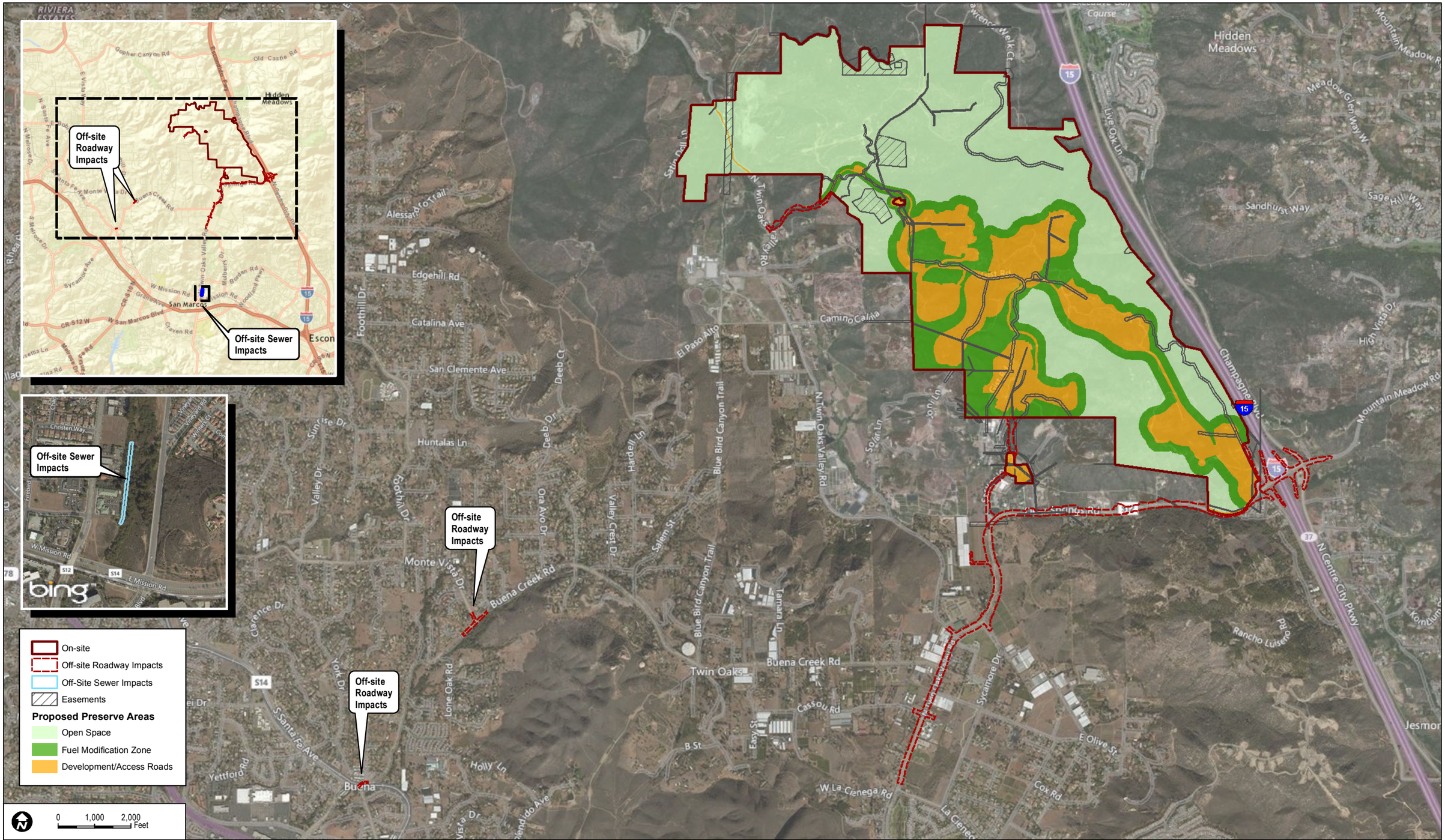


SOURCE: Bing 2016; Fuscoe Engineering 2016

DUDEK

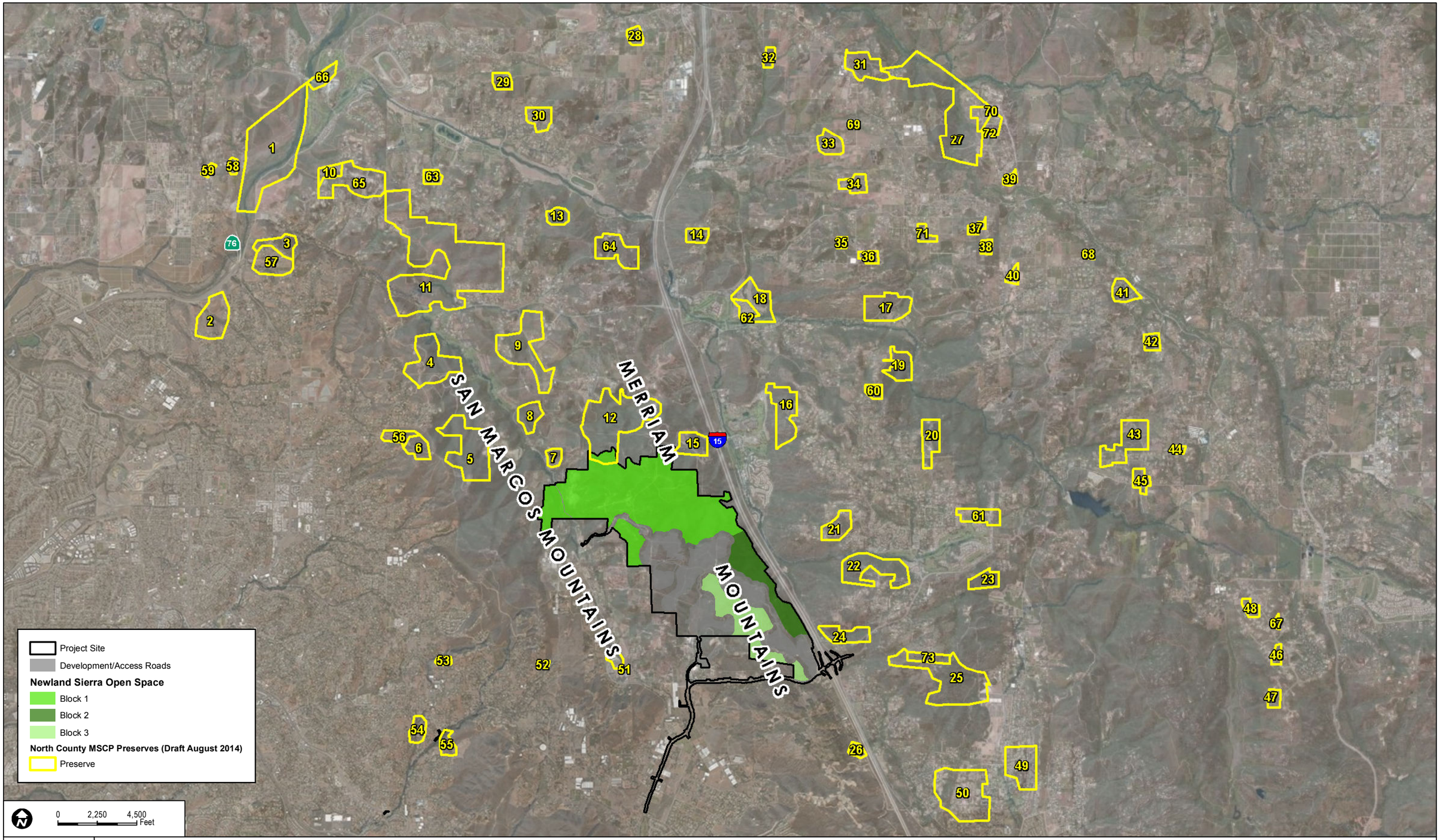
7608-01

FIGURE 3

Proposed Project

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

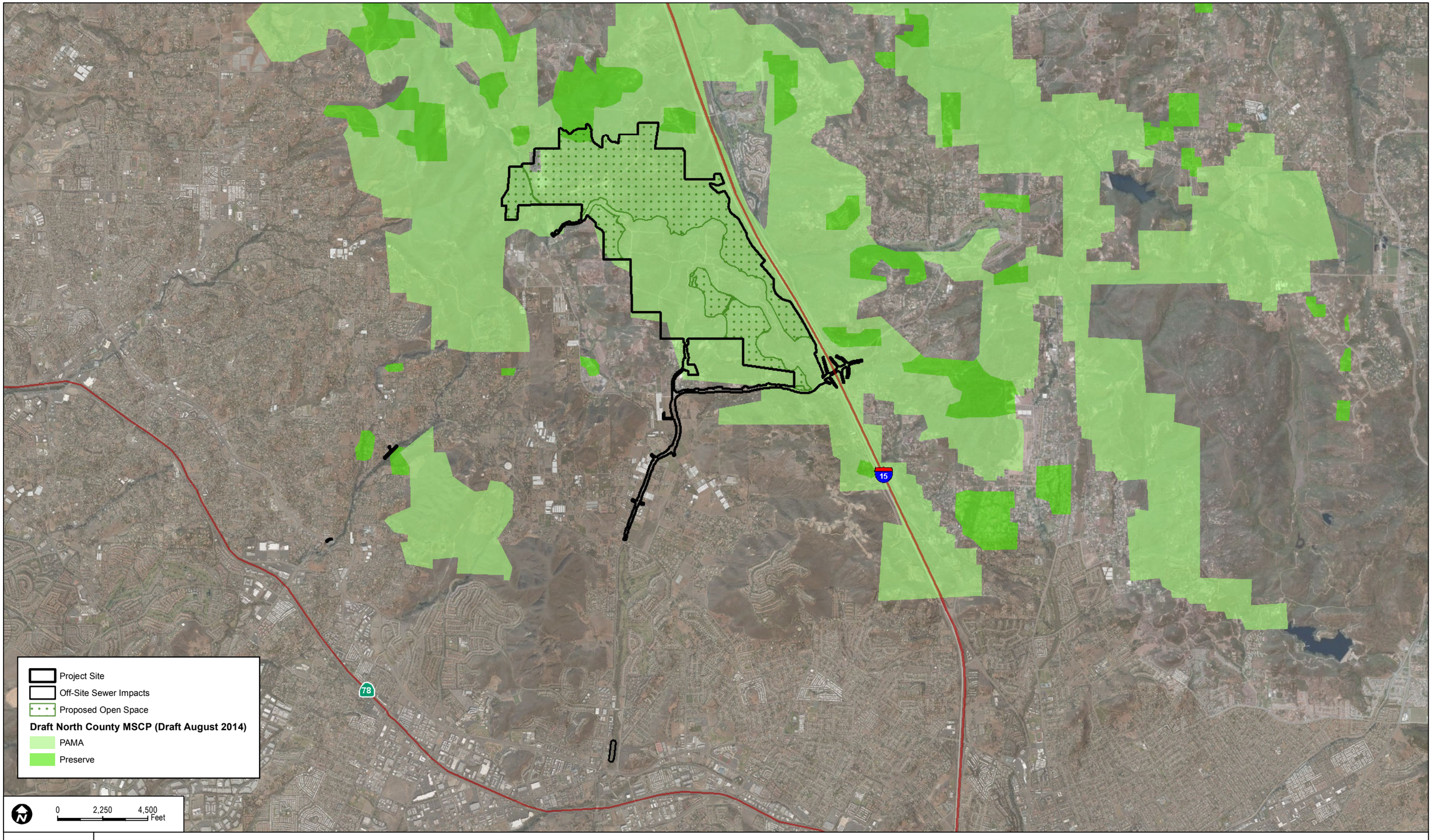
SOURCE: Bing 2016; County of San Diego 2014

FIGURE 4

Proposed Open Space Design and MSCP Preserves

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: Bing 2016; SANGIS 2014

FIGURE 5

Regional Context

INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site

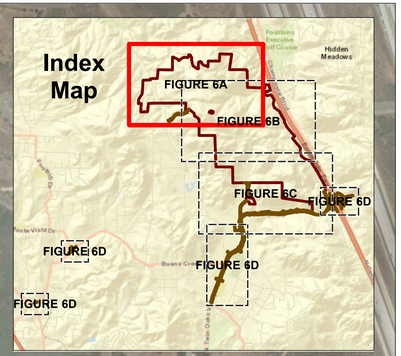
Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

- Oak Root Zones
- Las Posas Soil Series

Wildlife Species
- Coastal California gnatcatcher
- Nuttall's woodpecker
- Oak titmouse
- Red-shouldered hawk
- Sharp-shinned hawk
- Yellow warbler
- Desert woodrat (midden)
- Amphibian, western spadefoot
- Blainville's horned lizard
- Blainville's horned lizard (scat)
- Coast patch-nosed snake
- Coastal whiptail
- Red diamond rattlesnake

Plant Species
- Engelmann oak
- Munz's sage
- Ramona horkelia
- Summer holly
- ashy spike-moss
- chaparral rein orchid
- Engelmann oak
- Orcutt's brodiaea
- Ramona horkelia
- Summer holly

Index Map



0 165 330 Feet

DUDEK

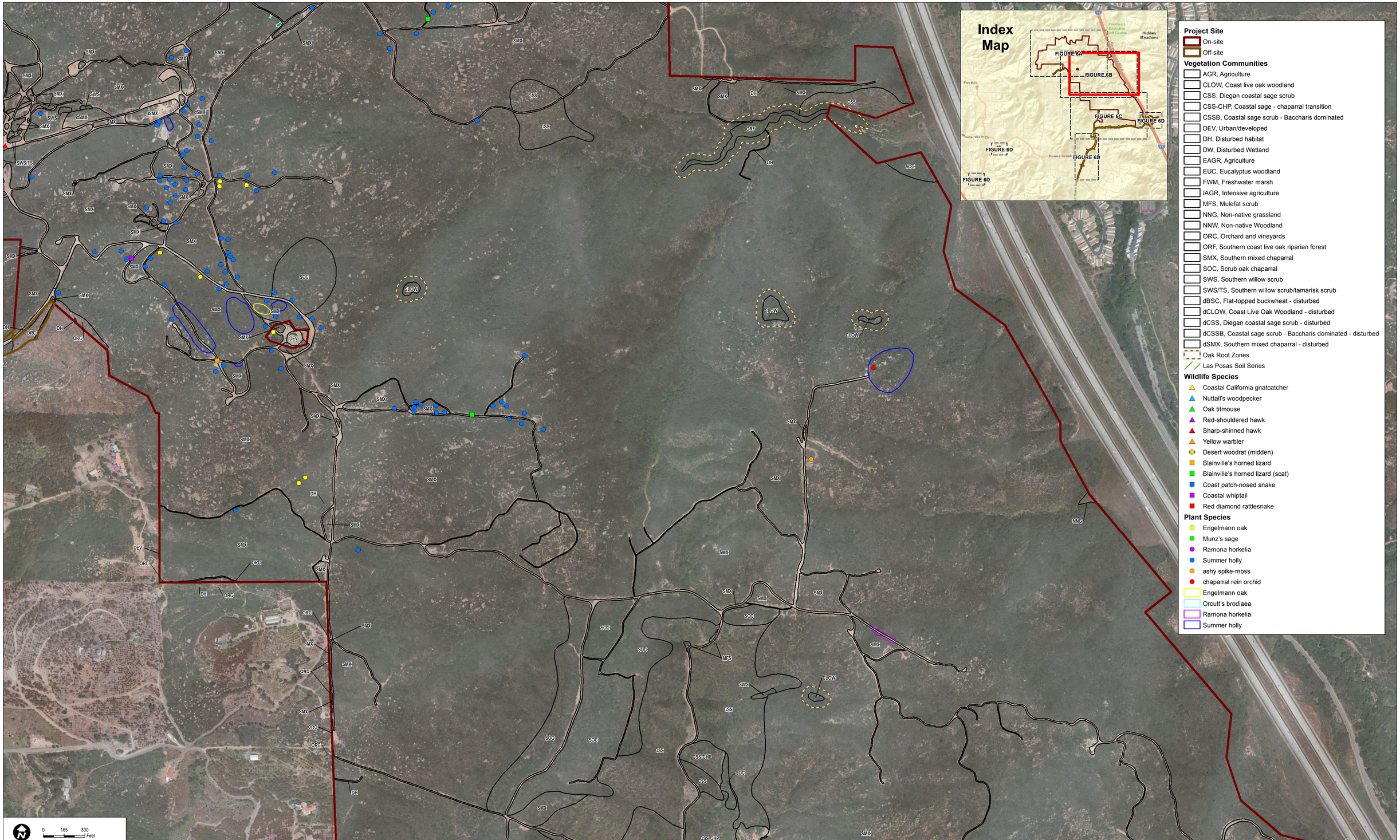
7608-01

SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

FIGURE 6A
Biological Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

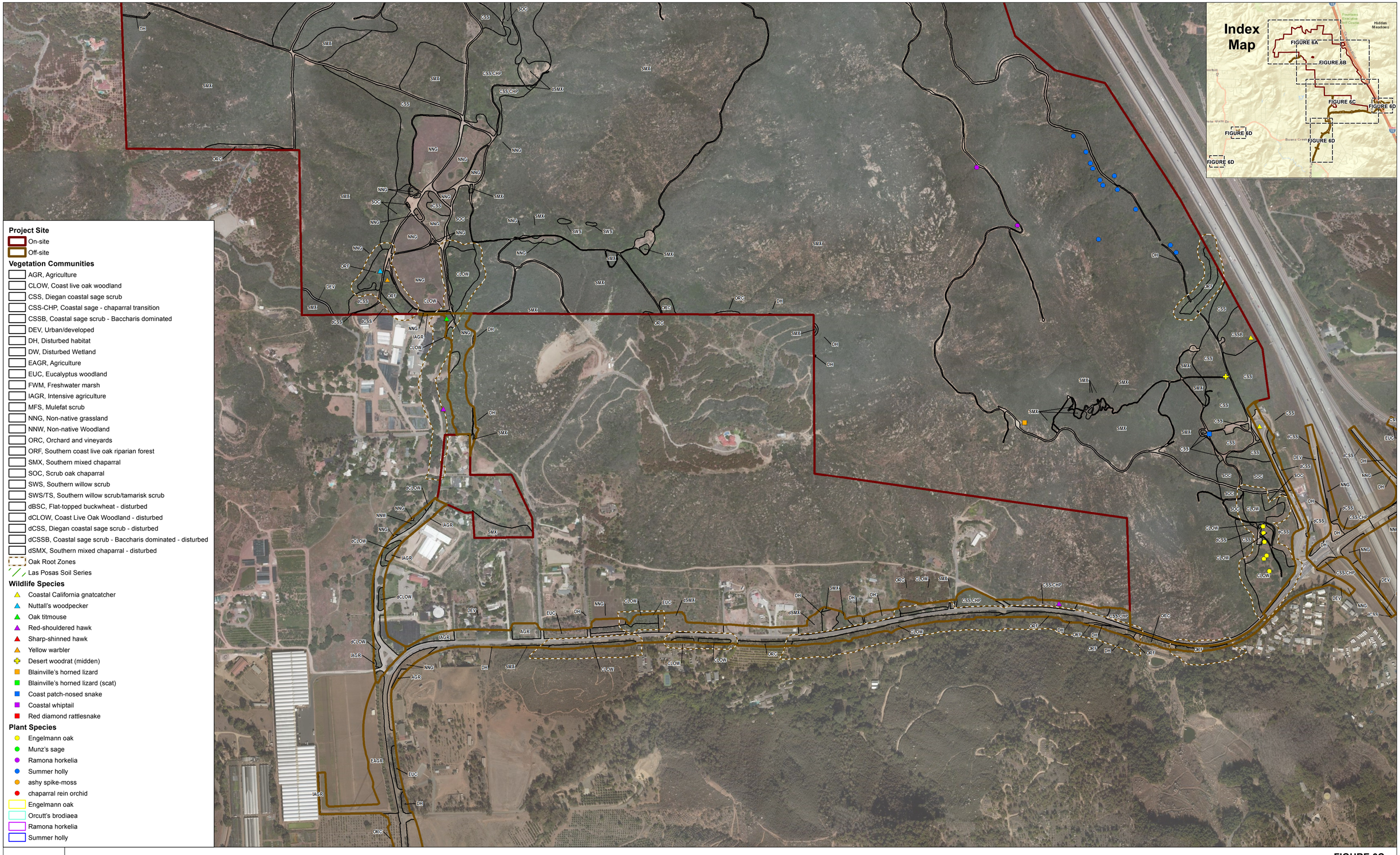
SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

