VPHCP and located outside the MHPA, would require a deviation from the wetland regulation requirements as outlined in Section IV.B. of the Biology Guidelines, the Environmentally Sensitive Lands Regulation (Section 126.0504 and 143.0101) and would be considered only under one of the three deviation/mitigation options described in Section III of the Biology Guidelines. Impacts to road pools supporting listed fairy shrimp outside the MHPA are authorized provided they are mitigated at a 2:1 ratio consistent with the VPHCP. Within the MHPA, road pools supporting listed fairy shrimp must be avoided, unless a deviation (e.g., biologically superior option) is approved by the City and Wildlife Agencies as defined in Section III.C.4. Impacts will be mitigated at a 2:1 ratio consistent with the VPHCP. The criteria for determining which option could be utilized must be incorporated into the biological technical report prepared for the project.

Biology Significance Determination

1. Direct Impacts

   The direct, indirect and cumulative impacts of a project must be analyzed for significance. The first step in making the determination is to identify the nature of the impact, and the extent, and degree of direct impacts to biological resources. A direct impact is a physical change in the environment which is caused by and immediately related to the project. An example of a direct physical change in the environment is the removal of vegetation due to brushing, grubbing, grading, trenching, and excavating.

   In order to determine the extent of impacts, the acreage of each habitat type to be lost should be quantified. If an upland, categorize the land into one of the four Tier categories (I -IV),

which are listed on Table 3 of the Biology Guidelines. If a natural wetland, categorize as indicated on Tables 2a and/or 2b of the Biology Guidelines. In addition, the boundaries of the MHPA should be determined and any proposed encroachment should be quantified. Where possible, the extent or number of individuals of sensitive, threatened, rare, or endangered species to be taken or harassed should also be quantified. In order to determine the degree of the impact, fragmentation of habitat, loss of foraging area for sensitive species, and other factors should be considered.

The City's permit to 'take' Covered Species under the MSCP is based on the concept that 90% of lands within the MHPA will be preserved. Any encroachment into the MHPA (in excess of the allowable encroachment by a project) would be considered significant and require a boundary line adjustment which would include a habitat equivalency assessment to ensure that what will be added to the MHPA is at least equivalent to what would be removed.

In addition, lands containing Tier I, II, IIIa and IIIb [(see Table 3 of City's Biology Guidelines] and all wetlands [see Tables 2a and/or 2b of City's Biology Guidelines] are considered sensitive and declining habitats. As such, impacts to these resources may be considered significant. Lands designated as Tier IV are not considered to have significant habitat value and impacts would not be considered significant.

Impacts to individual sensitive species, outside of any impacts to habitat, may also be considered significant based upon the rarity and extent of impacts. Impacts to state or federally listed species and all narrow endemics [see the City's Biology Guidelines] should be considered significant. Certain species covered by the MSCP and VPHCP [see Section I of the Biology Guidelines] and other species not covered by the MSCP, may be considered significant on a case-by-case basis taking into consideration all pertinent information regarding distribution, rarity, and the level of habitat conservation afforded by the MSCP.

Notes:

(a) Total upland impacts (Tiers I- IIIB) less than 0.1 acre are not considered significant and do not require mitigation. See Section 3 (Cumulative Impacts) relative to native grasslands.

(b) Impacts to non-native grasslands totaling less than 1.0 acres which are completely surrounded by existing urban developments are not considered significant and do not require mitigation. Examples may include urban infill lots.

(c) Total wetland impacts less than 0.01 acre are not considered significant and do not require mitigation. THIS DOES NOT APPLY TO VERNAL POOLS, road pools supporting listed fairy shrimp, or wetlands within the Coastal Zone.

(d) Brush management Zone 2 thinning activities, while having the potential to adversely affect biological resources, are not considered potentially significant inside the MHPA or, to the extent that non-covered species are not impacted, outside the MHPA, because of the implementation of the MSCP. Brush management Zone 2 thinning outside the MHPA which affects non-covered species is potentially significant. Brush management not

conducted in accordance with brush management regulations, regardless of where it is located, is also potentially significant.

(d) Mitigation is not required for impacts to non-native grassland habitat when impacted for the purpose of wetland or other native habitat creation.

(e) Habitat mitigation is not required for impacts to manufactured slopes or areas that have been planted with native species for the purpose of erosion control. For example, in order to qualify for this exception, substantiation of previous permits and mitigation must be provided. Noise mitigation, however may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may be present in the area such as the California gnatcatcher, least Bell's vireo, southern willow flycatcher, least tern, cactus wren, tricolored blackbird, western snowy plover, or burrowing owl. If these avian species (except for the California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 db(A), or the existing ambient noise level if already above 60dB(A) during the breeding season. For California gnatcatcher habitat within the MHPA and occupied, construction or operational noise levels exceeding 60 dB(A) (or exceeding the existing ambient noise level if already above 60 dB(A)) during the breeding season is considered significant. There are no restrictions for the gnatcatcher **outside** the MHPA anytime of the year.

In addition, inside the MHPA, impact avoidance areas are required for Cooper's hawk, northern harrier, golden eagle, burrowing owl, and southwestern pond turtle. See Biology Guidelines, Section II, A. 2 & 4, and Section 9.12 of the Implementing Agreement.

(f) Removal/control of non-native plants is not considered to constitute a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. Mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may be needed.

2. Indirect Impacts

CEQA Guidelines §15064(d) provides the following guidance regarding identification of direct versus indirect impacts:

In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.

a. An indirect impact is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct impact in turn causes another physical change in the environment, then the secondary changes is an indirect impact. For example, the dust from heavy equipment that would result from grading for a sewage treatment plant could settle on nearby vegetation and interfere with

photosynthetic processes; and the construction equipment noise levels could interrupt reproductive behavior within adjacent sensitive avian breeding habitats during the breeding season.

b. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

Depending on the circumstances, indirect impacts of a project may be as significant as the direct impacts of the project. In general, however, indirect impacts are easier to mitigate than direct ones. Some impacts may be considered indirect impacts in some circumstances and direct impacts under other circumstances. Indirect impacts include but are not limited to, the following impacts:

i. The introduction of urban meso-predators into a biological system;

ii. The introduction of urban runoff into a biological system;

iii. The introduction of invasive exotic plant species into a biological system;

iv. Noise and lighting impacts (note: consider both construction/demolition and operational phases of the project);

v. Alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and,

vi. Loss of a wetland buffer that includes no environmentally sensitive lands.

3. Cumulative Impacts

The MSCP and VPHCP were designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the Subarea Plan, VPHCP, and implementing ordinances, (i.e. Biology Guidelines and ESL Regulations) are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP and VPHCP. These resources include the vegetation communities identified as Tier I through IV (see City's Biology Guidelines, and the MSCP/VPHCP Covered Species list (see Appendix A of the City of San Diego's MSCP Subarea Plan and Chapter 3 of the VPHCP).

All direct impacts to vernal pools are significant and cumulatively significant. Impacts to vernal pools shall be mitigated in accordance with the criteria in the Biology Guidelines and VPHCP.

Direct impacts to perennial native grasslands that are greater than 0.1 acre are significant and cumulatively significant. Direct impacts to this habitat type are mitigated via Tier I per

Biology Guidelines. Cumulative impacts may be mitigated only via creation at a 1:1 ratio or greater with the feasibility of creation to be evaluated on a case-by-case basis.

Impacts to species covered by the MSCP and VPHCP (see Appendix A of MSCP Subarea Plan and Chapter 3 of the VPHCP) would not generally be considered cumulatively significant, provided the project is in full compliance with the MSCP, VPHCP, and the City's implementing regulations. Impacts to state- or federally-listed species not covered by the MSCP or VPHCP may be considered cumulatively significant. Each situation will be evaluated on a case-by-case basis.

It is expected that many other sensitive species not analyzed for coverage under the MSCP and VPHCP will be adequately conserved through the MSCP and VCPHCP's habitat-based mitigation plan. A rare circumstance may arise, however, where impacts to a particular species may still result in a cumulatively significant impact. The project-level biological survey report would identify those species and describe why a cumulative impact still exists in light of the habitat level of protection provided by the MSCP and VPHCP. Depending on the size of the impact, the salt marsh daisy (*Lasthenia glabrata* ssp. *coulteri*) found in salt pannes) and the little mouse tail (*Myosurus minimus*) found in vernal pools would be examples of non-covered species that might be considered rare enough to conclude cumulatively significant impacts.

APPENDIX II

Guidelines for Conducting Biology Surveys

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I. GOALS OF THE BIOLOGY SURVEY GUIDELINES

These guidelines are intended to prescribe the content of biology survey reports and will be used in the analysis and preparation of environmental documents. The Biological Survey Guidelines shall be used as part of the environmental review process to meet the requirements of the California Environmental Quality Act (CEQA), the Multiple Species Conservation Program (MSCP), Vernal Pool Habitat Conservation Plan (VPHCP) and the City's Environmentally Sensitive Lands (ESL) Regulations.

The intent of the biology survey is to identify biological resources on the project site, determine impacts, and recommend suitable mitigation measures. Mitigation and monitoring requirements pursuant to the City's Biology Guidelines (revised February 2018) and CEQA shall ensure preservation of the native species and sensitive biological resources of San Diego.

II. PREPARER'S QUALIFICATIONS AND CERTIFICATIONS

Persons preparing or responsible for biological technical reports should have the following minimum qualifications: a Bachelor’s degree in Biology or a closely related field with appropriate areas of study to understand San Diego’s local floral and faunal relationships; sufficient local field experience in identification of flora or fauna, particularly rare, endangered, and status and trends, experience in habitat evaluation and in quantifying environmental impacts, and familiarity with suitable mitigation methods including revegetation design and implementation. With regard to focused surveys, the principal or other member of the survey team must meet regulatory agency protocol qualifications and possess or obtain appropriate permits, prior to conducting the survey, where necessary.

III. TYPES OF SURVEY REPORTS

No two project sites are identical in terms of the biological resources present, the degree of disturbance, the proximity to developed areas, and the type of project proposed. For these reasons, three types of biological surveys are suggested. These types are the "General", the "Letter" and the "Focused" surveys. All conditions of the City's Biological Guidelines (revised February 2018), herein after called the "Biology Guidelines") must be met. For example, Table 1 of the Biology Guidelines will aid in determining the need for focused surveys. In most cases, a General Survey Report will be required or a previous basic report may need to be updated. Letter Survey Reports may (with complete flora and fauna lists) be acceptable for a small disturbed site or where previous reports are applicable. If sensitive species (e.g., listed threatened or endangered species, candidate species, etc.) are on the site or are likely to be present, Focused Survey Reports will be required. Focused Survey Reports shall follow any required state or federal agency protocols where appropriate. Biologists conducting surveys are responsible for contacting federal and state and local agencies, and acquiring protocol survey guidelines.

NOTES:

1. Protocol surveys shall be performed by a biologist who possesses current survey permit(s) for certain species, as required by state or federal regulatory agencies, or by the City of San Diego.

2. Biology Survey Reports for emergency public works projects or code violation enforcement cases shall include relevant information as appropriate. In other words, "before-impact" surveys may not be possible, but prior conditions shall be reconstructed to the greatest extent feasible.

A. GENERAL SURVEY REPORT

Projects involving or permitting modification of land in a natural or near natural state, and all areas containing sensitive habitats or sensitive habitats present.

1. Time in the field shall be proportional to the size of the project site and biological heterogeneity and the significance of sensitive habitats present.

2. Completeness of the biological inventory will be based on a "diminishing returns: criterion. In other words, the level of effort should be based on significance of resources present.

3. Data collected should be quantified where appropriate to indicate the extent of resources on the project site.

4. It is highly recommended that field surveys be performed when the majority of critical resources can be best evaluated. Some survey times are mandated per protocol established by state and federal agencies for certain species (e.g., Quino checkerspot butterfly). See Attachment 1.

5. The most recent generally accepted nomenclature shall be used to indicate plant and animal names to avoid confusion (see Attachment IV, or more recent literature).

6. Surveys shall include information on the presence or absence of Narrow Endemic Species (Section I - Biology Guidelines) likely to be present. If not present, a statement explaining the theoretical physical/biological basis for the lack of expected species shall be included.

7. Conditions of MSCP and VPHCP coverage shall be addressed for covered species (listed in Appendix A "Species Evaluated for Coverage Under the MSCP" of the MSCP Subarea Plan and Chapter 3 of the VPHCP) found on or adjacent to the site.

8. Vernal Pools: If this habitat is suspected, a focused survey shall be required to determine presence/absence of vernal pools. Focused surveys for vernal pools shall occur during the winter months when the pools are typically inundated. Historical photos and additional research may be necessary on a case-by-case basis. The entire vernal pool watershed shall be surveyed and mapped (Attachment II). Fairy shrimp surveys will be required per U.S. Fish & Wildlife Service Vernal Pool Guidelines.