FIGURE 6B

Biological Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

FIGURE 6C

Biological Resources

INTENTIONALLY LEFT BLANK

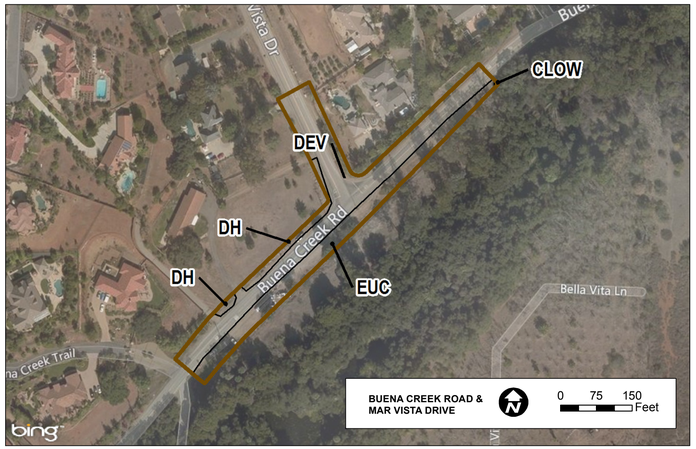
Project Site
- On-site
- Off-site

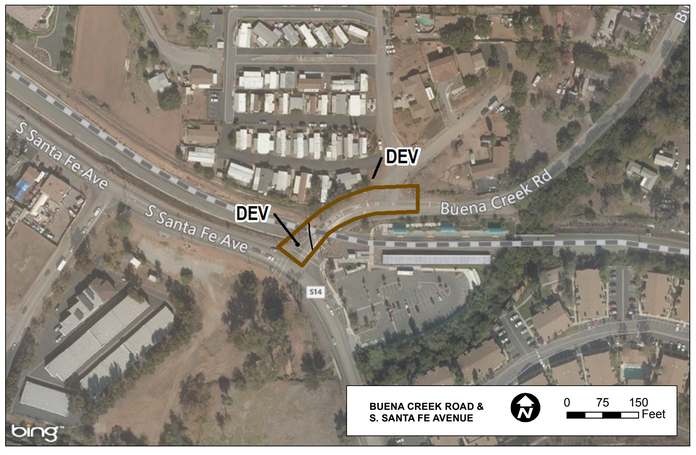
Wildlife Species
- Coastal California gnatcatcher
- Nuttall's woodpecker
- Oak titmouse
- Red-shouldered hawk
- Sharp-shinned hawk
- Yellow warbler
- Desert woodrat (midden)
- Blainville's horned lizard
- Blainville's horned lizard (scat)
- Coast patch-nosed snake
- Coastal whiptail
- Red diamond rattlesnake

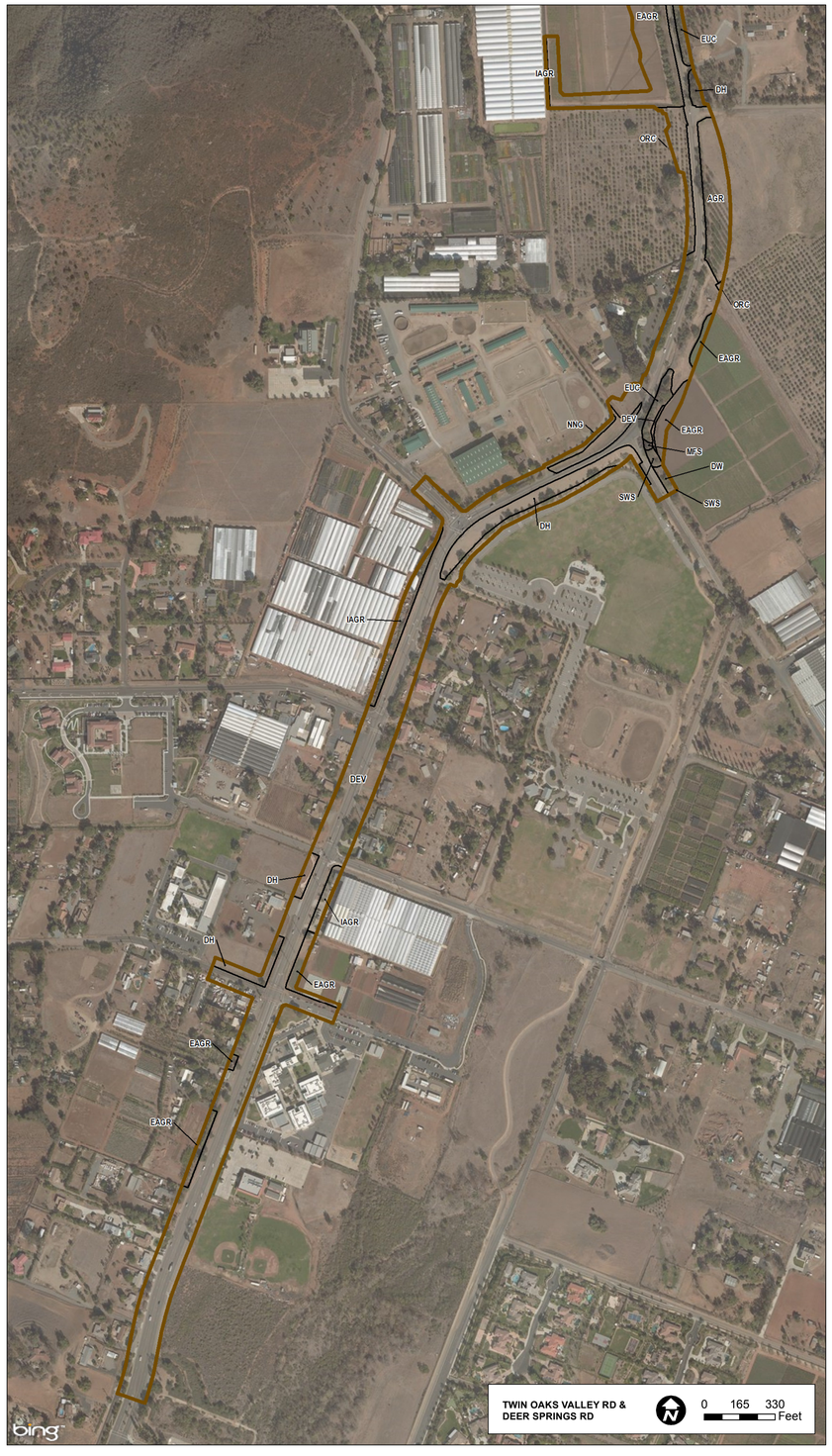
Plant Species
- Engelmann oak
- Munz's sage
- Ramona horkelia
- Summer holly
- ashy spike-moss
- chaparral rein orchid

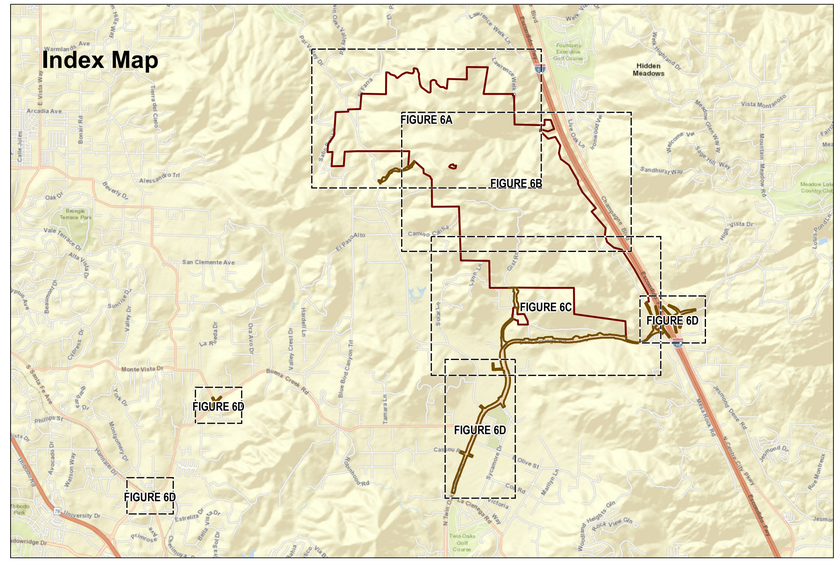
- Engelmann oak
- Orcutt's brodiaea
- Ramona horkelia
- Summer holly

Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed









DUDEK

7608-01

SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016

FIGURE 6D
Biological Resources

INTENTIONALLY LEFT BLANK

Proposed Sewer Line

100-Ft Buffer Of 30-Ft Sewer Easement

Vegetation Mapping

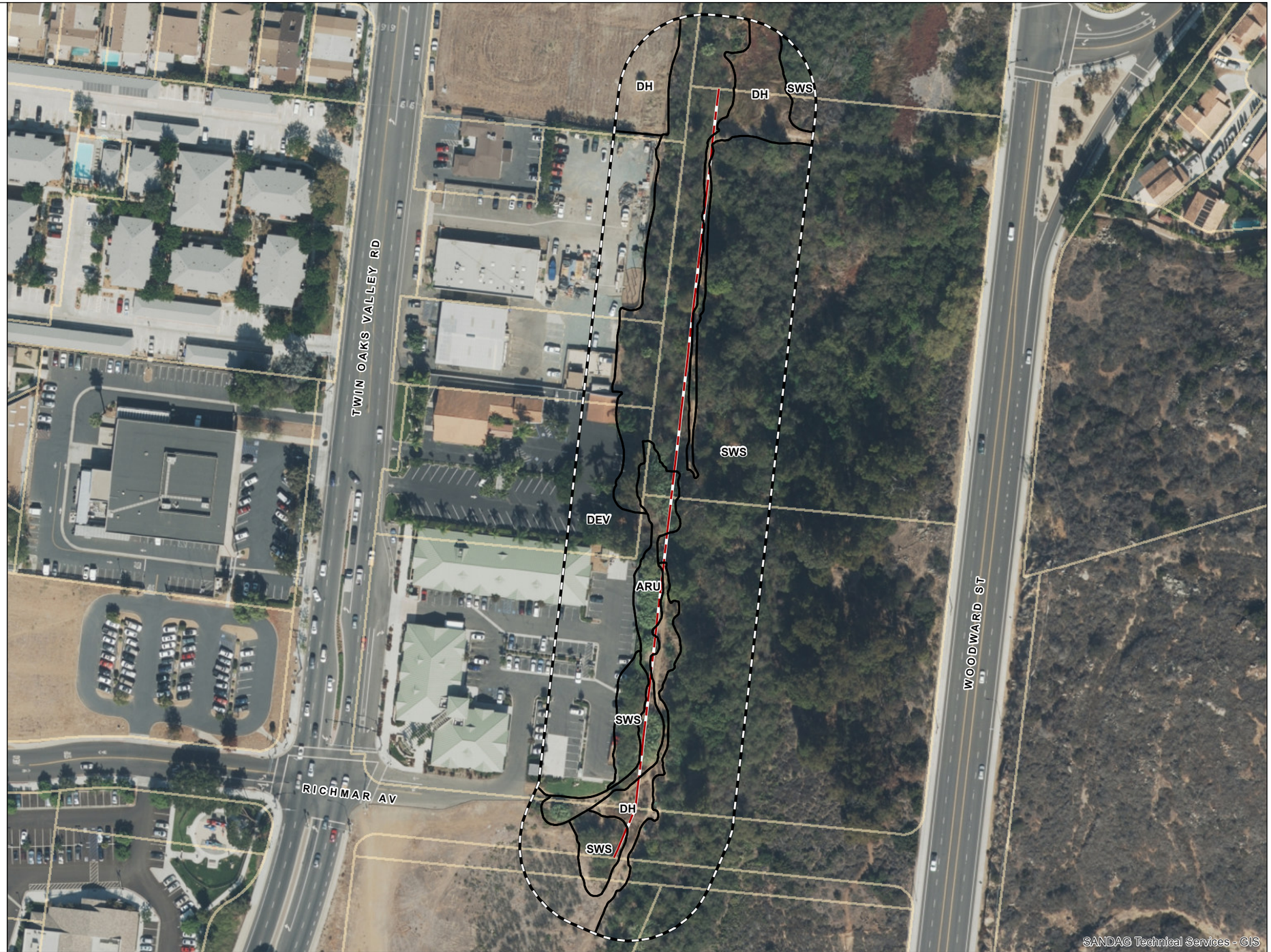
Vegetation Communities/Land Covers

ARU, Arundo Dominated Riparian

DEV, Urban Developed Ornamental

DH, Disturbed Habitat

SWS, Southern Willow Scrub



N 0 60 120 Feet

SOURCE: AERIAL-SANDAG IMAGERY 2014

DUDEK

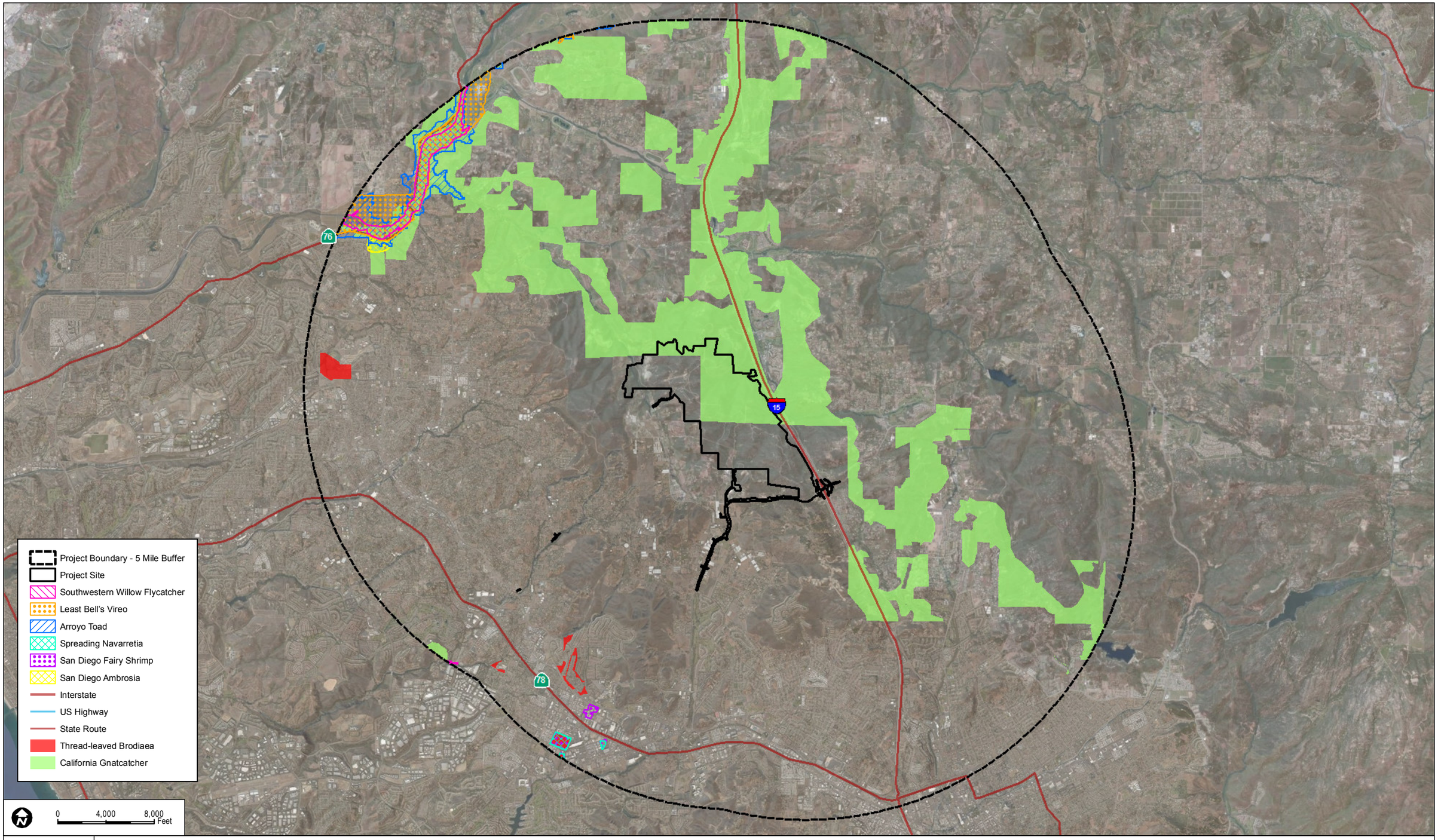
FIGURE 6E

Biological Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

Biological Resources Technical Report for the Newland Sierra Project

Date: 3/30/2017 - Last saved by: sbabrizi - Path: \\dudek-files\gisdata\Projects\j7608001\MAPDOC\MAPS\Tech Reports\BiologicalResourcesReport\Figure6E_BioRes_Offsite_Sewer TOV Rd.mxd

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: Bing 2016; USFWS 2014

FIGURE 7

Critical Habitat

Biological Resources Report for the Newland Sierra Project

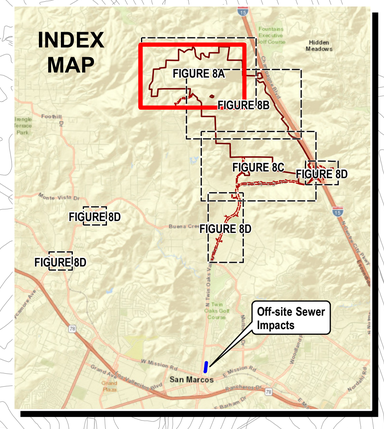
INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site
- RPO 75-Ft Buffer
- Data Stations

Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial
- RPO Wetlands

Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- CDFW ONLY

Vegetation Communities
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed



South Fork of Gopher Canyon

South Fork of Moosa Canyon

0 150 300 Feet

SOURCE:Topo-Fuscoe Engineering 2016

DUDEK

7608-01

FIGURE 8A
Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK

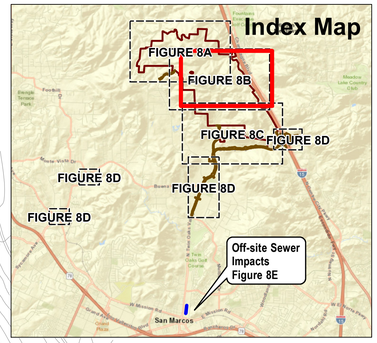
Project Site
- On-site
- Off-site
- RPO 75-Ft Buffer
- Data Stations
- RPO Wetlands

Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- CDFW ONLY

Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial

Vegetation Communities
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

Index Map



0 150 300 Feet

SOURCE: Fuscoe Engineering 2016; CA Department of Conservation 2011

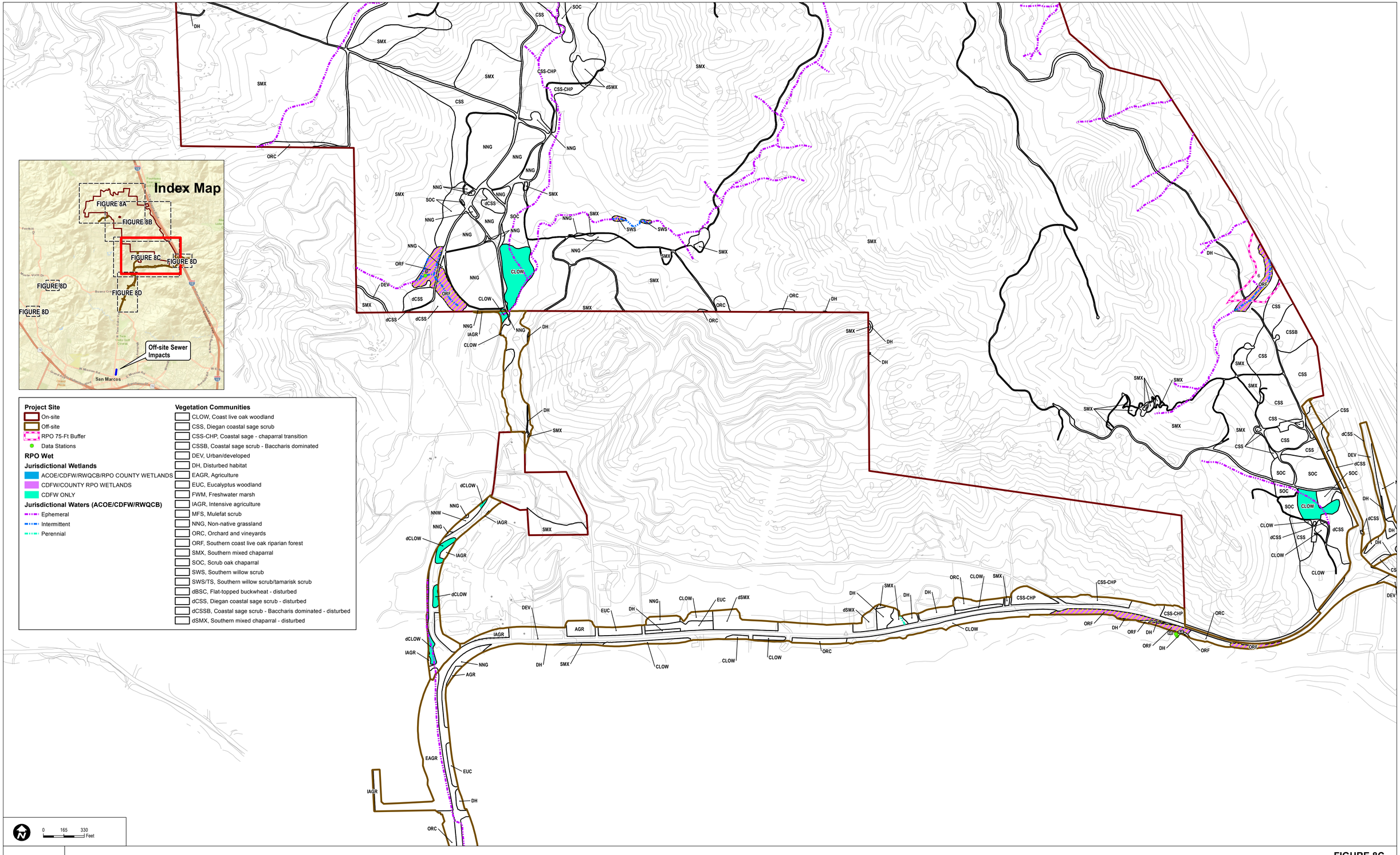
DUDEK

7608-01

FIGURE 8B
Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: Fuscoe Engineering 2016; CA Department of Conservation 2011

FIGURE 8C

Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

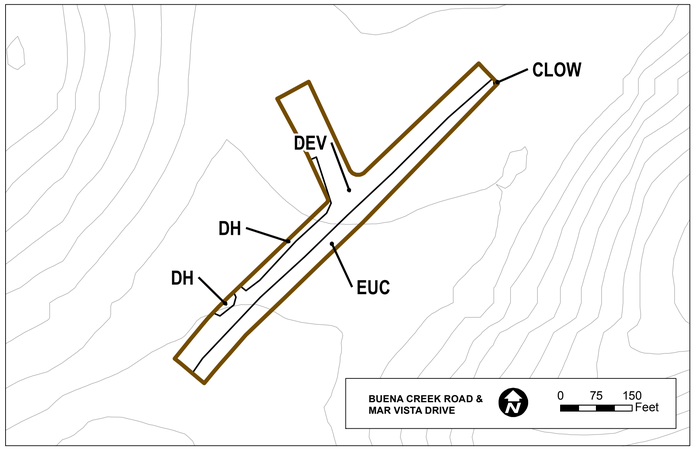
INTENTIONALLY LEFT BLANK

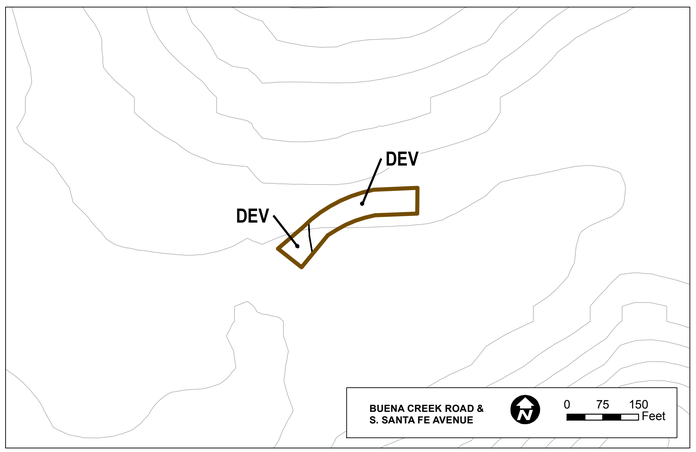
Project Site
- On-site
- Off-site
- RPO Wetlands

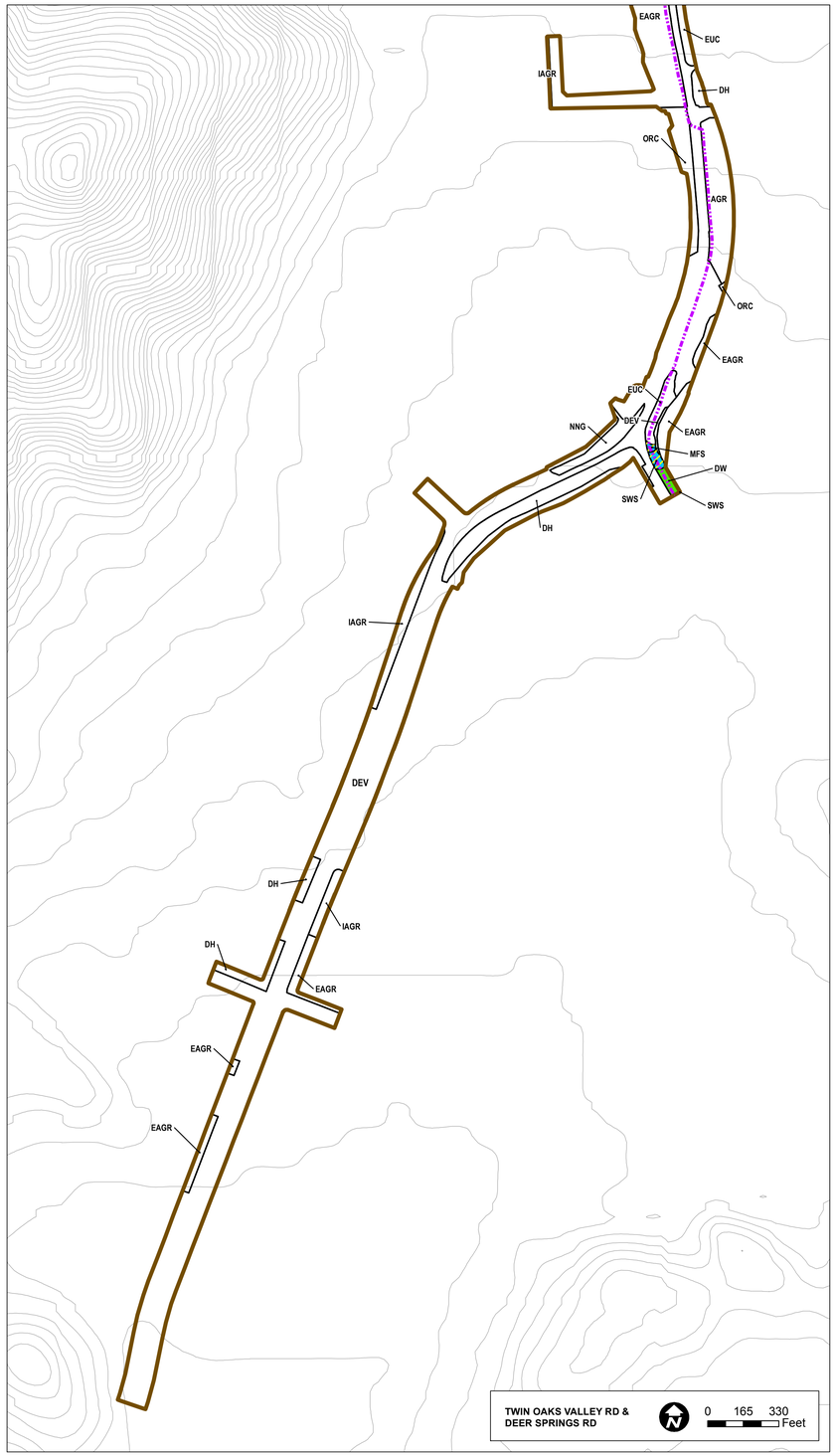
Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- ACOE/CDFW/RWQCB WETLANDS
- CDFW ONLY

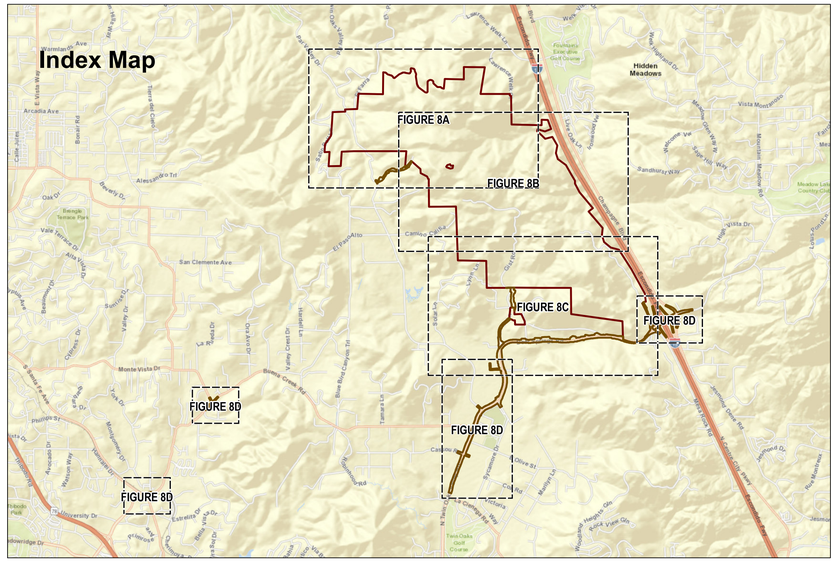
Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial

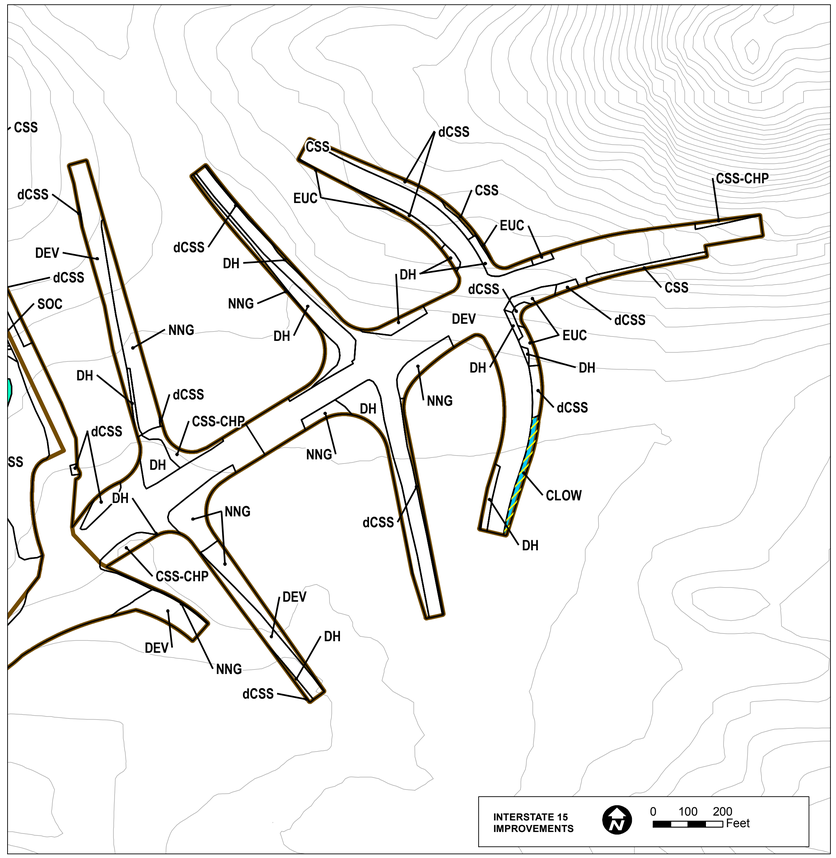
Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed











DUDEK

7608-01

SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016

FIGURE 8D
Jurisdictionall Resources

INTENTIONALLY LEFT BLANK

100-Ft Buffer Of 30-Ft Sewer Easement

Proposed Sewer Line

Vegetation Mapping

Jurisdictional Wetlands

ACOE/CDFW/RWQCB WETLANDS

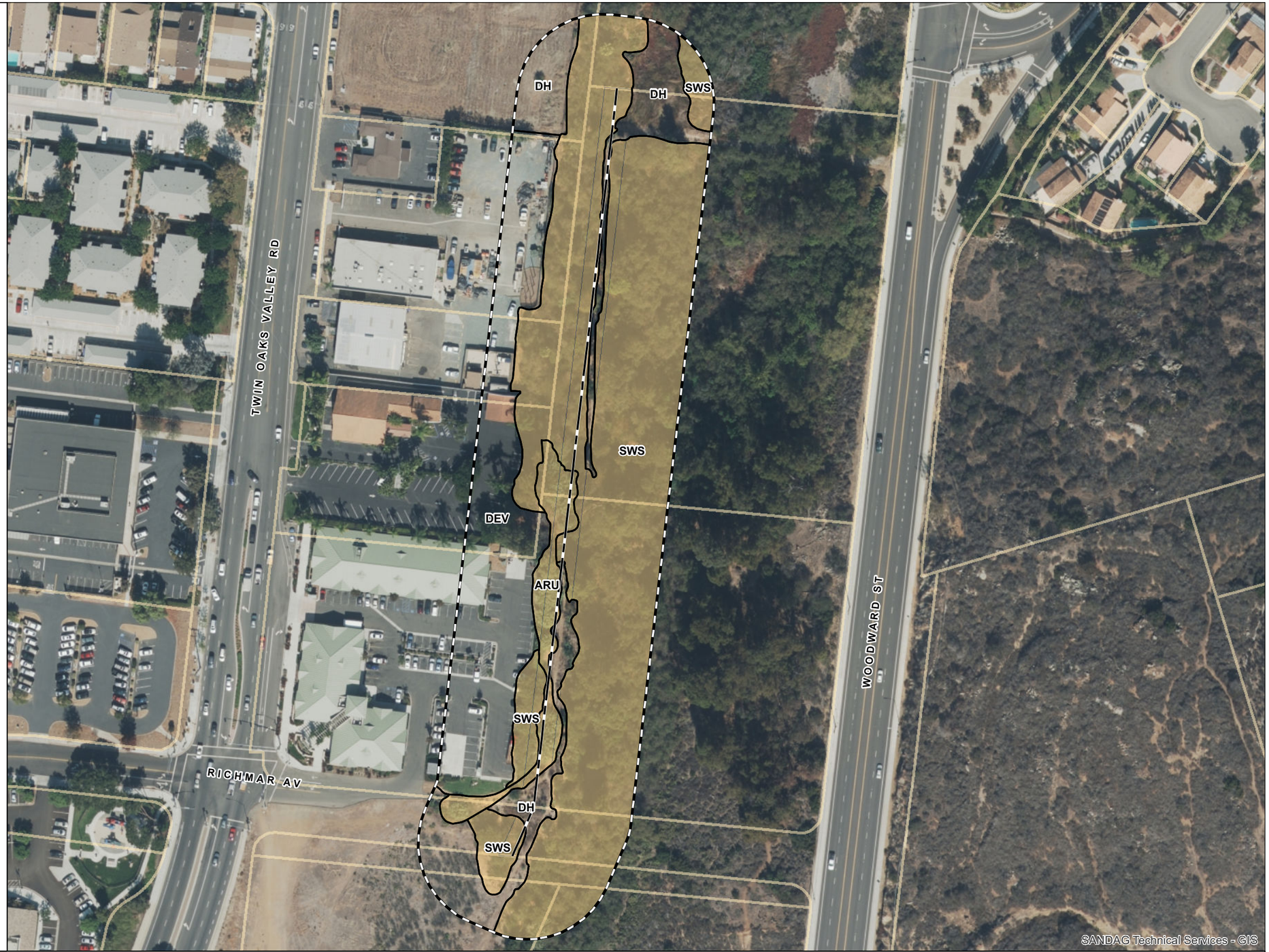
Vegetation Communities/Land Covers

ARU, Arundo Dominated Riparian

DEV, Urban Developed Ornamental

DH, Disturbed Habitat

SWS, Southern Willow Scrub



N 0 60 120 Feet

SOURCE: AERIAL-SANDAG IMAGERY 2014

DUDEK

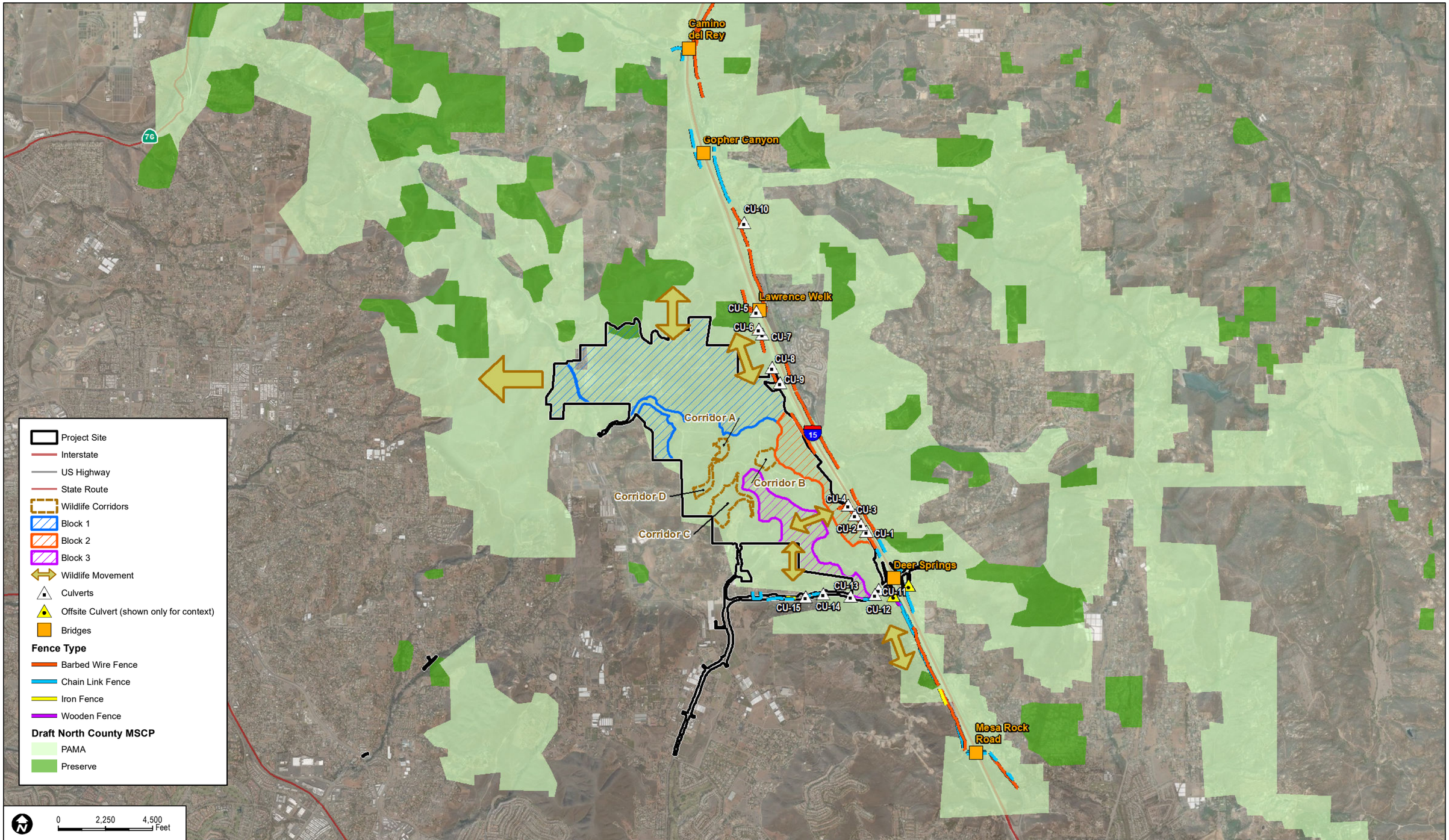
FIGURE 8E

Jurisdictional Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

Biological Resources Technical Report for the Newland Sierra Project

Date: 6/14/2018 - Last saved by: tterry - Path: Z:\Projects\j7608001\MAPDOC\MAPS\Tech Reports\BiologicalResourcesReport\Figure8E_JD_Offsite_Sewer TOVRd.mxd

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: Bing 2016; County of San Diego 2014

FIGURE 9

Wildlife Connectivity

INTENTIONALLY LEFT BLANK

2 PROJECT EFFECTS

2.1 Definition of Impacts

This section defines the types of impacts considered in this report to analyze the potential effects of the proposed project on biological resources. The proposed project is shown in Figure 10, Proposed Uses. These impacts are discussed in more detail as follows.

Direct impacts were quantified by overlaying the anticipated limits of grading on the biological resources and quantifying impacts. For purposes of this report, direct permanent impacts refer to the areas where the development, roads, and FMZs are proposed. Direct temporary impacts refer to the areas where grading and temporary construction areas are proposed within the open space; these areas would be restored and thus are considered temporary. Direct impacts were quantified by overlaying the proposed impacts on GIS-located biological resources.

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the proposed development, roads, and FMZ. Indirect impacts may affect areas within the defined project Site but outside the limits of grading, non-impacted areas, and areas outside the project Site, such as downstream effects. Indirect impacts include short-term effects immediately related to construction activities and long-term or chronic effects related to trail use and development of the project Site. In most cases, indirect effects are not quantified, but in some cases quantification might be included, such as using a noise contour to quantify indirect impacts to nesting birds.

Cumulative impacts refer to the combined environmental effects of the proposed project and other relevant projects. In some cases, the impact from a single project may not be significant, but when combined with other projects, the cumulative impact may be significant.

2.2 Vegetation Communities/Land Covers

2.2.1 Direct Impacts to Vegetation Communities/Land Covers

2.2.1.1 Temporary Direct Impacts

Impact V-1: Temporary Direct Impacts to Special-Status Vegetation Communities

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities, including temporary grading and temporary construction areas within the open space areas (Figures 11A–11E, Impacts to Biological Resources). These areas would be restored according the revegetation plan and would not be subject to repeated disturbance (see Appendix J). On-site temporary impacts are quantified in Table 2-1. As described in Section 1.2.2, the Deer Springs Road improvements includes an Option A and an Option B; Table 2-2

includes the off-site temporary impacts for the Deer Springs Road Option A and Option B; and Table 2-3 includes the additional off-site road improvements.

Table 2-1
On-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/Land Cover Type	Temporary Impacts (Acres)
Coastal Scrub	
Diegan coastal sage scrub*	2.6
Coastal sage – chaparral transition*	0.1
Subtotal	*2.7*
Chaparral	
Granitic southern mixed chaparral*	5.8-6.3[1]
Scrub oak chaparral*	<0.1
Subtotal	*5.8-6.3*
Non-native Communities and Land Covers	
Disturbed habitat	0.2
Total[2]	**8.7-9.2[1]**
Other	
RPO wetland buffers[3, 4]	<0.1

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 A portion of these temporary impacts are associated with the off-site Deer Springs Road Improvement and include 1.7 acres (Option A) or 2.2 acres (Option B).
2 Totals may not add due to rounding.
3 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.
4 This is an RPO resource and is described further in the RPP.

Table 2-2
Off-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types (Deer Springs Road)

General Vegetation Community/Land Cover Type	Temporary Impacts (Ac.)	
	Option A	*Option B*
Coastal Scrub		
Coastal sage – chaparral transition*	0.4	0.6
Chaparral		
Granitic southern mixed chaparral* (including disturbed)	0.5	0.7
Woodland		
Coast live oak woodland* (including disturbed)	1.0	1.1
Riparian		
Southern coast live oak riparian forest*	0.5	0.5
Disturbed wetland	0.1	0.1
Mulefat scrub	<0.01	<0.01
Southern willow scrub	0.04	0.04
Subtotal	*0.7*	*0.7*

Table 2-2
Off-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types (Deer Springs Road)

General Vegetation Community/Land Cover Type	Temporary Impacts (Ac.)	
	Option A	*Option B*
Non-native Communities and Land Covers		
Agriculture	0.6	0.6
Disturbed habitat	0.6	0.7
Eucalyptus	0.4	0.4
Non-native grassland*	0.4	0.5
Orchard and vineyards	0.7	0.8
Urban/developed	5.0	5.1
Intensive agriculture	0.6	0.6
Extensive agriculture	1.7	1.7
Subtotal	*10.1*	*10.5*
Total[1]	**12.8**	**13.6**
Other[2]		
RPO wetland buffers[2, 3]	1.4	1.4

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 Totals may not add due to rounding.
2 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.
3 This is an RPO resource and is described further in the RPP.

Table 2-3
Additional Off-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
Coastal Scrub								
Diegan coastal sage scrub (including disturbed)*	—	0.2	—	—	—	—	0.6	0.8
Coastal sage – chaparral transition*	—	—	—	—	—	—	0.2	0.2
Chaparral								
Granitic southern mixed chaparral* (including disturbed)	1.0	—	0.6	—	—	—	—	1.6
Woodland								
Coast live oak woodland (including disturbed)*	—	—	0.4	—	<0.01	—	0.1	0.5
Riparian								
Southern willow scrub*	<0.01	—	—	—	—	—	—	<0.01
Grassland								
Non-native grassland*	—	—	<0.01	—	—	—	0.8	0.8

Table 2-3
Additional Off-Site Temporary Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
Non-native Communities and Land Covers								
Intensive agriculture	—	—	0.3	—	—	—	—	0.3
Extensive agriculture	—	—	<0.1	—	—	—	—	<0.01
Eucalyptus woodland	—	—	—	—	0.3		0.1	0.4
Orchard and vineyards	0.1	—	—	—	—	—	—	0.1
Urban/developed	0.2	0.3	0.4	—	0.3	<0.1	1.7	2.9
Disturbed habitat	0.2	—	0.1	—	0.1	—	0.6	1.1
Non-native woodland	—	—	0.1	—	—	—	—	0.1
Subtotal	0.5	0.3	1.0	—	—	—	2.4	4.9
Total [1]	1.5	0.5	2.0	—	0.7	<0.1	4.1	8.8
Other								
RPO wetland buffers[2, 3]	0.2	—	<0.01	—	0.3	—	0.3	0.7

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 Totals may not add due to rounding.
2 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.
3 This is an RPO resource and is described further in the RPP.

In addition, clearing, trampling, or grading of vegetation outside designated construction zones could occur and be significant. These potential effects could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.2.1.2 Permanent Direct Impacts

Impact V-2: Permanent Direct Impacts to Special-Status Vegetation Communities

Long-term or permanent direct impacts to vegetation communities were quantified by comparing the impact footprint with the boundaries of the vegetation communities mapped in the project Site. Direct impacts to vegetation communities would occur as a result of grading activities, construction of the proposed project (including roads, residential units, commercial space, school, and parks), and FMZs (Figures 11A–11E). Table 2-4 shows the acreage of permanent direct impacts to vegetation communities in the project Site as a result of these activities. Table 2-5 includes the off-site permanent direct impacts for the Deer Springs Road Option A and Option B. Table 2-6 includes the additional off-site permanent direct impacts. The significance

determination for these impacts is determined through application of the County Significance Guidelines described in Section 4.

Table 2-4
On-Site Permanent Direct Impacts to Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Existing Acres	Development/ Access Roads	FMZs	Total Impacts
Coastal Scrub				
Diegan coastal sage scrub (including disturbed) *	68.2	18.1	27.5	45.6
Coastal sage scrub – Baccharis dominated (including disturbed)	2.0	0.2	1.4	1.5
Flat-topped buckwheat – disturbed*	1.7	—	—	0
Coastal sage – chaparral transition*	7.8	5.0	2.4	7.4
Subtotal	*79.7*	*23.2*	*31.4*	*54.5*
Chaparral				
Granitic southern mixed chaparral* (including disturbed)	1,700.7	307.3	319.6	626.9
Mafic southern mixed chaparral*	58.8	0.8	—	0.8
Scrub oak chaparral*	44.3	33.4	5.8	39.2
Subtotal	*1,803.8*	*341.5*	*325.4*	*666.9*
Woodland				
Coast live oak woodland *	9.1	5.9	0.6	6.5
Riparian[1]				
Freshwater marsh*	0.1	—	—	—
Southern coast live oak riparian forest*	5.2	—	1.9	1.9
Mulefat scrub*	0.2	<0.1	0.1	0.1
Southern willow scrub*	2.5	0.1	—	0.1
Southern willow scrub/tamarisk scrub*	0.3	—	—	—
Subtotal	*8.3*	*0.1*	*2.0*	*2.1*
Grassland				
Non-native grassland*	16.1	12.5	2.8	15.3
Non-native Communities and Land Covers				
Eucalyptus woodland	0.5	—	—	—
Intensive agriculture	<0.0	—	<0.1	<0.0
Orchard and vineyards	2.0	<0.1	0.9	1.0
Urban/developed	9.2	9.1	0.1	9.2
Disturbed habitat	57.0	14.2	6.8	21.0
Subtotal	*68.7*	*23.3*	*7.8*	*31.1*
Total[2]	**1,985.6**	**406.6**	**369.9**	**776.6**
Other				
RPO wetland buffers[3]	30.2	4.4	4.3	8.7

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 These are an RPO resource and are described further in the RPP.
2 Totals may not add due to rounding.
3 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.

Table 2-5
Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types (Deer Springs Road)

General Vegetation Community/Land Cover Type	Option A	Option B
Coastal Scrub		
Coastal sage – chaparral transition*	1.3	1.6
Chaparral		
Granitic southern mixed chaparral* (including disturbed)	1.2	1.8
Woodland		
Coast live oak woodland *	2.1	2.2
Riparian		
Southern coast live oak riparian forest*	0.8	0.8
Mulefat scrub	0.03	0.03
Southern willow scrub	0.1	0.1
Subtotal	*0.9*	*0.9*
Grassland		
Non-native grassland*	1.1	1.5
Non-native Communities and Land Covers		
Agriculture	1.9	2.0
Disturbed habitat	2.9	3.2
Eucalyptus woodland	1.3	1.6
Orchard and vineyards	1.3	1.3
Urban/developed	28.2	28.8
Intensive agriculture	0.9	0.9
Extensive agriculture	4.4	4.4
Subtotal	*40.9*	*42.2*
Total [1]	**47.5**	**50.2**
Other		
RPO wetland buffers[2, 3]	3.7	3.7

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 Totals may not add due to rounding.
2 This is an RPO resource and is described further in Section 4.2.5 and the RPP.
3 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.

Table 2-6
Additional Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
Coastal Scrub								
Diegan coastal sage scrub (including disturbed)*	—	0.3	—	—	—	—	0.2	0.5

Table 2-6
Additional Off-Site Permanent Direct Impacts to
Vegetation Communities and Land Cover Types

General Vegetation Community/ Land Cover Type	Camino Mayor	Mesa Rock Road	Sarver Lane	Sewer Improvements	Mar Vista	South Santa Fe	I-15 Interchange	Total Additional Off-Site
Coastal sage – chaparral transition*	—	—	—	—	—	—	0.1	0.1
Chaparral								
Granitic southern mixed chaparral* (including disturbed)	1.9	—	2.6	—	—	—	—	4.5
Woodland								
Coast live oak woodland (including disturbed)*	—	—	0.6	—	—	—	<0.1	0.6
Riparian								
Southern willow scrub*	0.1	—	—	0.3	—	—	—	0.4
Arundo-dominated riparian	—	—	—	0.1	—	—	—	0.1
Grassland								
Non-native grassland*	—	—	<0.1	—	—	—	1.0	1.1
Non-native Communities and Land Covers								
Intensive agriculture	—	—	0.5	—	—	—	—	0.5
Extensive agriculture	—	—	0.1	—	—	—	—	0.1
Eucalyptus woodland	—	—	—	—	0.3	—	0.1	0.4
Orchard and vineyards	0.6	—	—	—	—	—	—	0.6
Urban/developed	0.2	1.6	1.8		0.8	0.3	7.2	12.0
Disturbed habitat	0.6	—	0.3	0.2	<0.1		1.0	1.9
Non-native woodland	—	—	0.2	—	—	—	—	0.2
Subtotal	1.4	1.6	2.9	0.2	1.1	0.3	8.4	15.7
Total [1]	3.4	1.9	6.0	0.6	1.1	0.3	9.8	23
Other								
RPO wetland buffers[2, 3]	0.3	--	--	--	0.2	--	0.6	1.1

* Vegetation community is considered special-status by the County and requires mitigation (County of San Diego 2010a).
1 Totals may not add due to rounding.
2 This is an RPO resource and is described further in Section 4.2.5 and the RPP.
3 The RPO wetland buffers (75-foot buffer) are an overlay and not counted toward the overall acreage.

2.2.2 Indirect Impacts to Vegetation Communities

2.2.2.1 Temporary Indirect Impacts

Impact V-5: Temporary Indirect Impacts to Special-Status Vegetation Communities

Potential short-term or temporary indirect impacts to special-status vegetation communities in the project Site would primarily result from construction activities and include impacts related to

or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the special-status vegetation communities that occur within the project Site are described in detail below.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns in streams, which may affect adjacent and downstream vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into vegetation communities. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status vegetation communities. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. No herbicides would be used during construction.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.2.2.2 Permanent Indirect Impacts

Impact V-6: Permanent Indirect Impacts to Special-Status Vegetation Communities

Long-term or permanent indirect impacts could result from the proximity of the proposed project to special-status vegetation communities after construction (e.g., maintenance of roads, residential units, commercial space, school, and parks). Permanent indirect impacts that could affect special-status vegetation communities include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on special-status vegetation communities would be the same as the temporary indirect impacts described in Section 2.2.2.1.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although these effects are more readily observable in wildlife, there are potential ecological effects, such as changes in pollinator populations, which can result in altered plant community composition and thus adversely affect special-status vegetation communities.

Chemical Pollutants. The effects of chemical pollutants on special-status vegetation communities would be the same as the temporary indirect impacts described in Section 2.2.2.1. Landscaping activities may use herbicides to prevent vegetation from reoccurring around roads, residential units, commercial space, school, and parks. However, weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the San Diego County agriculture commissioner. Additionally, the herbicides used during landscaping activities would be contained within the proposed impact footprint.

Altered Hydrology. As described in Section 1.2, the proposed project includes well-designed stormwater facilities. For purposes of analyzing potential indirect impacts associated with hydrology, urban run-off associated with landscaping and irrigation are described here. Water would be used for landscaping purposes within residential units and maintained shared spaces (e.g., parks). These sources may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status vegetation communities. Altered hydrology can allow for the establishment of non-native plants and/or invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators (see Non-Native, Invasive Plant and Animal Species.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and unique vegetation communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within special-status vegetation communities.

As stated under Altered Hydrology, human-mediated increases in soil moisture is one of the primary causes of Argentine ant invasions into natural habitats that border development and agricultural uses. Invasive ants, including Argentine ants, may significantly disrupt the natural ecosystems within their introduced range. Argentine ants may become abundant within their introduced range and may drive out or kill native ants of a newly invaded territory (Holway et al. 2002; Suarez et al. 1998). This displacement of native ants is the most obvious and widely reported effect of non-native ants and may cause as high as 90 percent or more reduction of native ant abundance (Holway et al. 2002). The displaced ants often are ecologically similar to the invasive ants (e.g., occupy similar ecological niches, use same food resources), but displaced ants may also be ecologically different (e.g., use different food sources), such as harvester ant species that are displaced by Argentine ants in California (Holway et al. 2002a).

Argentine ant encroachments and invasions of natural upland vegetation such as sage scrub, chaparral and non-native grassland are dynamic and influenced by various abiotic and biotic variables, including moisture, plants, soil conditions, and patch size. However, the Staubus et al. (2015), Menke and Holway (2006), Bolger (2007), and Bodeman (2014) studies all suggest that maintaining xeric conditions in natural upland habitats can effectively control serious encroachments and invasions by Argentine ants. As recommended in several of the studies (Bolger 2007; Bodeman 2014; Menke and Holway 2006; Staubus et al. 2015), management efforts should address source populations at urban edges, and regulate water and moisture conditions at edges with natural areas.

Potential impacts would be reduced by design features, including bioretention swales and bioretention basins that have been integrated into the proposed project design, along with additional LID features such as roadside swales. To eliminate potential flooding impacts during peak storm events, stormwater detention would be provided prior to runoff exiting the project Site. Drainage improvements would also be constructed for the off-site road improvements. In addition, the structure of the FMZ for the proposed project, which includes an extra 150 feet of fuel modification above and beyond the typical 100 feet, would provide for buffers from development and the proposed biological open space preserve. Within Zone 1 of the FMZ, which extends 100 feet from structures, all flammable native vegetation shall be removed except for species approved by the Deer Springs Fire Protection District (see Appendix N of EIR). This zone would be planted with drought-tolerant, fire-resistive plants from San Diego County Fire Chief's Association Fuel Modification Zone Plant Reference List, and an automatic irrigation system would be installed in this area to maintain hydrated plants without over-watering and creating run-off. However, overwatering of landscaping within development could extend into this zone. Therefore, the additional 150 feet of FMZ, which would not include any irrigation, would be a "xeric zone" between development and preserve.

Increased Human Activity. The Site is currently subject to illegal/unauthorized activity, including hiking, biking, off-road vehicle activity, parties, trash dumping, homeless activities, and camping. With the development and associated open space preserve, all of these activities except the biking and hiking would cease and the hiking/biking would be managed and kept to select trails. The other trails would be closed and new trail creation (which currently occurs) would stop. Therefore, the proposed development is expected to lead to a decrease in human activity on the project Site.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction within developed neighborhoods or inadvertent/intentional ignitions within or adjacent to open space. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and in some cases, result in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.3 Special-Status Plant Species

2.3.1 Direct Impacts to Special-Status Plant Species

2.3.1.1 Temporary Direct Impacts

Impact SP-1: Temporary Direct Impacts to Special-Status Plant Species

Short-term, construction-related, or temporary direct impacts to special-status plants would primarily result from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones could occur and be significant. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. There would also be temporary direct impacts to special-status plant species at the edge of the development/open space interface (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3). Special-status plant species on Site at the edge of the development/open space interface could be impacted by potential temporary direct impacts such as those previously listed. These areas

would be restored according the revegetation plan and would not be subject to repeated disturbance (see Appendix J).

The significance determination for these potential impacts is determined through application of the County Significance Guidelines as described in Section 3.1.

2.3.1.2 Permanent Direct Impacts

Impact SP-2: Permanent Direct Impacts to Special-Status Plant Species

Long-term or permanent direct impacts to special-status plant species were quantified by comparing the impact footprint with the occurrence data for each special-status plant species. Table 2-7 includes each species' County status, CRPR, estimates of the number of individuals on Site, and an assessment of permanent direct impacts based on the number of individual plants located within the impact footprint, and the estimated percentage of occurrences impacted on Site.

Table 2-7
Summary of Direct Impacts to Special-Status Plant Species

Species	CRPR	Approximate Number of Individuals within Project Site	Approximate Number of Individuals within On-Site Development Footprint	Estimated Percentage of Occurrences Impacted On Site
County List A				
Brodiaea orcuttii Orcutt's brodiaea	1B.1	50	0	0%
Comarostaphylis diversifolia ssp. *diversifolia* Summer holly	1B.2	1,356	196[1]	14%
Horkelia truncata Ramona horkelia	1B.3	62	62	100%
County List B				
Salvia munzii Munz's Sage	2.3	4	0	0%
County List D				
Piperia cooperi Chaparral rein orchid	4.2	5	5	100%
Quercus engelmannii Engelmann oak	4.2	28	18	64%
Selaginella cinerascens Ashy spike-moss	4.1	3	1	33%

[1] This total includes one individual plant which are located within a temporary 15-foot construction area. Although vegetation within this area would be restored and therefore impacts are considered temporary, impacts to special-status plants within the area are considered permanent.

2.3.2 Indirect Impacts to Special-Status Plant Species

2.3.2.1 Temporary Indirect Impacts

Impact SP-3: Temporary Indirect Impacts to Special-Status Plant Species

Potential short-term or temporary indirect impacts to special-status plant species in the project Site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all special-status plant species that occur on the project Site are described in detail as follows.

Generation of Fugitive Dust. Excessive dust can decrease the vigor and productivity of special-status plants through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns in streams and rivers and dewatering, which may affect adjacent and downstream aquatic, wetland, and riparian vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation and increase runoff from roads and other paved surfaces, resulting in increased erosion and transport of surface matter into special-status plant occurrences. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect special-status plant species. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants. No herbicides would be used during construction.

All special-status plant species on Site, but especially those at the edge of the preserve/ development interface, could be impacted by potential temporary indirect impacts such as those previously listed. The significance determination for these impacts is determined through application of the County Significance Guidelines described in Section 3.

2.3.2.2 Permanent Indirect Impacts

Impact SP-4: Permanent Indirect Impacts to Special-Status Plant Species

Permanent indirect impacts could result from the proximity of the proposed project to special-status plants after construction. Permanent indirect impacts that could affect special-status plant species include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, and alteration of the natural fire regime. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on special-status plants are described in Section 2.3.2.1.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes; and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986).

Chemical Pollutants. The effects of chemical pollutants on special-status plants are described in Section 2.3.2.1.

Altered Hydrology. As described in Section 1.2, the proposed project includes well-designed stormwater facilities. For purposes of analyzing potential indirect impacts associated with hydrology, urban run-off associated with landscaping and irrigation are described here. Water would be used for landscaping purposes within residential units and maintained shared spaces (e.g., parks). These sources may alter the on-site hydrologic regime. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that could be seed dispersers or plant pollinators (see Section 2.2.2.2). Potential impacts would be reduced by design features, including bioretention swales and bioretention basins that have been integrated into the project design, along with additional LID features such as roadside swales. To eliminate potential flooding impacts during peak storm events, stormwater detention would be provided prior to runoff exiting the project Site. Drainage improvements would also be constructed for the off-site road improvements.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients, and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species

may alter habitats and displace native species over time, leading to extirpation of native plant species. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for special-status plant species.

Increased Human Activity. The proposed project includes the development of seven neighborhoods, recreational facilities (e.g., parks), and designated open space. The Site is currently subject to illegal/unauthorized activity, including hiking, biking, off-road vehicle activity, parties, trash dumping, homeless activities, and camping. With the development and associated open space preserve, all of these activities except the biking and hiking would cease and the hiking/biking would be managed and kept to select trails. The other trails would be closed and new trail creation (which currently occurs) would stop. Therefore, the proposed development is expected to lead to a decrease in human activity on the project Site.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction within developed neighborhoods or inadvertent/intentional ignitions within or adjacent to open space. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and result, in some cases, in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation.

Special-status plant species on Site, but especially those at the edge of the preserve/development interface, could be impacted by permanent direct impacts such as those previously listed. The significance determination for these potential impacts is determined through application of the County Significance Guidelines as described in Section 3.

2.4 Sensitive Wildlife Species

2.4.1 Direct Impacts to Special-Status Wildlife Species

2.4.1.1 Temporary Direct Impacts

Impact W-1: Temporary Direct Impacts to Special-Status Wildlife

Short-term, construction-related, or temporary direct impacts to special-status wildlife species would primarily result from construction activities, including temporary grading and temporary construction areas within the open space areas (Figures 11A–11E). These areas would be restored

according the revegetation plan and would not be subject to repeated disturbance (see Appendix J). Clearing, trampling, or grading of vegetation communities outside designated construction zones could occur and be significant. These potential effects could reduce suitable habitat for wildlife species and alter their ecosystem, thus creating gaps in vegetation that allow exotic, non-native plant species to become established. Potential temporary direct impacts to suitable habitat for special-status wildlife species on Site would be significant (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

2.4.1.2 Permanent Direct Impacts

Impact W-2: Permanent Direct Impacts to Special-Status Wildlife

Long-term or permanent direct impacts to special-status wildlife species were quantified by comparing the impact footprint with suitable habitat for wildlife species. The significance determination for these potential impacts is described in Section 3. These impacts are quantified in Table 2-8. Table 2-9 includes the off-site permanent direct impacts to suitable wildlife habitat for the Deer Springs Road Option A and Option B and other off-site roads.

Table 2-8
On-Site Direct Permanent Impacts to Observed County Group 1 Species and/or State SSC Species (acres)

	Species	Existing Suitable Habitat (acres)	Permanent Impacts to Suitable Habitat (acres)	Percent of Suitable Habitat Impacted
Reptiles	Coastal whiptail	1,965.7	764.2	39%
	Red-diamond rattlesnake	1,965.7	764.2	39%
	Blainville's horned lizard	1,965.7	764.2	39%
	Coast patch-nosed snake	1,953.3	763.3	39%
	Bell's sage sparrow	1,869.3	720.6	39%
Birds	Coastal California gnatcatcher	79.7	54.5	68%
	Cooper's hawk – nesting	59.0	47.5	81%
	Cooper's hawk – foraging	1,976.4	767.3	39%
	Red shouldered hawk – nesting	59.0	47.5	81%
	Red shouldered hawk – foraging	1,976.4	767.3	39%
	Sharp-shinned hawk – foraging	1,976.4	767.3	39%
	Turkey vulture – foraging	1,976.4	767.3	39%
	Northern harrier – foraging	76.1	36.5	48%
	Yellow warbler	8.2	2.1	26%
	Northwestern San Diego pocket mouse	1,944.2	756.9	39%
Mammals	San Diego desert woodrat	1,937.2	748.1	39%

Table 2-9
Off-Site Direct Permanent Impacts to Observed County Group 1 Species and/or State SSC Species (acres)

	Species	Deer Springs Road– Option A (acres)	Deer Springs Road– Option B (acres)	Camino Mayor (acres)	Mesa Rock Road (acres)	Sarver Lane (acres)	Sewer (acres)	I-15 Interchange (acres)	Mar Vista (acres)
Reptiles	Coastal whiptail	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
	Blainville's horned lizard	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
	Coast patch-nosed snake	7.6	8.6	2.5	0.3	2.9	0.2	2.5	0.01
	Red-diamond rattlesnake	8.6	10.0	2.5	0.3	2.9	0.2	2.5	0.01
Birds	Bell's sage sparrow	1.5	1.9	1.9	0.3	2.6	--	0.4	--
	Coastal California gnatcatcher	1.3	1.6	--	0.3	--	--	0.4	--
	Cooper's hawk – nesting	4.3	4.6	--	--	0.1	--	0.1	0.3
	Cooper's hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Red shouldered hawk – nesting	4.3	4.6	--	--	0.1	--	0.1	0.3
	Red shouldered hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Sharp-shinned hawk – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Turkey vulture – foraging	12.1	14.0	3.2	0.3	2.9	0.5	2.6	0.3
	Northern harrier – foraging	4.1	4.6	0.6	--	0.3	0.5	2.0	0.01
	Yellow warbler	0.9	0.9	0.1	--	--	0.3	--	--
Mammals	Northwestern San Diego pocket mouse	5.5	6.4	2.5	0.3	2.8	0.2	2.4	0.01
	San Diego desert woodrat	6.5	7.3	2.5	0.3	2.9	0.2	1.4	0.01

2.4.1.2.1 County Group I and/or SSC Species

The information provided in this section discusses the potential effects for County Group 1 and/or SSC species observed within the project Site. More detailed information about

observation of the species or its potential to occur within the proposed project Site, suitable habitat, and range is provided in Section 1.4.6.2.

Reptiles

Coastal Whiptail (*Aspidoscelis tigris stejnegeri*) – SSC/ Group II

Coastal whiptail was only observed at only location; however, the majority of the Site is considered suitable habitat for this species. There would be direct impacts to suitable habitat for this species (Tables 2-8 and 2-9). Reptiles are low-mobility or sedentary species, and direct impacts to these species could occur as a result of the grading activities and activities within the FMZ. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Blainville's Horned Lizard (*Phrynosoma blainvillei*) – SSC/ Group II

Blainville's horned lizard was detected through direct observation and through species signs within the project Site. The majority of the Site is considered suitable habitat for this species. There would be direct impacts to suitable habitat for this species (Tables 2-8 and 2-9). Reptiles are low-mobility or sedentary species, and direct impacts to these species could occur as a result of the grading activities and activities within the FMZ. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Coast Patch-Nosed Snake (*Salvadora hexalepis virgultea*) – SSC/ Group II

Coast patch-nosed snake was only observed at one location; however, the majority of the Site is considered suitable habitat for this species. There would be direct impacts to suitable habitat for this species (Tables 2-8 and 2-9). Reptiles are low-mobility or sedentary species, and direct impacts to these species could occur as a result of the grading activities and activities within the FMZ. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Red-Diamond Rattlesnake (*Crotalus ruber*) – SSC/ Group II

Red-diamond rattlesnake was only observed on one occasion in 2007; however, the majority of the Site is considered suitable habitat for this species. There would be direct impacts to suitable habitat for this species (Tables 2-8 and 2-9). Reptiles are low-mobility or sedentary species, and direct impacts to these species could occur as a result of the grading activities and activities within the FMZ. This would be a significant impact absent mitigation (the significance of the

impact is determined through application of the County Significance Guidelines described in Section 3).

Birds

Bell's Sparrow (*Artemisiospiza bellii*) – BCC/CDFW WL/Group I

Bell's sparrow was observed on Site during biological surveys and has the potential to use the project Site for foraging. There would direct impacts to both suitable nesting and foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young if present during vegetation clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Cooper's Hawk (*Accipiter cooperii*) – CDFW WL/Group I

Cooper's hawk was observed on Site during biological surveys and has the potential to use the project Site for both nesting and foraging. There would direct impacts to both suitable nesting and foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Sharp-Shinned Hawk (*Accipiter striatus*) – CDFW WL/Group I

Sharp-shinned hawk was observed on Site during biological surveys and has the potential to use the project Site for foraging. There would direct impacts to suitable foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Impacts to foraging habitat would be significant absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Since sharp-shinned hawks do not breed within Southern California, there would be no loss of individual birds as a result of construction-related impacts.

Red-Shouldered Hawk (*Buteo lineatus*) – Group I

Red-shouldered hawk was observed on Site during biological surveys and has the potential to use the project Site for both nesting and foraging. There would direct impacts to both suitable nesting and foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities.

This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Turkey Vulture (*Cathartes aura*) – Group I

Turkey vulture was observed on Site during biological surveys and has the potential to use the project Site for foraging. There would be direct impacts to suitable foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Northern Harrier (*Circus cyaneus*) – SSC/ Group 1

Northern harrier has the potential to use the Site for foraging purposes only. There would be direct impacts to suitable foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Coastal California Gnatcatcher (*Polioptila californica californica*) – Federally Threatened/ SSC/ Group I

The coastal California gnatcatcher was detected on Site during biological surveys and has the potential to use the project Site for both nesting and foraging. There would direct impacts to both suitable nesting and foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Yellow Warbler (*Setophaga [Dendroica] petechia brewsteri*) – BCC/SSC/ Group II

Yellow warbler was observed within riparian habitat during focused surveys. There would direct impacts to both suitable nesting and foraging habitat as a result of the proposed project (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active nests and/or young during vegetation clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Mammals

San Diego Desert Woodrat (*Neotoma lepida intermedia*) – SSC/ Group II

Sign of this species (i.e., middens) were detected throughout the Site in 2007 (PSBS 2007) and in 2013, but the majority of the middens were not mapped. There would be direct impacts to suitable habitat for this species (Tables 2-8 and 2-9). Construction-related impacts could result in the loss of active middens and/or young during vegetation-clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*) – SSC/ Group II

Although northwestern San Diego pocket mouse was not observed, this species has a high potential to occur within the project Site due to the presence of suitable habitat. Construction-related impacts could result in the loss of active breeding areas and/or young during vegetation-clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

2.4.1.2.2 County Group II Species

County Group II species that have been observed in the project Site, or have high potential to occur, are described as follows.

Special-Status Amphibians and Reptiles

San Diego ringneck snake, Belding's orange-throated whiptail, and Coronado skink were observed in the project Site. Coastal whiptail, red-diamond rattlesnake, coast patch-nosed snake, and Blainville's horned lizard are County Group II species which were observed on Site or have a high potential to occur; however, since they are also SSC species, they are discussed in the Section 2.4.1.2.1. Amphibians and reptiles are low-mobility or sedentary species, and direct impacts to these species could occur as a result of the grading activities and activities within the fire buffer. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Special-Status Birds

Two County Group II species, western bluebird and yellow warbler were observed within the project Site. A third Group II species, the barn owl, was not observed but has a high potential to occur within the project Site due to the presence of suitable habitat. There would be direct impacts to suitable habitat for these species. Construction-related impacts could result in the loss

of active nests and/or young during vegetation-clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Special-Status Mammals

San Diego desert woodrat and mule deer are County Group II species and both were observed within the project Site. A third Group II species, the northwestern San Diego pocket mouse, was not observed but has a high potential to occur within the project Site due to the presence of suitable habitat. Since both San Diego desert woodrat and northwestern San Diego pocket mouse are both SSC species, they are discussed in Section 2.4.1.2.1. There would be direct impacts to suitable habitat for mule deer. Construction-related impacts could impact breeding activities or result in the loss of young during vegetation-clearing activities. This would be a significant impact absent mitigation (the significance of the impact is determined through application of the County Significance Guidelines described in Section 3).