9. Other procedures, as listed below in C., Focused Survey Report and in the Biology Guidelines.

B. LETTER SURVEY REPORT

A Letter Survey Report may be acceptable (at the discretion of the City Manager or his/her designee) for projects with:

1. Recent adequate General Survey Report

2. Projects involving minimal habitat alteration.

3. Highly disturbed areas, including but not limited to, agricultural areas presently or recently under cultivation. Additional information may be required based upon the results of the Letter Survey Report.

4. Very small sites, especially when they are isolated by development or when there are only temporary impacts.

C. FOCUSED SURVEY REPORT

1. Focused surveys shall be performed in conformance with Table 1 of the Biology Guidelines. Surveys should be done at the appropriate time of year to determine presence/absence of sensitive species. If surveys are not done at the appropriate time of year, and the potential for occurrence is moderate to high (based on historical knowledge, site records, determination by the biologist, etc.), then it will be concluded that their presence exists on the property. The emphasis of the survey shall be directed at a search for rare, endangered, threatened, or otherwise sensitive resources. See Section VI.H. Vernal Pools, for vernal pool survey requirements.

2. When appropriate, the methodology for the focused survey(s) and report(s) shall be obtained from the appropriate regulating agencies (e.g., protocols for state listed species would be obtained from the California Department of Fish and Wildlife and federal species would be obtained from U.S. Fish and Wildlife Service). Depending on the species, one or more focused surveys may be required. In some instances, protocol

survey guidelines may not be available. It is the responsibility of the consulting biologist to assure all required protocols are followed. See Attachment I (Sample Protocol Survey Requirements) for examples of typical protocol survey requirements.

3. A statement explaining the theoretical physical/biological basis for any lack of expected species shall be included.

IV. SUBMISSION REQUIREMENTS AND REPORT FORM AND CONTENT

The survey reports shall contain the elements listed below and be presented in the following format. For the Letter Survey Reports, the format can be presented in correspondence form, but pertinent items such as brief methodology, species list, vegetation map, impact analysis, and mitigation measures shall be addressed.

A minimum of three draft and final reports/letters shall be submitted to Development Services Department for distribution. The total number of final copies will vary depending on the extent of distribution associated with CEQA public review.

A. TITLE PAGE

1. Report title (type of study, project name, city, state)
2. Development Services Department (DSD) project number
3. Party for whom report prepared (e.g., contracting or responsible party, such as agency, developer or lead agency under CEQA)
4. Party preparing report (example: Biologist or consulting firm preparing report name, address, telephone number)
5. Investigators (include titles)
6. Date (month, year)
7. Signature block of the principal investigators

B. TABLE OF CONTENTS

1. Major report sections, subheadings, and appendices with page numbers
2. Figures/graphics/maps with page numbers
3. Tables with page numbers

C. MANAGEMENT SUMMARY/ABSTRACT

Briefly state the purpose, results of the survey, sensitive species present, and the impacts anticipated with any feasible measures to reduce or eliminate likely impacts. State whether or not the project site is entirely within, partially within, adjacent to, or outside the Multi-Habitat Planning Area (MHPA) of the City's MSCP.

TABLE 1
SUMMARY OF BIOLOGICAL SURVEY REQUIREMENTS

RESOURCE	SURVEY REQUIREMENTS	
	Inside MHPA	Outside MHPA
Vegetation		
Uplands	Confirm/Revise MSCP mapping	Confirm/Revise MSCP mapping
Wetlands	Delineate wetlands per City definition	Delineate wetlands per City definition
Covered spp.[1]		
Listed spp. (e.g., California gnatcatcher)	Focused survey per protocol	Per MSCP conditions of coverage[2]
Narrow endemic (e.g., San Diego thornmint)	Focused survey per protocol	Focused survey per protocol
Other (e.g., San Diego horned lizard, Western burrowing owl)	Survey as necessary to comply with requirements as outlined in Section II.A.2 of these Guidelines	Per MSCP conditions of coverage[2]
Vernal pool species	Focused survey per protocol	Focused survey per protocol
Non-covered spp.[1]		
Listed spp. (e.g., Pacific pocket mouse)	Focused survey per protocol	Focused survey per protocol
"Other Sensitive Species"[3] (e.g., little mouse tail)	Case-by-case determination depending on the spp.	Case-by-case determination depending on the spp.

Notes:

[1] Based upon the MSCP and VPHCP mapping, site specific surveys, the NDDB records, previous EIRs and biological surveys, and/or discussion with the, the potential for listed species, narrow endemics and CEQA sensitive species will be determined. Where there is a reasonable likelihood that one of these specifies exists, surveys will follow the above requirements.

[2] Survey as necessary to conform to Appendix A of the City of San Diego MSCP Subarea Plan (March 1997) and VPHCP (2018).

[3] "Other Sensitive Species": Those other species that are not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA.

D. INTRODUCTION

1. Purpose of study (relevant federal, state, and local laws), if applicable, reference any previous studies.
2. Location map of the project shown on 800-foot scale City Engineering base map with survey boundaries.
3. Project description, all areas of impacts, and construction staging areas.
4. Project schedule, including phasing and duration.

E. METHODS AND SURVEY LIMITATIONS

Discuss survey methodology including rationale for the use of the given survey method. Include dates, times, personnel (with qualifications), weather conditions during the survey; limitations for the survey (e.g., portions of the property indirectly surveyed or seasonal variability); and a map showing the location of transects, sample points and the areas actually visited, as appropriate. Surveys for state or federally listed sensitive or MSCP and VPHCP covered species older than 24 months must be updated, as appropriate, to accurately reflect resources on site. Surveys should be done at the appropriate time of year to detect presence/absence of sensitive species. If surveys are not done at the appropriate time of year, and the potential for occurrence is moderate to high (based on historical knowledge, site records, determination by the biologist, etc.), then it will be concluded that their presence exists on the property. Biological surveys that are over 24-months shall be required to be updated to reflect the most current conditions affecting the project site. The U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (e.g., Wildlife Agencies) may require updated survey data during their review of projects.

NOTE: Protocol survey requirements/protocol guidelines are subject to change by the regulatory agencies and methods must be valid at the time of the survey.

V. SURVEY RESULTS

A. Physical Characteristics

Briefly describe the physical characteristics of the property from a biological perspective: include existing land use, slope/aspect (exposure).