Invertebrates

The monarch butterfly was observed in the project Site during biological surveys. There would be no impacts to eucalyptus woodland on Site, and minor impacts to eucalyptus woodlands associated with off-site road improvements. However, neither of these location would be considered potential wintering roosts, therefore no impacts to this species are expected to occur.

2.4.2 Indirect Impacts to Special-Status Wildlife Species

2.4.2.1 Temporary Indirect Impacts

Impact W-3: Temporary Indirect Impacts to Special-Status Wildlife

Short-term, construction-related, or temporary indirect impacts to avian foraging and wildlife access to foraging, nesting, or water resources would primarily result from construction activities. Potential temporary indirect impacts could occur as a result of generation of fugitive dust, noise during construction, chemical pollutants, increased human activity, and the introduction of invasive predators and non-native animal species.

Generation of Fugitive Dust. Dust and applications for fugitive dust control can impact vegetation surrounding the limits of grading, resulting in changes in the community structure and function. These changes could result in impacts to suitable habitat for special-status wildlife species.

Noise. Construction-related noise could occur from equipment used during vegetation clearing and construction of the proposed project. Noise impacts can have a variety of indirect impacts on wildlife species, including increased stress, weakened immune systems, altered foraging behavior, displacement due to startle, degraded communication with conspecifics (e.g., masking), damaged hearing from extremely loud noises, and increased vulnerability to predators (Lovich and Ennen 2011; Brattstrom and Bondello 1983, as cited in Lovich and Ennen 2011).

Chemical Pollutants. Accidental spills of hazardous chemicals could contaminate nearby surface waters and groundwater and indirectly impact wildlife species through poisoning or altering suitable habitat.

Increased Human Activity. Construction activities can deter wildlife from using habitat areas near the proposed project footprint and increase the potential for vehicle collisions.

Invasive Predators and Non-native Animal Species. Trash from construction-related activities could attract invasive predators such as ravens and coyotes that could impact the wildlife species in the project Site. Landscaping stock could bring in Argentinean ants or other pests that could compete with native wildlife.

All special-status wildlife species on Site could be impacted by potential temporary indirect impacts such as those previously listed. The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 3.

2.4.2.2 Permanent Indirect Impacts

Impact W-4: Permanent Indirect Impacts to Special-Status Wildlife

Potential long-term or permanent indirect impacts to special-status wildlife species include generation of fugitive dust; off-road vehicle use; non-native, invasive plant and animal species; habitat fragmentation; increased human activity; alteration of the natural fire regime; and altered hydrology.

Generation of Fugitive Dust. The effects of fugitive dust on special-status wildlife are described in Section 2.4.2.1.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States. Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open

areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and subsequently suitable habitat for special-status wildlife species. In addition, trash can attract invasive predators such as ravens and coyotes that could impact the wildlife species in the project Site. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that are known to could be seed dispersers and plant pollinators (see Section 2.2.2.2).

Habitat Fragmentation. The proposed project would impact approximately 776.6 acres of vegetation communities and land covers, resulting in potential habitat fragmentation within the Site. Habitat fragmentation can reduce diversity of species, spread invasive species, and reduce access to important habitats (Lovich and Ennen 2011). In addition, habitat fragmentation and isolation of wildlife populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes, and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although the project proposes impacts related to both Twin Oaks Valley Road and Deer Springs Road, these road improvements are not expected to result in habitat fragmentation. Wildlife are expected to cross Deer Springs Road and Twin Oaks Valley Road similar to current conditions because the open space configuration allows for continued movement to the south and west. Access to waters sources within the creek along Twin Oaks Valley Road would not be constrained by the development.

Increased Human Activity. The proposed project includes the development of seven neighborhoods, recreational facilities (e.g., parks), and designated open space. The Site is currently subject to illegal/unauthorized activity, including hiking, biking, off-road vehicle activity, parties, trash dumping, homeless activities, and camping. With the development and associated open space preserve, all of these activities except the biking and hiking would cease and the hiking/biking would be managed and kept to select trails. The other trails would be closed and new trail creation (which currently occurs) would stop. Therefore, the proposed development is expected to lead to a decrease in human activity on the project Site.

Alteration of the Natural Fire Regime. The proposed project could potentially increase the risk of fire, including but not limited to fire associated with electrical shorts or electrical equipment malfunction within developed neighborhoods or inadvertent/intentional ignitions within or adjacent to open space. Shorter-than-natural fire return intervals can preclude recovery of the native vegetation between fires, weaken the ecological system, allow for invasion of exotic species, and result, in some cases, in permanent transition of the vegetation to non-native communities, such as annual grassland and weedy communities (Malanson and O'Leary 1982; Keeley 1987; O'Leary et al. 1992). If the natural fire regime is suppressed, longer-than-natural

fire return intervals can result in excessive buildup of fuel loads so that when fires do occur, they are catastrophic. Unnaturally long fire intervals can also result in senescence of plant communities, such as chaparral, that rely on shorter intervals for rejuvenation. Alterations of plant communities could affect wildlife that relies on those habitat types.

Altered Hydrology. As described in Section 1.2, the proposed project includes well-designed stormwater facilities. For purposes of analyzing potential indirect impacts associated with hydrology, urban run-off associated with landscaping and irrigation are described here. Water would be used for landscaping purposes within residential units and maintained shared spaces (e.g., parks). These sources may alter the on-site hydrologic regime. These hydrologic alterations may affect special-status wildlife species. Altered hydrology can allow for the establishment of non-native plants and invasion by Argentine ants, which can compete with native ant species that are known to could be seed dispersers and plant pollinators. Changes in plant composition could affect the native vegetation communities and wildlife habitat. Potential impacts would be reduced by design features, including bioretention swales and bioretention basins that have been integrated into the project design, along with additional LID features such as roadside swales. To eliminate potential flooding impacts during peak storm events, stormwater detention would be provided prior to runoff exiting the project Site. Drainage improvements would also be constructed for the off-site road improvements.

Lighting. Urban development, recreational facilities, and general human activity (e.g., night-time light from vehicles, home security systems) would result in light pollution and possibly disrupt dark skies. Long-term lighting may deter nocturnal wildlife from traversing through developed areas and restrict movements to the northern open space facilities.

Noise. Increased human activity in the proposed project Site is expected to result in long-term noise effects in the area. Noise is expected to be greatest during daylight hours and therefore would be more of a disturbance to those species that are active during the daytime, as the noise levels are less at night. Nocturnal wildlife would not be significantly impacted while foraging, and moving in open space areas, particularly because there is a 250-foot FMZ area between development and open space areas. Noise pollution is not anticipated to decrease breeding of any special-status species.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 3.

2.5 Wetlands/Jurisdictional Waters

2.5.1 Direct Impacts to Wetlands/Jurisdictional Waters

2.5.1.1 Temporary Direct Impacts

Impact V-3: Temporary Direct Impacts to Jurisdictional Resources

Short-term, construction-related, or temporary direct impacts to jurisdictional riparian habitat, County RPO wetlands, and non-wetland waterways (i.e., jurisdictional resources) would primarily result from construction activities. Clearing, trampling, or grading of riparian vegetation or non-wetland waters outside designated construction zones could occur and be significant. These potential effects could damage individual plants and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. Potential temporary direct impacts to all jurisdictional resources on Site would be significant. There are no temporary impacts associated with on-site grading within the ACOE/RWQCB/CDFW/County wetlands, CDFW riparian habitat, or County RPO wetlands; there is 0.06 acre of impacts to ACOE/RWQCB/CDFW non-wetland waters associated with temporary grading. This impact would be restored (see Appendix J). There are temporary impacts associated with the 15-foot work area for the off-site improvement areas. These impacts are summarized in Table 2-10. Due to access constraints along Deer Springs Road, it is anticipated that all construction and staging would be contained within the 15-foot work area. In addition, tailboard meetings, orange construction fencing, and monitoring would occur to ensure that adjacent areas are not impacted.

Table 2-10
Temporary Off-Site Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road–Option A (acres)	Deer Springs Road–Option B (acres)	Camino Mayor (acres)	Sarver Lane (acres)	Mar Vista (acres)	I-15 Interchange (acres)
ACOE/RWQCB/CDFW						
Non-wetland waters (ephemeral and intermittent)	0.01	<0.01	0.01	0.04	—	—
Disturbed wetland	0.14	0.14	—	—	—	—
ACOE/RWQCB/CDFW/County						
Southern willow scrub	0.04	0.04	—	—	—	—
Mulefat scrub	<0.01	<0.01	—	—	—	—
Coast live oak woodland	—	—	—	—	<0.01	0.12

Table 2-10
Temporary Off-Site Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road–Option A (acres)	Deer Springs Road–Option B (acres)	Camino Mayor (acres)	Sarver Lane (acres)	Mar Vista (acres)	I-15 Interchange (acres)
CDFW Only						
Coast live oak woodland (including disturbed)	—	—	—	0.39	—	—
Southern coast live oak riparian forest	0.52	0.52	—	—	—	—
CDFW/County						
Southern willow scrub	—	—	<0.01	—	—	
Total Jurisdictional Resources	**0.72**	**0.72**	**0.01**	**0.43**	**<0.01**	**0.12**

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.5.1.2 Permanent Direct Impacts

Impact V-3: Permanent Direct Impacts to Jurisdictional Resources

Development of the proposed project would impact CDFW riparian habitat and County RPO wetlands, as well as jurisdictional non-wetland waterways (Figures 12A–12E, Impacts to Jurisdictional Resources). As shown in Table 2-11, the proposed project would have impacts to 2.13 acres of CDFW and County jurisdictional resources and 3.30 acres of impacts to CDFW only resources. In addition, the proposed project would result in impacts to 1.41 acres of non-wetland waters. Table 2-12 includes the off-site permanent direct impacts to jurisdictional resources for the Deer Springs Road Option A and Option B and the other off-site areas. There are off-site impacts to ACOE/RWQCB/CDFW/County wetlands totaling ~~0.49~~2.02 acres.

Table 2-11
On-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Permanent Impacts (acres)			Total Impacts (acres)
	ACOE/RWQCB/ CDFW	*CDFW/ County*	*CDFW Only*	
Wetlands and Riparian Habitat				
Coast live oak woodland	—	—	3.30	**3.30**
Freshwater marsh	—	—	—	**—**
Mulefat scrub	—	0.09	—	**0.09**
Southern coast live oak riparian forest	—	1.91	—	**1.91**

Table 2-11
On-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Vegetation Community	Permanent Impacts (acres)			Total Impacts (acres)
	ACOE/RWQCB/ CDFW	*CDFW/ County*	*CDFW Only*	
Southern willow scrub	—	0.13	—	**0.13**
Southern willow scrub/tamarisk	—	--	—	**—**
Total	**—**	**2.13**	**3.30**	**5.43**
Non-wetland waters (ephemeral and intermittent)	*1.41*	*n/a*	*n/a*	*1.41*

Table 2-12
Off-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road		Camino Mayor (acres)	Sarver Lane (acres)	Sewer Improvements (acres)	I-15 Interchange (acres)	Total
	Option A (acres)	*Option B (acres)*					
ACOE/RWQCB/CDFW							
Non-wetland waters (ephemeral and intermittent)	0.08	0.08	0.06	<0.01	—	—	0.14
Southern willow scrub	—	—	—	—	0.35	—	0.41
Arundo dominated riparian	—	—	—	—	0.14	—	0.14
ACOE/RWQCB/CDFW/County							
Southern willow scrub	0.06	0.06	—	—	~~— 0.35~~	—	0.06~~0.41~~
~~Arundo dominated riparian~~	~~—~~	~~—~~	~~—~~	~~—~~	~~0.14~~	~~—~~	~~0.14~~
Mulefat scrub	0.03	0.03	—	—	—	—	0.03
Coast live oak woodland	—	—	—	—	—	0.02	0.02
CDFW Only							
Coast live oak woodland (including disturbed)	—	—	—	0.56	—	—	0.56
CDFW/County							
Southern coast live oak riparian forest	0.83	0.83	—	—	—	—	0.83
Southern willow scrub	—	—	0.06	—	—	—	0.06
Total Jurisdictional Resources	**0.83**	**0.83**	**0.12**	**0.56**	**0.49**	**0.02**	**2.02**
RPO Buffer[1]	**2.75**	**2.75**	**0.29**	**—**	**—**	**0.57**	**3.85**

Table 2-12
Off-Site Permanent Impacts to Wetlands, Riparian Habitat, and Non-Wetland Waters

Jurisdictional Resource	Deer Springs Road		Camino Mayor (acres)	Sarver Lane (acres)	Sewer Improvements (acres)	I-15 Interchange (acres)	Total
	Option A (acres)	*Option B (acres)*					
Total Off-Site Impacts (Option A)	**2.02**						
Total Off-Site Impacts (Option B)	**2.02**						

1 Additional impacts to RPO buffer would result from improvements at Mar Vista (0.24 acre)

2.5.2 Indirect Impacts to Wetlands/Jurisdictional Waters

2.5.2.1 Temporary Indirect Impacts

Impact V-5: Temporary Indirect Impacts to Special-Status Vegetation Communities

Potential short-term or temporary indirect impacts to jurisdictional resources in the project Site would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; and the introduction of chemical pollutants (including herbicides). Potential short-term indirect impacts that could affect all the jurisdictional resources waterways that occur on the project Site are described in detail as follows.

Generation of Fugitive Dust. The effects of fugitive dust on jurisdictional non-wetland waterways are similar to those described for vegetation communities in Section 2.2.2.

Changes in Hydrology. Construction could result in hydrologic and water-quality-related impacts adjacent to and downstream of the construction area. Hydrologic alterations include changes in flow rates and patterns in streams, which may affect adjacent and downstream vegetation communities. Water-quality impacts include chemical-compound pollution (fuel, oil, lubricants, paints, release agents, and other construction materials), erosion, increased turbidity, and excessive sedimentation. Direct impacts, as described previously, can also remove native vegetation, resulting in increased erosion and transport of surface matter into jurisdictional waterways. Altered erosion, increased surface flows, and underground seepage can allow for the establishment of non-native plants. Changed hydrologic conditions can also alter seed bank characteristics and modify habitat for ground-dwelling fauna that may disperse seed.

Chemical Pollutants. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect jurisdictional non-wetland waterways. The use of chemical pollutants can decrease the number of plant pollinators, increase the existence of non-native plants, and cause damage to and destruction of native plants.

All jurisdictional non-wetland waterways on Site could be impacted by potential temporary indirect impacts such as those previously listed. The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.5.2.2 Permanent Indirect Impacts

Impact V-6: Permanent Indirect Impacts to Special-Status Vegetation Communities

Long-term or permanent indirect impacts could result from the proximity of the proposed project to jurisdictional resources after construction. Permanent indirect impacts that could affect jurisdictional resources include generation of fugitive dust, habitat fragmentation, chemical pollutants, altered hydrology, non-native invasive species, increased human activity, alteration of the natural fire regime, and shading. Each of these potential indirect impacts is discussed as follows.

Generation of Fugitive Dust. The effects of fugitive dust on jurisdictional resources are similar to those described for vegetation communities in Section 2.2.2.

Habitat Fragmentation. Habitat fragmentation and isolation of plant populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes, and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986). Although these effects are more readily observable in wildlife, there are potential ecological effects, such as changes in pollinator populations, which can result in altered plant community composition and thus adversely affect jurisdictional resources.

Chemical Pollutants. The effects of chemical pollutants on jurisdictional resources are described in Section 2.2.2.

Altered Hydrology. As described in Section 2.2.2, for purposes of analyzing potential indirect impacts associated with hydrology, urban run-off associated with landscaping and irrigation are described here. Water would be used for landscaping purposes within residential units and maintained shared spaces (e.g., parks). These sources may alter the on-site hydrologic regime. However, potential impacts would be reduced by design features (bioretention swales and bioretention basins, roadside swales, stormwater detention, and drainage improvements for off-site road improvements), and long-term indirect impacts to jurisdictional waters associated with altered hydrology are not expected.

Non-Native, Invasive Plant and Animal Species. Invasive plant species that thrive in edge habitats are a well-documented problem in Southern California and throughout the United States.

Development could also fragment native plant populations, which may increase the likelihood of invasion by exotic plants due to the increased interface between natural habitats and developed areas. Bossard et al. (2000) list several adverse effects of non-native species in natural open areas, including but not limited to the fact that exotic plants compete for light, water, and nutrients and can create a thatch that blocks sunlight from reaching smaller native plants. Exotic plant species may alter habitats and displace native species over time, leading to extirpation of native plant species and alteration of wetland plant communities. The introduction of non-native, invasive animal species could negatively affect native species that may be pollinators of or seed dispersal agents for plants within jurisdictional resources.

Increased Human Activity. The effects of increased human activity on jurisdictional resources are similar to those described for vegetation communities in Section 2.2.2.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 4.

2.6 Habitat Connectivity and Wildlife Corridors

2.6.1 Direct Impacts to Habitat Connectivity and Wildlife Corridors

2.6.1.1 Temporary Direct Impacts

Impact CWA-1: Temporary Direct Impacts to Existing Core Wildlife Area

Short-term, construction-related, or temporary direct impacts to habitat connectivity and wildlife corridors would primarily result from construction activities. There are 8.4 acres of temporary impacts associated with grading (see Table 2-1, earlier in this report). In addition, clearing, trampling, or grading of vegetation outside designated construction zones could occur and be significant. These potential effects could impact wildlife movement through these areas by reducing cover and food sources. The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 6.

2.6.1.2 Permanent Direct Impacts

Impact CWA-2: Permanent Direct Impacts to Existing Core Wildlife Area

Implementation of the proposed project is not expected to result in long-term or permanent direct impacts to habitat connectivity and wildlife corridors for large mammals. See Section 1.4.8 for a detailed discussion regarding habitat connectivity and wildlife corridors. For the most part, the area in and around the project Site is very similar with regard to undeveloped landscapes with limited human disturbance, similar topographic relief, and similar vegetation communities. The

project Site is considered part of a regional corridor based on regional planning, topography, connectivity to adjacent regional open space, and resources on Site; it would remain as such even after development.

Although large sections of this landscape would be developed, the project includes proposed biological open space that would form a centroid of habitat connectivity to the north, south, east, and west, thereby retaining connectivity of undeveloped landscapes throughout and surrounding proposed development. In addition, the proposed open space design includes a diverse array of environmental features including ridgetops, hill tops, and rocky outcrops. See Section 1.4.8 for a detailed description of the proposed open space design.