Topographical characteristics, water resources, soil and rock types, rock outcrops, and adjacent land uses.

Include a brief discussion of habitats present. Discuss any wetlands, water bodies, watersheds or stream beds on the project site which would be modified and subject to the California Fish and Game (CDFG) Code, Section 1600-1603, the U.S. Army Corps of Engineers (ACOE) Section 404 of the Clean Water Act, or the City's Environmentally Sensitive Lands regulations. Describe existing

conditions, sensitive lands per MSCP and VPHCP, and any critical habitats of endangered species as determined by the. A discussion of wetland jurisdiction/definition for the ACOE, CDFW, and the City of San Diego shall be required, including a discussion of existing and proposed wetland buffers as accepted by the regulatory agencies.

B. Biological Resources

1. Botanical Resources – Flora

Describe the existing vegetation communities as well as disturbed areas, and list the dominant (indicator) species of each vegetation community type. Identify, if possible, the nature of any disturbance, e.g., grading, active agriculture, fire, etc. Each vegetation community should be categorized into either wetland(s) and/or type of upland(s) as shown in the Tables found in Section III of the Biology Guidelines. Include a vegetation map (at least one copy submitted shall be on a project plan map) overlain by the development proposed. The amount of each vegetation community or habitat type present on the property should be indicated in acres, hectares, or square feet, as appropriate. Quantify transect data when appropriate. Indicate locations of sensitive plants as points or polygons as appropriate. Include a complete listing (in an appendix) of all plant species observed, including scientific and common names. Indicate the community or habitat each species was found in and which species are not native to the area.

2. Zoological Resources – Fauna

Provide a list of all vertebrate species observed or detected in an appendix. Both common and scientific names should be used. "Regional Lists" are not acceptable. Listing of particular expected species may be appropriate, but should be justified (migratory, estivating, nocturnal species, etc.).

Include the method used to identify the species (e.g., direct sighting, scat, or calls) in the text or lists. Indicate the number and location of individuals detected or estimated. Note indications of breeding activity (i.e., nests, dens) on the property. Occurrence of the species should be related to the vegetative community or wildlife habitat types on the property when possible. Relative amounts of each wildlife habitat type should be indicated (may be same as plant communities).

Discuss invertebrates in special situations (i.e., rare, threatened or endangered butterfly species, fairy shrimp, unusual species concentrations, or pest species).

If a species is reported which is considered rare or unusual in occurrence in the region, verify its identification with a photographed or a written species diagnostic description in the appendix or use the form provided as Attachment III.

Indicate locations of (on at least one copy of a project map) and discuss areas exhibiting concentrations or a higher diversity of wildlife or wildlife signs, and discuss possible reasons for these activities (e.g., amphibian breeding areas, deer feeding, raptor hunting areas, etc.). Such areas may reflect physical attributes of the property such as dunes, rock out-crops, streams, ponds, stands of trees, etc., which should be mapped.

C. Rare, Threatened, Endangered, Endemic and/or Sensitive Species or MSCP-Covered Species.

The report shall contain a separate discussion of any sensitive species occurring on or using areas directly or indirectly affected by the project that are recognized by a governmental agency, conservation or scientific group, or the investigator(s) as being depleted, potentially depleted, declining, rare, critical, endemic, endangered, or threatened, and/or any species nominated or on a state or federal rate, endangered or threatened species list.

The survey report shall contain a theoretical discussion and/or list of rare, endangered, and threatened species and habitats likely to occur on site or nearby. Species discussed shall be based on sources listed in the paragraph above or more recent data. Discuss the suitability of the habitat on the property for each such species and the probability of the property being utilized by them, particularly if the survey was done when the species would not be identifiable. Discuss the known growth requirements of said species, including required soil types, exposure, elevation, availability of water, etc., as well as when the species is identifiable. Confirm the identification of rare, endemic, endangered, or threatened species, by a species-diagnostic photograph or by a written description. A California Natural Diversity Database, "California Native Species Field Survey Form" (Attachment V) should be completed where a species has not been reported before, or as deemed appropriate.

D. Maps

All maps submitted with the biology survey report must be of sufficient scale to show the location of the identified resources and their relationship to the project (See Attachment II). Elevations/topography, north direction, and scale, must be indicated on all maps. The map should identify biological resources (plants and animals) present on site, including any portions of the site identified as part of or adjacent to the MSCP's MHPA and any other species not listed by federal and/or state agencies, and/or not covered by the MSCP or VPHCP and to which any impacts may be considered significant under CEQA. In addition, at least one

copy of a full-scale project map (Tentative Map, Tentative Parcel Map, Site Plan, etc.) must be submitted, showing the resources identified including blue line streams and other wetland features sourced from a U.S.G.S topographical map, and project characteristics including lot lines, roads, grading, open space easements, off-site improvements, etc. To summarize, the following maps are required:

1. A copy of the project map or site plan, etc., with sensitive species/habitats plotted thereon (see interactive mapping feature on the following website: www.sandiego.gov/planning/programs/mscp/vphcp.shtml and www.sangis.org);
2. A copy of the project map or site plan with the MHPA boundaries shown thereon; and
3. A copy of the project map or site plan showing project impacts in relationship to biological resources.

NOTE: All information can be put on one map if it can be clearly depicted. If information is depicted on separate maps, all maps must be presented at the same scale.

VI. PROJECT IMPACT ANALYSIS

Identify all potential impacts of the project (on-site and off-site impacts such as roads, staging areas, and water and sewer lines) to sensitive biological resources and to other significant biological resources as determined by the CEQA process (i.e., sensitive, non-covered species). The report should evaluate the significance, and quantify/qualify impacts. Impact assessments need to include analysis of direct impacts (e.g., grading, Zone 1 brush management), indirect (e.g., lighting, noise, edge effects, sediment loading, etc.) and cumulative impacts, if appropriate. The City of San Diego's Significance Determination Thresholds under CEQA (Biological Resources) should be used as a reference. The proposed area of impact to each resource by the project must be presented in both a graphic and tabular form. In addition, this section shall contain a discussion of the following:

A. An evaluation of the physical or biological features used by flora and fauna on the property and their relative importance.

B. An evaluation of the physical and biological relationship of the property to surrounding or contiguous habitats and relationships to the MHPA. Discuss, if the proposed project will disrupt the integrity or continuity of an important habitat (i.e., disruption of a wildlife corridor and/or an extensive riparian woodland, etc.).