Wildlife movement within the proposed open space design would occur within three large blocks of open space and four corridors located between development (Figure 9). Although small mammals may regularly use the dense chaparral occurring on Site, larger mammals such as mule deer, mountain lion, and coyote are expected to use dirt trails and any riparian corridors occurring throughout the open space as their primary means of travel. Similarly, small wildlife species (e.g., lizards and small mammals) would continue to use the dense chaparral and dirt trails within the proposed open space.

The project Site is currently undeveloped with a network of trails and connectivity to surrounding undeveloped landscapes. Although wildlife movement would be restricted within developed areas, the proposed open space design would allow for habitat connectivity and wildlife movement within on-site open space and surrounding preserves (Figure 9).

The culverts, fences, and bridges mapped along I-15 and Deer Springs Road demonstrate that wildlife can move in some areas in an east/west direction and north/south. Because the open space is designed to preserve open space in the east, south, and north, smaller wildlife species would be able to continue using this area.

Off-site improvements to Deer Springs Road have the potential to impact wildlife crossing the road. Road widening would occur to the north side of Deer Springs Road as opposed to impacting the adjacent creek itself. These impacts would increase impacts to upland habitats. The increase in road width and increase in traffic numbers and speed would likely cause additional road mortality of wildlife; particularly where the road occurs adjacent to natural lands.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 3.

2.6.2 Indirect Impacts to Habitat Connectivity and Wildlife Corridors

2.6.2.1 Temporary Indirect Impacts

Impact CWA-3: Temporary Indirect Impacts to Existing Core Wildlife Area

Potential short-term indirect impacts to habitat connectivity and wildlife corridors could result from increased human activity, lighting, and noise, and during construction.

Increased Human Activity. Project construction would likely take place during the daytime and would not affect wildlife species such as mammals that are most active in evenings and nighttime. Wildlife species such as birds, rabbits, and lizards are active in the daytime, but use a variety of habitats and could continue using other areas within and adjacent to the project Site for wildlife movement.

Lighting. Some localized security-related lighting may be required during construction and/or operations; lighting would conform to County of San Diego outdoor lighting requirements. These impacts would be short-term, and therefore proposed project is not expected to result in significant impacts to wildlife movement.

Noise. Project construction would result in the production of noise and ground vibrations through the use of mechanized equipment and increased traffic within the area. Noise would most likely only be a disturbance to those species that are active during the daytime, as the noise levels are less at night. Most wildlife that would use the area as a habitat corridor are nocturnal, and therefore would not be impacted while foraging and moving. Noise pollution is not anticipated to hamper breeding of any special-status species.

2.6.2.2 Permanent Indirect Impacts

Impact CWA-4: Permanent Indirect Impacts to Existing Core Wildlife Area

Long-term indirect impacts to habitat connectivity and wildlife corridors include habitat fragmentation, human activity (including an increase in intrusions by both humans and domestic pets), lighting, and noise from the proposed urban development, recreational facilities, and human activity.

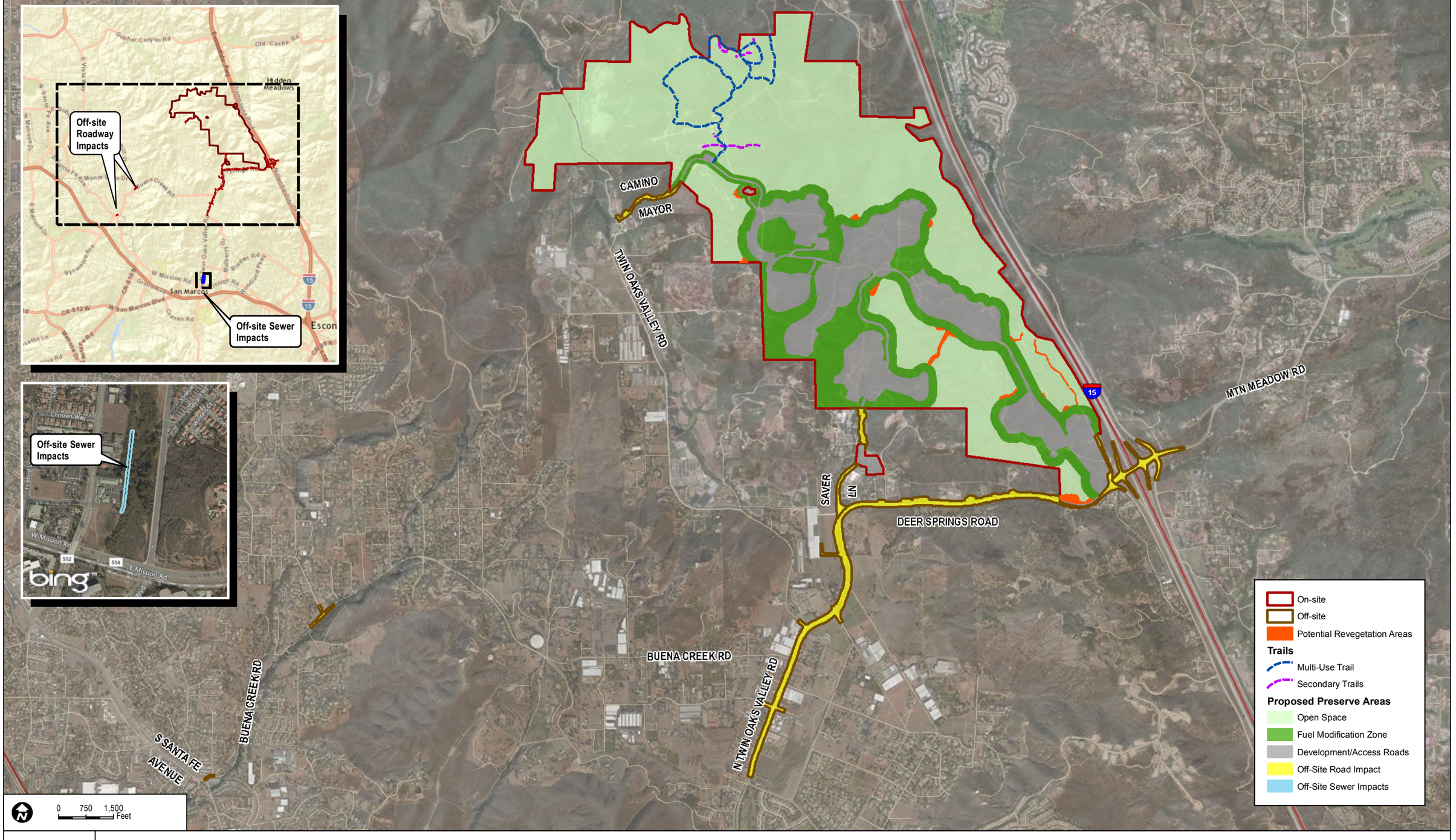
Habitat Fragmentation. The proposed project would impact approximately 776.6 acres of vegetation communities and land covers, resulting in potential habitat fragmentation. Habitat fragmentation can reduce diversity of species, spread invasive species, and reduce access to important habitats (Lovich and Ennen 2011). In addition, habitat fragmentation and isolation of wildlife populations may cause extinction of local populations as a result of two processes: reduction in total habitat area, which reduces effective population sizes, and insularization of local populations, which affects dispersal rates (Wilcox and Murphy 1985; Wilcove et al. 1986).

Increased Human Activity. The proposed project includes the development of seven neighborhoods, recreational facilities (e.g., parks), and designated open space. The Site is currently subject to illegal/unauthorized activity, including hiking, biking, off-road vehicle activity, parties, trash dumping, homeless activities, and camping. With the development and associated open space preserve, all of these activities except the biking and hiking would cease and the hiking/biking would be managed and kept to select trails. The other trails would be closed and new trail creation (which currently occurs) would stop. Therefore, the proposed development is expected to lead to a decrease in human activity on the project Site. Increasing the human presence adjacent to development could also increase the amount of domestic pets within the preserve. All dogs within the open space would be required to be on leash while homeowners would be informed of the impacts that domestic pets can have on native habitat and wildlife.

Lighting. Urban development, recreational facilities, and general human activity (e.g., night-time light from vehicles, home security systems) would result in light pollution and possibly disrupt dark skies. Long-term lighting may deter nocturnal wildlife from traversing through developed areas and restrict movements to the northern open space facilities.

Noise. Increased human activity in the proposed project Site is expected to result in long-term noise effects in the area. Noise is expected to be greatest during daylight hours and therefore would be more of a disturbance to those species that are active during the daytime, as the noise levels are less at night. Nocturnal wildlife would not be significantly impacted while foraging, and moving in open space areas, particularly because there is a 250-foot FMZ area between development and open space areas. Noise pollution is not anticipated to decrease breeding of any special-status species.

The significance determination for these potential impacts is determined through application of the County Significance Guidelines described in Section 6.



DUDEK

7608-01

SOURCE: Bing 2016; Fuscoe Engineering 2017

FIGURE 10

Proposed Uses

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site

Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

- Oak Root Zones
- Las Posas Soil Series

Wildlife Species
- Coastal California gnatcatcher
- Nuttall's woodpecker
- Oak titmouse
- Red-shouldered hawk
- Sharp-shinned hawk
- Yellow warbler
- Desert woodrat (midden)
- Amphibian, western spadefoot
- Blainville's horned lizard
- Blainville's horned lizard (scat)
- Coast patch-nosed snake
- Coastal whiptail
- Red diamond rattlesnake

Plant Species
- Engelmann oak
- Munz's sage
- Ramona horkelia
- Summer holly
- ashy spike-moss
- chaparral rein orchid
- Engelmann oak
- Orcutt's brodiaea
- Ramona horkelia
- Summer holly

Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space

Index Map

FIGURE 11A
FIGURE 11B
FIGURE 11C
FIGURE 11D
FIGURE 11D
FIGURE 11D
FIGURE 11D

0 165 330 Feet

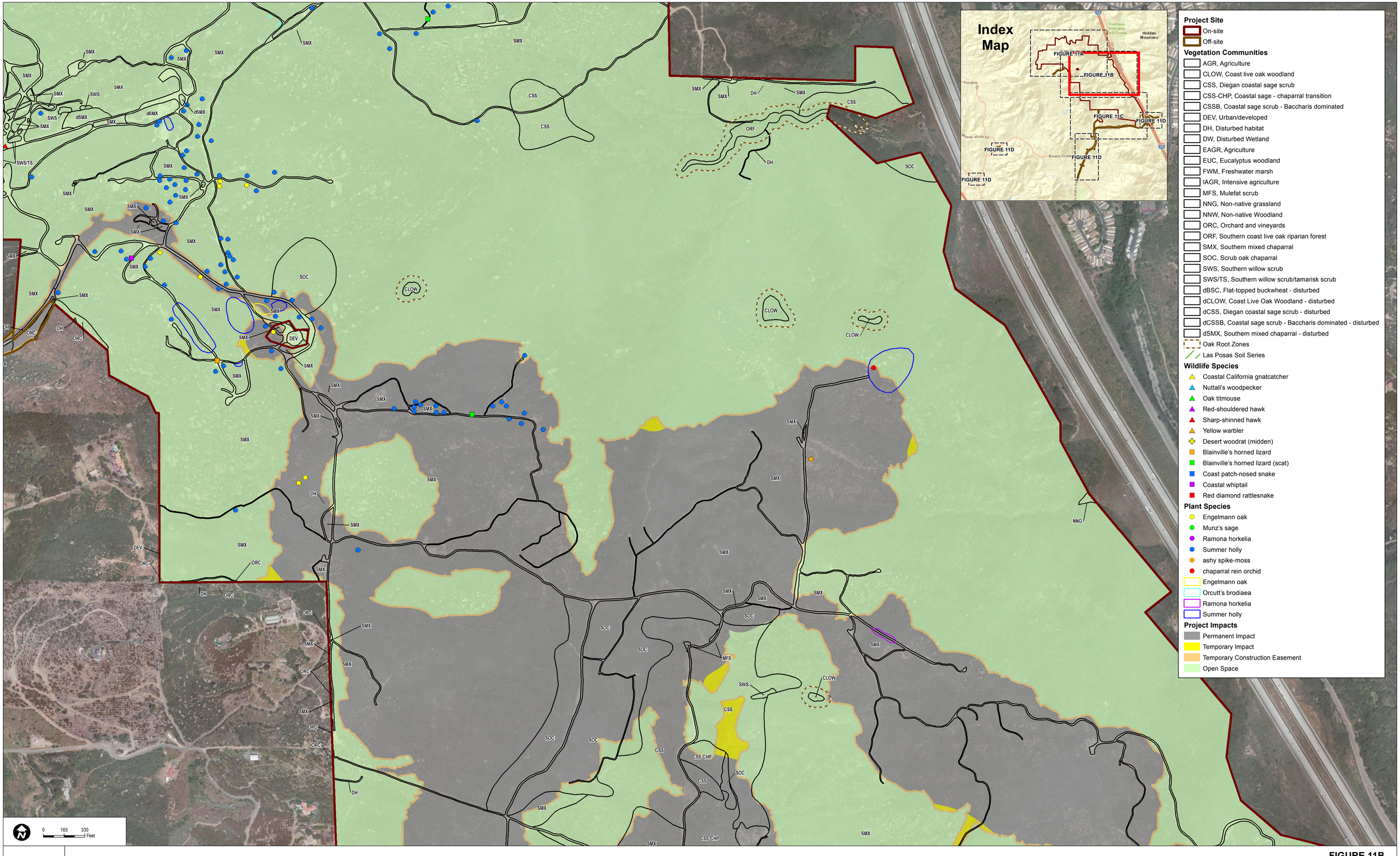
SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

DUDEK

7608-01

FIGURE 11A
Impacts to Biological Resources

INTENTIONALLY LEFT BLANK



SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

DUDEK

7608-01

FIGURE 11B

Impacts to Biological Resources

INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site

Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed
- Oak Root Zones
- Las Posas Soil Series

Wildlife Species
- Coastal California gnatcatcher
- Nuttall's woodpecker
- Oak titmouse
- Red-shouldered hawk
- Sharp-shinned hawk
- Yellow warbler
- Desert woodrat (midden)
- Blainville's horned lizard
- Blainville's horned lizard (scat)
- Coast patch-nosed snake
- Coastal whiptail
- Red diamond rattlesnake

Plant Species
- Engelmann oak
- Munz's sage
- Ramona horkelia
- Summer holly
- ashy spike-moss
- chaparral rein orchid
- Engelmann oak
- Orcutt's brodiaea
- Ramona horkelia
- Summer holly

Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space

Index Map

FIGURE 11A
FIGURE 11B
FIGURE 11C
FIGURE 11D
FIGURE 11D
FIGURE 11D
FIGURE 11D

DUDEK

7608-01

SOURCE: SANDAG Imagery 2014; Fuscoe Engineering 2017

FIGURE 11C
Impacts to Biological Resources

INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site

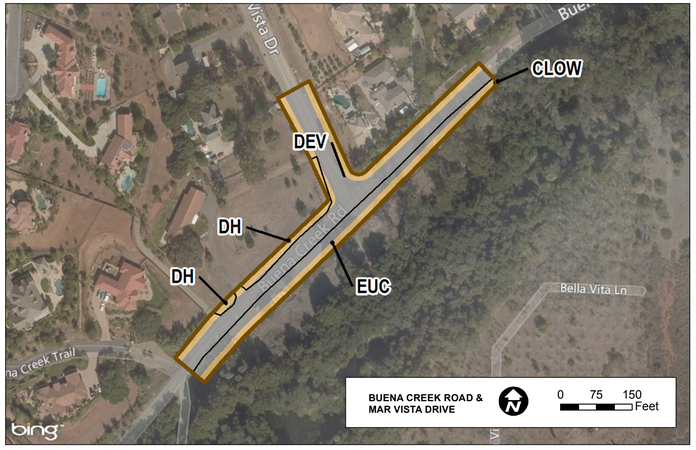
Wildlife Species
- Coastal California gnatcatcher
- Nuttall's woodpecker
- Oak titmouse
- Red-shouldered hawk
- Sharp-shinned hawk
- Yellow warbler
- Desert woodrat (midden)
- Blainville's horned lizard
- Blainville's horned lizard (scat)
- Coast patch-nosed snake
- Coastal whiptail
- Red diamond rattlesnake

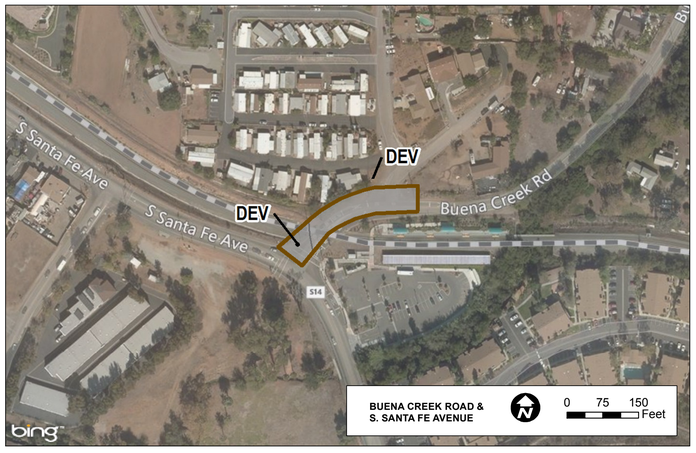
Plant Species
- Engelmann oak
- Munz's sage
- Ramona horkelia
- Summer holly
- ashy spike-moss
- chaparral rein orchid