C. Indicate the percentage (or acreage) of plant communities and habitats to be removed or modified in tabular form by the proposed development or reasonably anticipated to be removed. Discuss likely subsequent impacts for phased and staged development, even if they are not a part of the project.

D. A determination of significance must be done per the City of San Diego's Significance Determination Thresholds under CEQA (Biological Resources).

E. Quantify the anticipated loss of sensitive plant and animal habitat, populations, or individuals. Define, where possible, the local and regional significance of this loss.

F. Discuss and evaluate indirect impacts anticipated on and off the site from project implementation.

G. Discuss the following consistency issues with the MSCP and VPHCP (discuss how the project will provide for the long-term viability of wildlife and sensitive habitats):

1. Whether or not the project lies within or adjacent to the MHPA (see interactive mapping features on the following web site: www.sangis.org).

2. Describe any relevant MHPA Guidelines (map notes).

3. Assess compliance with the planning policies and guidelines (is the project an allowed use within the MHPA?).

4. Address, if applicable, the land use adjacency guidelines (as shown on Page 48, the MSCP Subarea Plan).

5. Identify any appropriate management issues per Section 1.5, MSCP Subarea Plan, per Chapter 3 of the VPHCP, and Vernal Pool Management and Monitoring Plan.

6. Assess whether any special conditions of coverage apply to the species affected by the project (per Covered Species list, Appendix A, MSCP Subarea Plan and VPHCP).

7. Discuss any boundary adjustments to the MHPA. If proposed, evaluate for functional equivalency per Sections 1.1.1 and 5.4.2 of the MSCP Subarea Plan and Section 8.3.2 of the VPHCP.

8. Discuss whether or not the project is located on the least sensitive portion of the site (Sections II and III - Biology Guidelines).

H. Vernal Pools (see also Attachment II, Map Submissions and Methodology)

A focused survey evaluating the quantity and quality of vernal pool(s) and watershed must be provided. Substantial evidence must be presented that demonstrates: 1) presence/absence of the pools; 2) what measures are being taken

to avoid the pools and 3) if unavoidable provide substantiation as to why the impacts cannot be avoided and what measures are being used to minimize impacts (Section III - Biology Guidelines).

I. Cumulative Impacts

Projects that conform to the MSCP and VPHCP would not result in significant cumulative impacts. However, a rare circumstance could occur where impacts to a particular species not covered by the MSCP (e.g., little mousetail, salt marsh daisy) may still result in a cumulative/significant impact. In this case, the report would identify those species and describe why a cumulative impact still exists regardless of the habitat level protection provided by the MSCP.

VII. MITIGATION AND MONITORING REQUIREMENTS

This program will consist of three elements: 1) Mitigation Element, 2) Protection and Notice Element, and 3) Management Element (Section III, Biological Impact Analysis and Mitigation Procedures). For instances where revegetation or restoration is proposed, a revegetation/restoration plan shall be prepared in accordance with Attachment III, General Outline for Conceptual Revegetation/Restoration Plans.

Notes:

1. Restoration of vernal pools in historically non-vernal pool areas is not acceptable.
2. All wetland impacts and road pools with listed fairy shrimp shall have an identified wetlands mitigation site and an accompanying conceptual revegetation plan.
3. One component of the wetland mitigation effort (at a minimum 1:1 ratio) shall consist of wetland creation or wetland restoration. The remaining balance of the mitigation may occur as wetland enhancement.

VIII. ACKNOWLEDGMENTS AND BIBLIOGRAPHY

A. Acknowledgments

Staff from the following City Departments assisted in the preparation of these survey guidelines:

Planning Department – MSCP
Development Services Department – Environmental Analysis Section
Development Services Department – Mitigation Monitoring Coordination

B. Bibliographical References

The following documents were used in the preparation of these Survey Guidelines:

1. City of San Diego Land Development - Biology Guidelines. Revised February 2018.
2. City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan, March 1997.
3. Significance Determination Thresholds under CEQA – Biological Resources
4. Vernal Pool Habitat Conservation Plan (VPHCP), February 2018.

IX. ACRONYMS – Alphabetical Order

ACOE	Army Corps of Engineers
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
ESL	Environmentally Sensitive Lands Regulations, Land Development Code
GIS	Geographic Information System
LDR	Land Development Review
MMRP	Mitigation Monitoring Reporting Program
MHPA	Multi-Habitat Planning Area (90% Preserve Area of the MSCP)
MSCP	Multiple Species Conservation Program
NAD	North American Datum
Regulating Agencies	Those Governmental agencies with discretionary power to issue permits (e.g., U.S. Army Corps of Engineers, California Department of Fish and Wildlife, City of San Diego Development Services Department
RUIS	Regional Urban Information System – now known as SANGIS – San Diego GIS
SANDAG	San Diego Association of Governments
SANGIS	San Diego Geographic Information System
USFWS	United States Fish & Wildlife Service
VPHCP	Vernal Pool Habitat Conservation Plan
www.sangis.org	City of San Diego's web site which includes the MHPA mapping

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ATTACHMENT I

SAMPLE PROTOCOL SURVEY REQUIREMENTS

The following sample protocol survey requirements are representative of the typical sensitive species found within the City of San Diego. These focused survey protocols are consistent with the current regulations of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). **Please note that these requirements are subject to change as the status of a given species changes, as new information is discovered for a given species, and as jurisdictions of the USFWS and CDFW dictate through their individual regulations and/or survey protocols.** All surveys must be conducted by individuals possessing appropriate permits through the USFWS and CDFW.

NOTE: Extreme weather conditions can cause variations in the breeding season of individual species. In such instances, additional coordination with the USFWS and CDFW may be required.

1. Coastal California Gnatcatcher *(Polioptila californica)*

Breeding Season	March 1 to August 15
Minimum Number of Surveys Required	3
Minimum Number of Days between Surveys	7

2. Least Bell's Vireo (Vireo bellii pusillus)

Breeding Season	March 15 to September 15
Minimum Number of Surveys Required	8
Minimum Number of Days between Surveys	10

3. Southwestern Willow Flycatcher *(Empidonax traillii extimus)*

Breeding Season	May 1 to September 1
Minimum Number of Surveys Required	5
Minimum Number of Days between Surveys	5

One survey must occur between May 15 and May 31. One survey must occur between June 1 and June 21. Three surveys must occur between June 22 and July 17.

4. Southwestern Arroyo Toad (*Bufo microscaphus californicus*)

Breeding Season	March 15 to July 1
Minimum Number of Surveys Required	6
Minimum Number of Days between Surveys	7

5. Quino Checkerspot Butterfly *(Euphydras editha quino)*

Breeding Season	Generally late February to early May
Minimum Number of Surveys Required	5
Minimum Number of Days between Surveys	7

6. Fairy Shrimp *(Branchiopods)*

Minimum Number of Surveys Required: one full wet season survey and one dry season survey (or vice-versa) within a 3-year period.

Wet season surveys – Once inundated, pools/swales shall be adequately sampled once every 7 days, beginning no later than two weeks after their initial inundation and continuing until they are no longer inundated, or until they have experienced 120 days of continuous inundation. In cases where the pools/swales dry and then refill in the same wet season, sampling shall be reinitiated within 7 days of refilling every time they meet the 3 cm of standing water criteria and shall continue until they have experienced 120 days of continuous inundation, or until they are no longer inundated.

7. Burrowing Owl (*Specotyto cunicularia*)

Breeding Season:	February 1 to August 31
Minimum Number of Surveys Required	4
Minimum Number of Days between Surveys	1 (24 hours)

Survey protocol for this species is recommended by the CDFW. The following references should be utilized:

1. California Department of Fish and Game (DFG), 2009-2010. Guidance for Burrowing Owl Conservation. Habitat Conservation Branch, Wildlife Branch, Bay Delta Region. Sacramento, California.
2. DFG, 1995. Department's Staff Report on Burrowing Owl Mitigation. Refer to http://www.dfg.ca.org/wildlife/species/docs/burowlmit.pdf.
3. California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines, 1993, 1997. Refer to http://www.dfg.ca.org/wildlife/species/docs/boconsortium.pdf.

Surveys may also be conducted outside the breeding season for winter residents (non-breeding owls). Positive results (e.g., sightings) outside of the breeding season would be adequate to determine presence, but may be inadequate for mitigation planning because the number of owls and their distribution pattern may change between winter and nesting seasons.

ATTACHMENT II

MAP SUBMISSIONS AND METHODOLOGY

Vegetation Community Subassociations

The mapping of vegetation should be based on the most current source information for San Diego County. The City's MSCP and Biology Guidelines are based on vegetation classifications provided in R.F. Holland system of natural communities as described in Preliminary Descriptions of the Terrestrial Natural Communities of California, California Department of Fish and Wildlife, Non-Game Heritage Program, Sacramento, 1986 (and as modified for San Diego County SANDAG 1992), and revised Holland (Oberbauer 2005 and 2008). These systems will provide the names and descriptions of the basic plant community associations. An alternative mapping methodology that is also available to the City of San Diego is Sawyer and Keeler-Wolfe (1995). These documents are available in the office of the Environmental Analysis Section, Entitlements Division, Development Services Department, City of San Diego. If additional mapping categories are used, a cross-reference table should be provided to clearly show how these "new" categories fit into the Holland System. In most cases, an aerial photograph at 1"=200" scale should be used to aid in the delineation of vegetation boundaries.

Where applicable to enhance the clarity of field data, subassociations should be mapped. For example, where a coastal sage scrub community is dominated by *Adolphia californica* rather than the more typical coastal sagebrush, the community should be identified as *Adolphia californica*-dominated coastal sage scrub. The study report should describe the subassociations in terms of the dominant elements and distinguishing characteristics.

All vegetation should be considered potential habitat whether it is disturbed or not, and/or if it supports a cover of approximately 30% of native vegetation. This is applicable to fallow agricultural fields as well (no time frame is necessary as long as at least 30% cover is demonstrated). However, other factors may be present to preclude viable habitat as described below.

The use of the modifier "disturbed" should be limited to human-induced disturbance such as agriculture, prior grading activities, or permanent damage from continuous off road vehicle use. The probable cause of the disturbance should be noted. The modifier is not applicable to burned areas. Canopy cover varies by vegetation type. Therefore the percent canopy cover which represents a disturbed condition will vary according to vegetation type. The use of the term "disturbed" is within the discretion of the principal investigator, biologist, and/or City staff, and should be applied to provide a true and accurate representation of field conditions.

A. Problem Mapping Areas

The following descriptions are given as guidelines for distinguishing difficult habitats in the field. If a habitat fits one of the descriptions below, but there is scientific information to classify the habitat otherwise, please submit that information in the biology report.

1. Non-Native Annual Grasslands vs. Other Disturbed Areas (Ruderal, Agricultural/Fallow):

   Non-native annual grasslands (NNGL) contain annual grass species (Poaceae family) including, but not limited to, bromes *(Bromus* spp.), wildoat (*Avena* spp.), ryegrass (*Lolium* spp.) and fescues (*Vulpia* spp.). Typically, NNGL includes at least 50% cover of the entire herbaceous layer attributable to annual non-native grass species, although other plant species (native or non-native) may be intermixed. Other common plant species found in NNGL include filaree (*Erodium* spp.), California poppy (*Eschscholzia californica*), tecolote (*Centaurea melitensis*), mustards (*Brassica* spp.), artichoke thistle (Cynara cardunculus), sweet fennel (Foeniculum vulgare), and others.

   Other Disturbed Areas include lands commonly defined as Ruderal Habitat or Agricultural/Fallow. Ruderal habitat typically develops on sites with heavily compacted soils following intense levels of disturbance such as grading. Agricultural/fallow lands include areas of active agricultural cultivation (e.g., nurseries, orchards, field crops) and fallow areas which have been disturbed in the recent past by cultivation or agricultural activity. These types of disturbed areas should not be confused with areas that are degraded, yet still retain sufficient vegetation community (e.g., "disturbed" coastal sage scrub does not meet the definition of disturbed under this definition). Disturbed areas are usually associated with prior development (e.g., previous grading) or agricultural use. These areas can consist of bare ground. , or when vegetated, are dominated by at least 50 percent cover of invasive broad-leaved non-native plant species including, but are not limited to, horseweed, (*Conyza* spp.), garland chrysanthemum (*Chrysanthemum conronarium*), pineapple weed (*Chamomilla suaveolens*), sow-thistle (*Sonchus* spp.), Russian thistle (*Salsola tragus*), mustards, knotweed (*Polygonum* spp.), bur-clover (*Medicago polymorpha*), fennel and others. Minor amounts of other species including non-native annual grasses can also be present.

   To distinguish between NNGL and other disturbed areas, the relative percent cover of the herbaceous species should be used as a diagnostic tool. Within the area in question, the percent cover and relative percent cover of all herbaceous species should be assessed. The cumulative total of each species should be determined and ranked in descending order of abundance (see example below). The vegetation community should be determined based upon the total cumulative relative percent cover of non-native grasses (*Poaceae* family). If native habitats have been ruled out and if the majority (50 percent or greater) of the observed species are introduced members of the Poaceae family, then the area should be characterized as non-native annual grassland. Otherwise, consideration should be given to identified types of disturbed areas.

Vegetative cover is **usually** determined by visual estimate. For example, if three out of four dominant plant species observed are non-native annual grasses, the area in question should be considered a non-native annual grassland.

In more controversial cases, vegetative cover should be determined by standard vegetative sampling protocol such as the line transect or point intercept transect methods, as shown by the following example:

Example: (Point intercept Transect; Site determined to be NNGL)

Species	Absolute % Cover	Relative % Cover	
Avena barbata (P)	30	19.4	Total Relative 5% Cover of Dominant Poaceae Species (P) 51.7%
Bromus hordeaceus (P)	30	19.4	
Lolium perenne (P)	20	12.9	
Brassica nigra	25	16.1	Total Relative % Cover of Other Dominant Herbaceous Spp. 41.9%
Chrysanthemum sp.	40	25.8	
Salsola tragus	10	(6.4)*	
Bare Ground	20	**	
Total	175%	100%	

(P) Species within Poaceae (grass) family

* For pragmatic purposes, dominant species (those that consist of greater than 20% herbaceous percent cover) should be used to determine the classification of an area. Therefore, in the above example, *Salsola tragus* should not be considered when calculating the relative percent cover.

**Re-estimate of percent cover on-site eliminating bare ground. Sites that contain more than 75% bare ground may be categorized as disturbed if there is evidence of historic soil disturbance (e.g., grading, agriculture, disking, compaction). This does not include naturally occurring open areas such as natural outcroppings, cryptogrammic crusts, vernal pools, ephemeral areas, etc

2. Southern Maritime Chaparral vs. Southern Mixed Chaparral:

Distinguishing between Southern Maritime and Southern Mixed Chaparral can be difficult, especially in areas where the habitat may be transitional between the two. Please keep in mind when identifying these habitats, especially on smaller parcels, that it may be necessary to assess the adjacent, associated habitats, not just what occurs on site. If access to adjacent areas cannot be obtained, any data available such as historic records or aerial photos should be used in making your determination. Southern Maritime Chaparral is a rare vegetation community associated with the fog belt along the coastal areas and could extend inland to areas such as, but not limited to.

The following characteristics and plant species are considered indicators of Southern Maritime Chaparral within the City of San Diego: occurrence on sandstone soils;

occurrence within the coastal fog belt; Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *Crassifolia*), wart-stemmed Ceanothus/coast white lilac (*Ceanothus verrucosus*), Orcutt's spineflower (*Chorizanthe orcuttiana*), sea-dahlia (*Coreopsis maritima*), California aster (*Corethrogyne filaginifolia*), summer holly (*Comarostaphylis diversifolia*), short-leaved dudleya (*Dudleya blochmaniae* ssp. *brevifolia*), Torrey pine (*Pinus torreyana*), Nuttall's scrub oak (*Quercus dumosa*), and Encinitas baccharis (*Baccharis vanessae*).

The above plant species do not need to be dominant, only present, to be considered as an indicator of Southern Maritime Chaparral.

Southern Mixed Chaparral is a more common inland vegetation community. Typical plant species include chamise (*Adenostoma asciculatum*), Ceeanothus species (excluding wart stemmed Ceanothus/coast white lilac [*Cceanothus verrucosus]*), Manzanita species (excluding Del Mar manzanita [*Arctostaphylos gladulosa crassifolia]*), and scrub oaks (*Quercus berberififolia* or excluding *Quercus dumosa*). If any single species dominates more than 50% of the cover, then the habitat is not a mixed habitat and should be designated according to that dominant species present (e.g. chamise chaparral).

3. Vernal Pools vs. Road Pools

Vernal Pools are seasonally flooded depressions that support a distinctive living community which is adapted to extreme variability in hydrologic conditions (seasonally very dry and very wet conditions). Vernal pools are usually associated with mima-mounds, occurring on mesas, especially where the hardpan or bedrock is underlain by clay soils (Zedler, 1987). Due to these soil conditions, vernal pools hold water after rain storms.

Under U.S. Army Corps regulations, for a seasonally flooded depression to be considered a vernal pool, it must have at least one vernal pool indicator species. The City of San Diego will consider similar factors.

Depressions which are man-made, such as tire tracks or road ruts, may still be considered vernal pools if they contain at least one indicator plant species. A list of these indicator species has been compiled by the U.S. Army Corps of Engineers (Special Public Notice, Regional General Conditions to the Nationwide Permits, Nov. 25, 1997), and this list and Appendix A of the VPHCP should be used as a guideline to distinguish vernal pools from other seasonal depressions. Many of these species are endemic to vernal pools and are covered by the MSCP and/or are listed by federal and/or state agencies.

Road ruts and other seasonal depressions which are not vernal pools may contain wildlife associated with vernal pools, such as San Diego or Riverside fairy shrimp, but will not contain vernal pool plant indicator species. Seasonal depressions not containing indicator plant species are usually not considered wetlands by the City of San Diego; however, they are addressed under the VPHCP. Careful consideration should be given to road ruts or other seasonal depressions adjacent to vernal pool complexes. These depressions are

likely to contain vernal pool plant indicator species and should be examined thoroughly (e.g., multiple surveys) before they are dismissed as not being vernal pools.

B. Biological Resource Map Submittal Requirements

The minimum mapping unit should be based on the project scale and type of vegetation/resources being mapped. However, splits of vegetation community subassociations, as described above should be made if they are accurately labeled and described. The maps should contain all the necessary biological information on the same sheet as long as it is clearly readable. If there is too much information to make a single legible map, acetate overlays may be used. A reduced version of the map must be included in the report at either 8 ½ x 11 or 11 x 17 size depending on the project features. Maps should be dated and at the original scale (not photo-reproduced), and must contain the following features:

- Location Map (800 Engineering scale) w/survey boundaries (Elevations/topography, north direction, and scale)
- Full scale project map (TM) w/MHPA boundaries (D-sheet size)
- Limits of Grading
- Limits of Disturbance
- Vegetation Map overlain by the development proposal
- Vegetation map (with ESL delineated) showing habitat, area(s) of impact with habitat and plant species
- Multi-Habitat Planning Area (MHPA) delineated / MHPA Map (SANGIS) and any other species to which any impacts may be considered significant under CEQA.
- Brush Management Zones delineated
- Full scale project map (TM) w/MHPA boundaries
- Limits of Grading
- Limits of Disturbance

C. Vernal Pool Requirements

Show all vernal pools on the full scale biological resource map. In addition, provide another map of appropriate scale (such as a minimum of 1" = 40') that depicts the microtopography, limits and/or boundaries of the basins and watersheds. The watershed is a topographically defined catchment area from which surface water flows to a vernal pool. This map must be delineated using standard survey techniques or GPS. Identification of the presence/absence of vernal pool plant and animal species, shall be done, where appropriate, utilizing the U.S. Fish and Wildlife Service's Vernal Pool Guidelines and VPHCP. Techniques include, but are not limited to, cyst sampling in dry pools, presence/absence of mima-mound topography, and/or historical indicators.

D. Required Maps (SANGIS/digitally compatible submittals)

A. Digital information should be provided on a Compact Disc (CD) in a GIS (geographic information systems) compatible format. The geographic coordinate system used by the City is the NAD 1983 StatePlane California Zone VI (feet). The information provided must be consistent with this coordinate system. Acceptable formats include:

- ESRI Shapefile
- ESRI Geodatabase (file or personal)
- ESRI Coverage (.e00 interchange file)
- CADD.dwg or .dxf.
- Other formats may be acceptable upon approval from the City

ATTACHMENT III

GENERAL OUTLINE FOR CONCEPTUAL REVEGETATION/RESTORATION PLANS

The following outline is intended to provide guidance in the preparation and review of conceptual revegetation/restoration plans. This outline is not intended as an exhaustive list of all design elements to consider when planning a revegetation effort. Consideration must also be given to the City's Land Development Code Landscape regulations (Chapter 14, Article 2, Division 4) and Landscape Standards when preparing conceptual revegetation plans and detailed revegetation construction drawings. All vernal pool restoration plans shall be consistent with the VPHCP and Vernal Pool Management and Monitoring Plan.

INTRODUCTION

- Background – Purpose
- Project location(s) with maps (regional, vicinity, site plan)
- Restoration goals and objectives/Mitigation requirements

EXISTING CONDITIONS

- Environmental setting of impacted areas – vegetation & wildlife affected, functions and values, impact acreages, reference sites for development of revegetation specifications (can be in intro)
- Environmental setting of revegetation areas – land ownership, existing land uses
- Revegetation site characteristics: description/evaluation of topography, vegetation, soils, hydrology/drainage, access, site constraints (figures/maps)
- Regulatory requirements

MITIGATION ROLES & RESPONSIBILITIES

- Financially responsible party – Performance bonds
- Revegetation team: Applicant, Landscape Architect, Revegetation Installation Contractor, Revegetation Maintenance Contractor (if different), Project Biologist, Nursery (seed/plant procurement)

SITE PREPARATION

- Site and resource protection – staking/flagging/fencing of sensitive habitat areas/limits of work
- Weed eradication
- Topsoil/plant salvage (if needed)
- Clearing/grubbing
- Grading/recontouring
- Irrigation
- Water source and supply
- Temporary or permanent installation
- Manual or automatic

- Plant Installation Specifications
- Species composition lists – container plants/seed mixes/quantities and sizes
- Planting arrangement/design (include conceptual planting plan)
- Planting procedure – interim storage methods, seed application methods, cuttings, special handling
- Timing of plant installation
- Irrigation requirements – frequency and duration

MAINTENANCE PROGRAM

120-Day Plant Establishment Period (PEP)

- Weed Control
- Horticultural treatments (pruning, mulching, disease control)
- Erosion control
- Trash & debris removal
- Replacement planting and reseeding
- Site protection and signage
- Pest management
- Vandalism
- Irrigation maintenance

Five-Year Maintenance Period for Each Year Following the 120-Day PEP (See 120-day plant establishment items above)

BIOLOGICAL MONITORING

- Reference sites for development of performance criteria
- Monitoring procedures – qualitative (photo documentation) and quantitative (vegetation sampling methods)

- Monitoring frequency
  - → 120-Day Plant Establishment – Does revegetation meet intended design requirement?
  - → 5-Year monitoring requirement – or until 5th year performance/success criteria met
- Performance success criteria
- Reporting program

SCHEDULE OF ACTIVITIES

REMEDIATION MEASURES

COMPLETION OF MITIGATION NOTIFICATION

LITERATURE/REFERENCE CITATIONS

ATTACHMENT IV

SUGGESTED REFERENCES AND NAMING AUTHORITIES

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ATTACHMENT V

California Native Species Field Survey Form

Sample Form follows on next page

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work: ____ - ____ - ____
month (mm) day (dd) year yyyy

Scientific Name:

Common Name:

Species Found? ☐ Yes ☐ No _____ If not, why?

Total No. Individuals _____ Subsequent Visit? ☐ yes ☐ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☐ no ☐ unkn

Collection? If yes: _____ Number _____ Museum/Herbarium

Reporter: _____
Address: _____
_____

Email Address: _____

Phone: ( ) _____

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

Age Structure: _____ # Adults _____ # Juveniles _____ # Unknown

☐ breeding ☐ wintering ☐ burrow site ☐ colony ☐ nesting ☐ other

Location (*PLEASE ALSO ATTACH OR DRAW MAP ON BACK*)

County: _____ Landowner/Manger: _____

Quad Name: _____ Elevation: _____

T _____ R _____ _____ ¼ of _____ ¼ of Section _____ T _____ R _____ _____ ¼ of _____ ¼ of Section _____

UTM: Zone: _____ (10, 11) Datum: _____ (NAD83, NAD27, WGS84, other)

Source: _____ (GPS, map & type, etc.) Point Accuracy: _____ Meters

UTM Coordinates: _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope)

Other rare species?

Site Information Overall site quality: ☐ excellent ☐ good ☐ fair ☐ poor

Current / surrounding land use:

Visible disturbances / possible threats:

Comments:

Determination: (Check one or more, and fit in blanks)

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo/drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs (check one or more)

	Slide	Print
Plant/Animal	☐	☐
Habitat	☐	☐
Diagnostic Feature	☐	☐

May we obtain duplicates at our expense? ☐ yes ☐ no

APPENDIX III

Essential Public Projects List

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