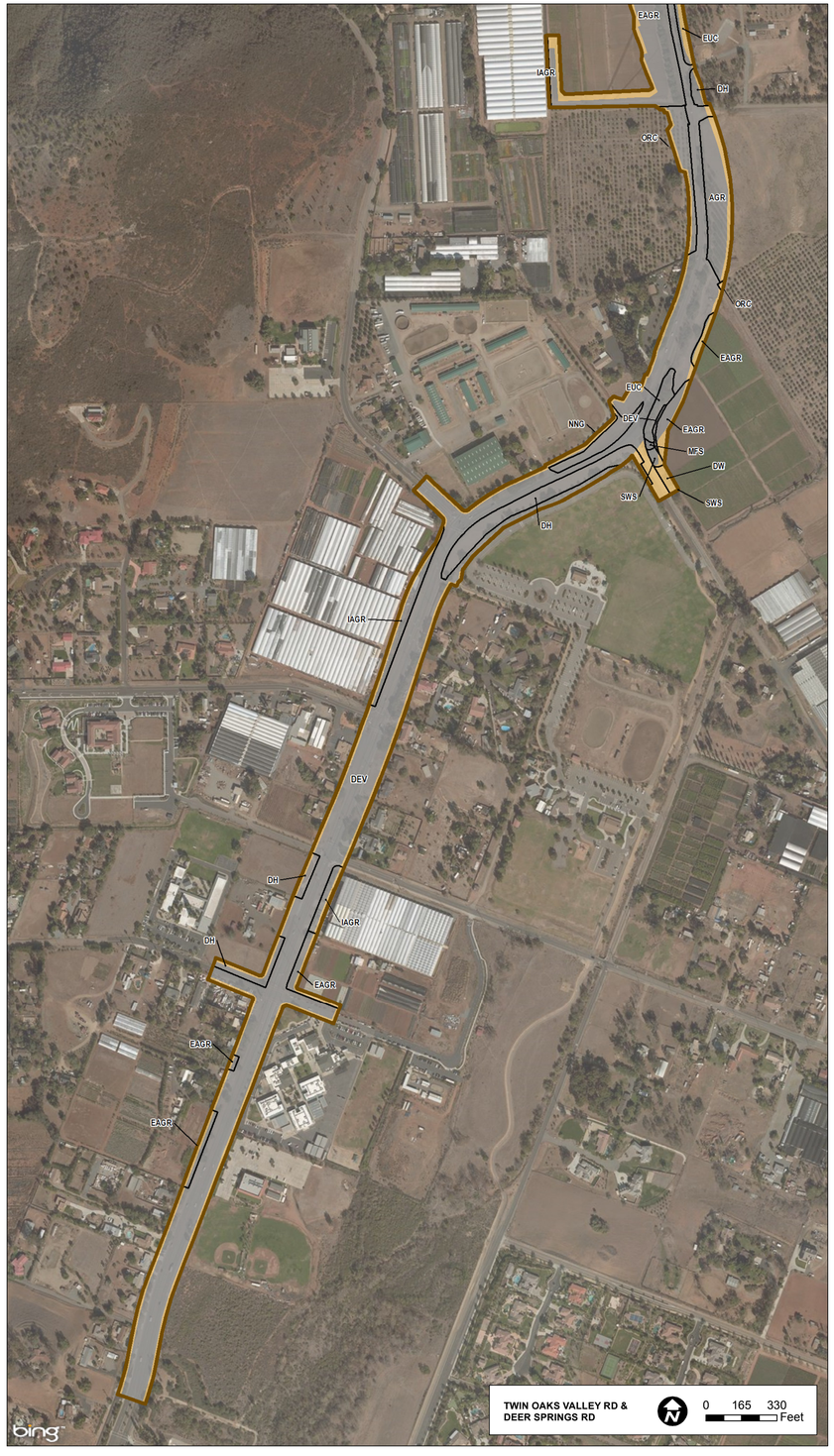
- Engelmann oak
- Orcutt's brodiaea
- Ramona horkelia
- Summer holly

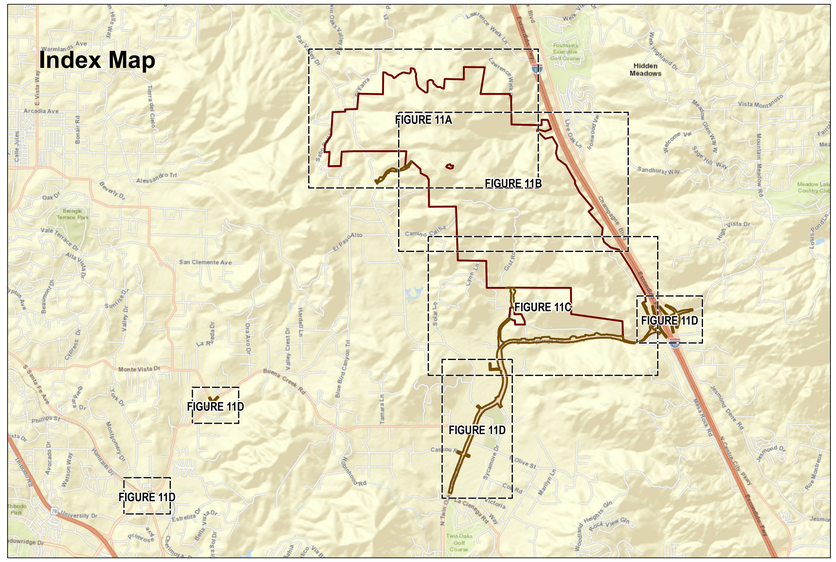
Vegetation Communities
- AGR, Agriculture
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space









DUDEK

7608-01

SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016

FIGURE 11D
Impacts to Biological Resources

INTENTIONALLY LEFT BLANK

100-Ft Buffer Of 30-Ft Sewer Easement

30-Ft Off-Site Sewer Permanent Impact

Vegetation Mapping

Vegetation Communities/Land Covers

ARU, Arundo Dominated Riparian

DEV, Urban Developed Ornamental

DH, Disturbed Habitat

SWS, Southern Willow Scrub

N 0 60 120 Feet

SOURCE: AERIAL-SANDAG IMAGERY 2014

DUDEK

FIGURE 11E

Impacts to Biological Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

Biological Resources Technical Report for the Newland Sierra Project

Date: 3/30/2017 - Last saved by: lterry - Path: Z:\Projects\j760801\MAPDOC\MAPS\Tech Reports\BiologicalResourcesReport\Figure11E_BioResImpacts_

INTENTIONALLY LEFT BLANK

Data Stations

Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial

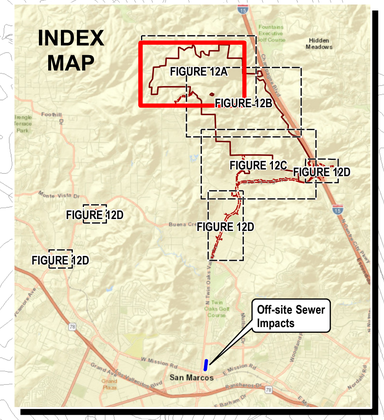
Project Site
- On-site
- Off-site
- RPO 75-Ft Buffer
- RPO Wetlands

Vegetation Communities
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- CDFW ONLY

Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space

INDEX MAP



South Fork of Gopher Canyon

South Fork of Moosa Canyon

0 150 300 Feet

SOURCE:Topo-Fuscoe Engineering 2016

DUDEK

7608-01

FIGURE 12A
Impacts to Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK

Project Site
- On-site
- Off-site
- RPO 75-Ft Buffer
- Data Stations
- RPO Wetlands

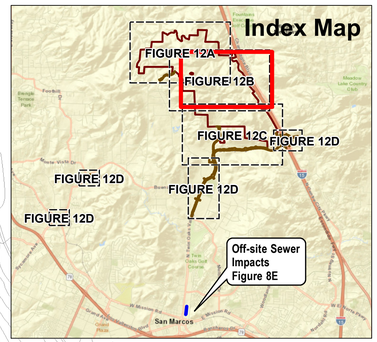
Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- CDFW ONLY

Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial

Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space

Vegetation Communities
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- EAGR, Agriculture
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed

Index Map



0 150 300 Feet

DUDEK

7608-01

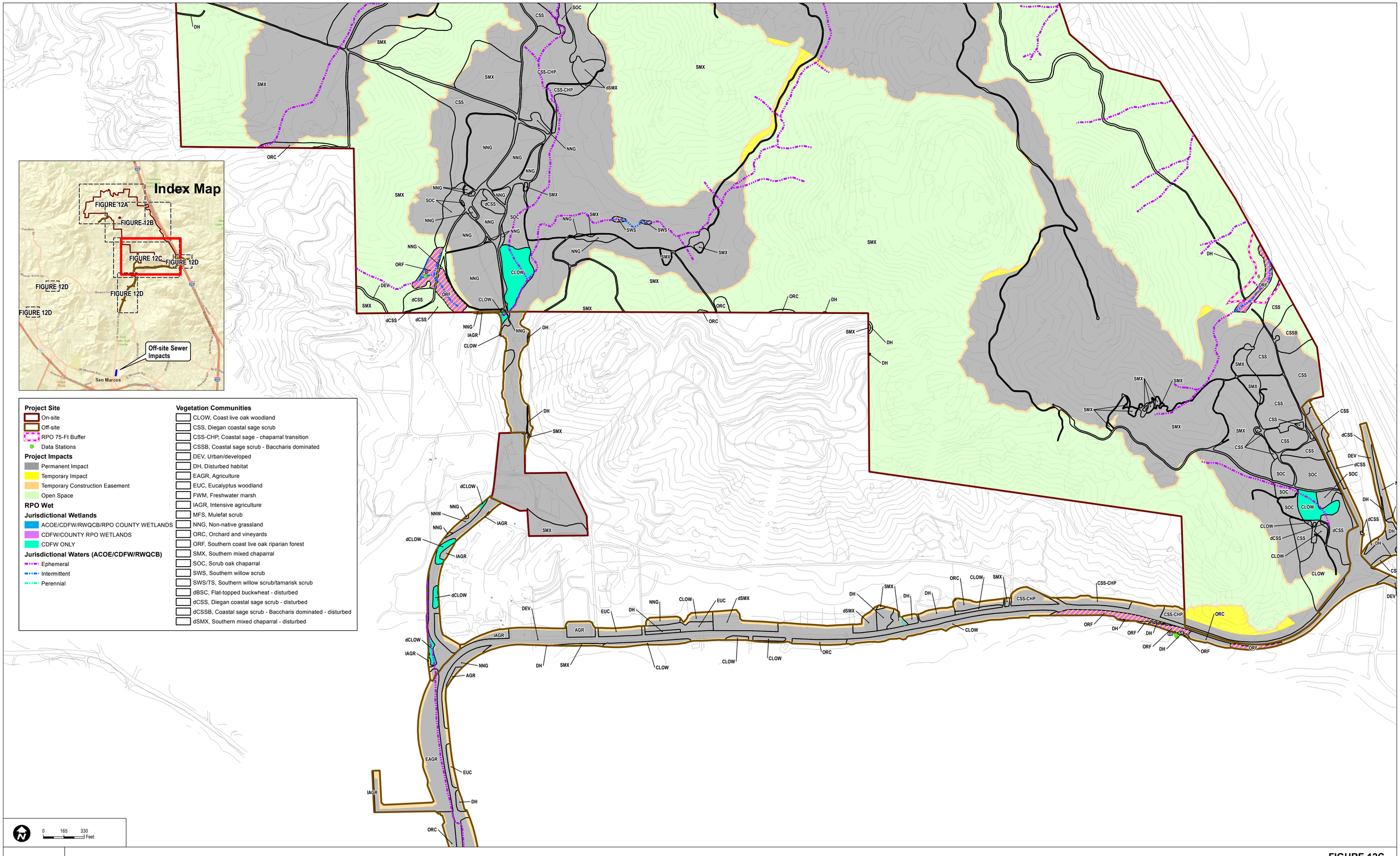
SOURCE: Fuscoe Engineering 2016; CA Department of Conservation 2011

FIGURE 12B

Impacts to Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK



DUDEK

7608-01

SOURCE: Fuscoe Engineering 2016; CA Department of Conservation 2011

FIGURE 12C

Impacts to Jurisdictional Resources

Biological Resources Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK

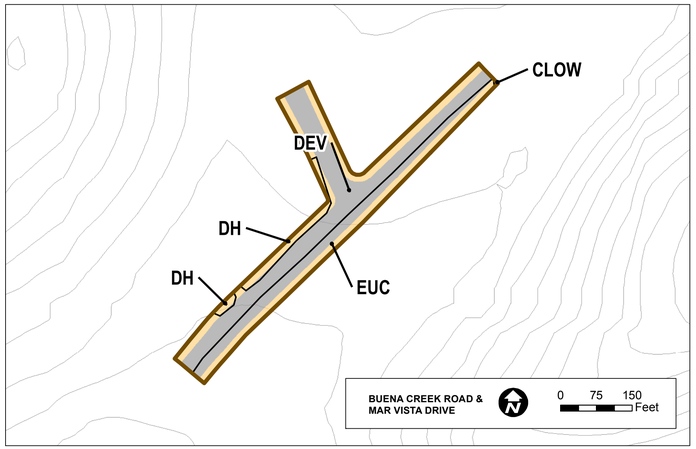
Project Site
- On-site
- Off-site
- RPO Wetlands

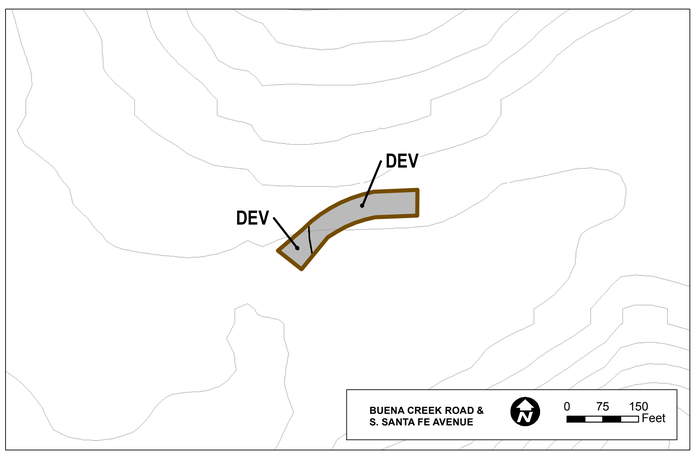
Jurisdictional Wetlands
- ACOE/CDFW/RWQCB/RPO COUNTY WETLANDS
- CDFW/COUNTY RPO WETLANDS
- ACOE/CDFW/RWQCB WETLANDS
- CDFW ONLY

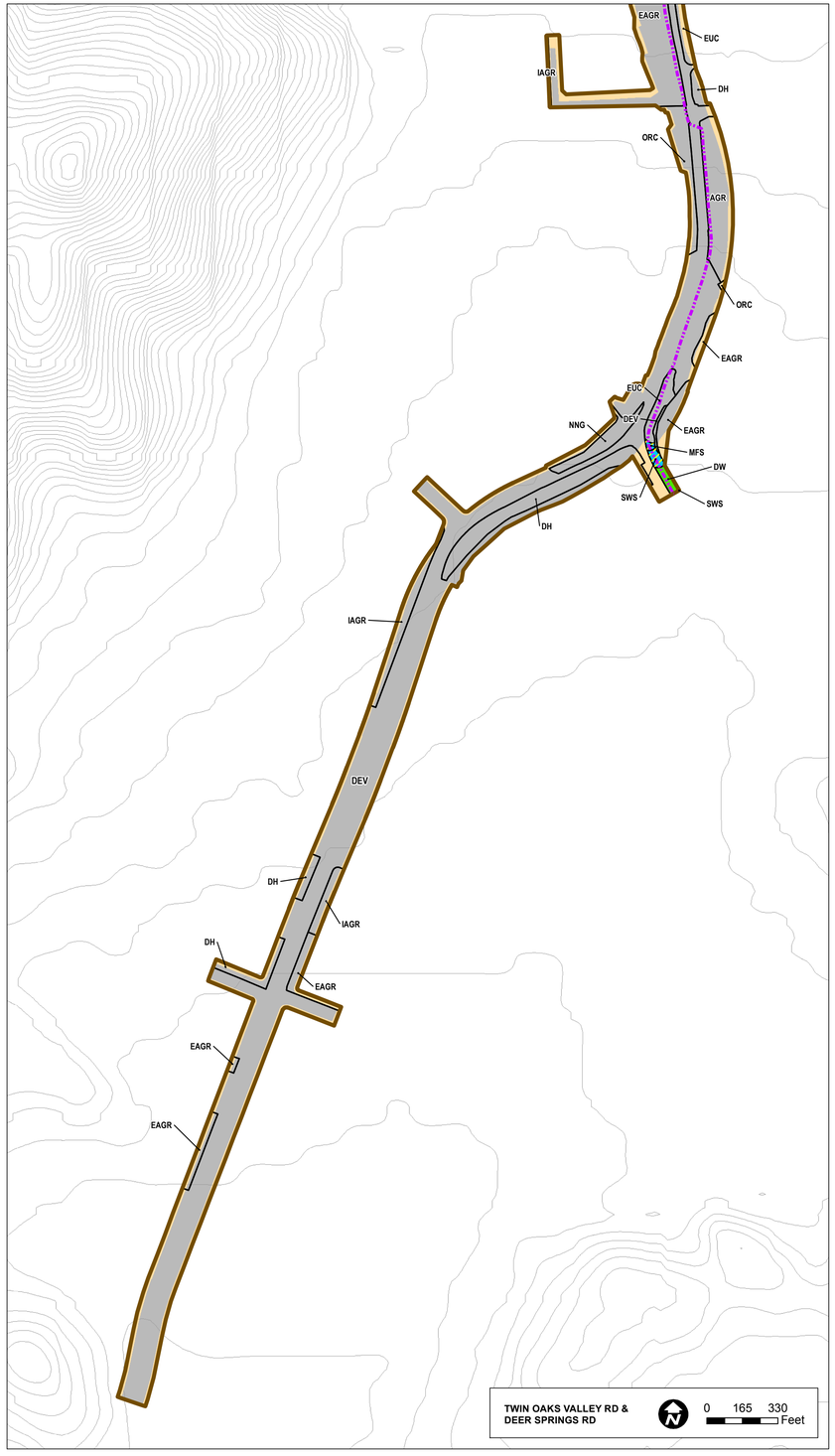
Jurisdictional Waters (ACOE/CDFW/RWQCB)
- Ephemeral
- Intermittent
- Perennial

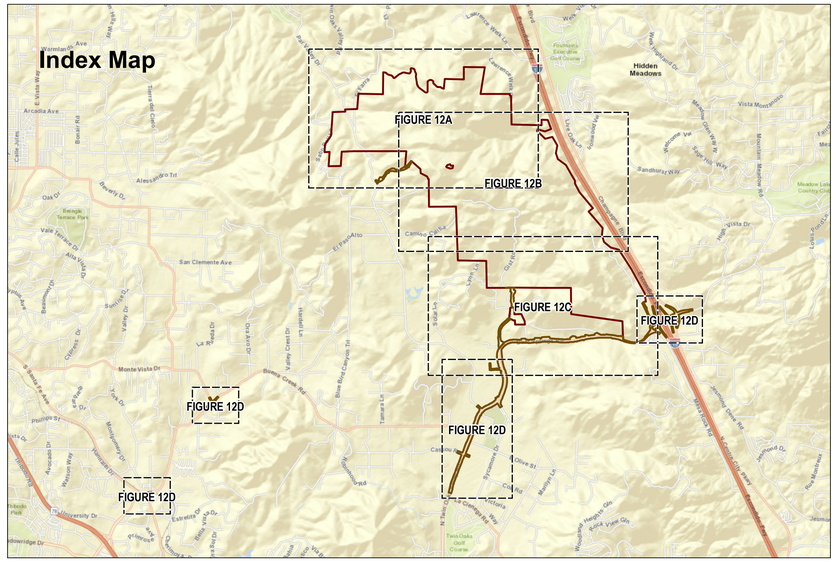
Project Impacts
- Permanent Impact
- Temporary Impact
- Temporary Construction Easement
- Open Space

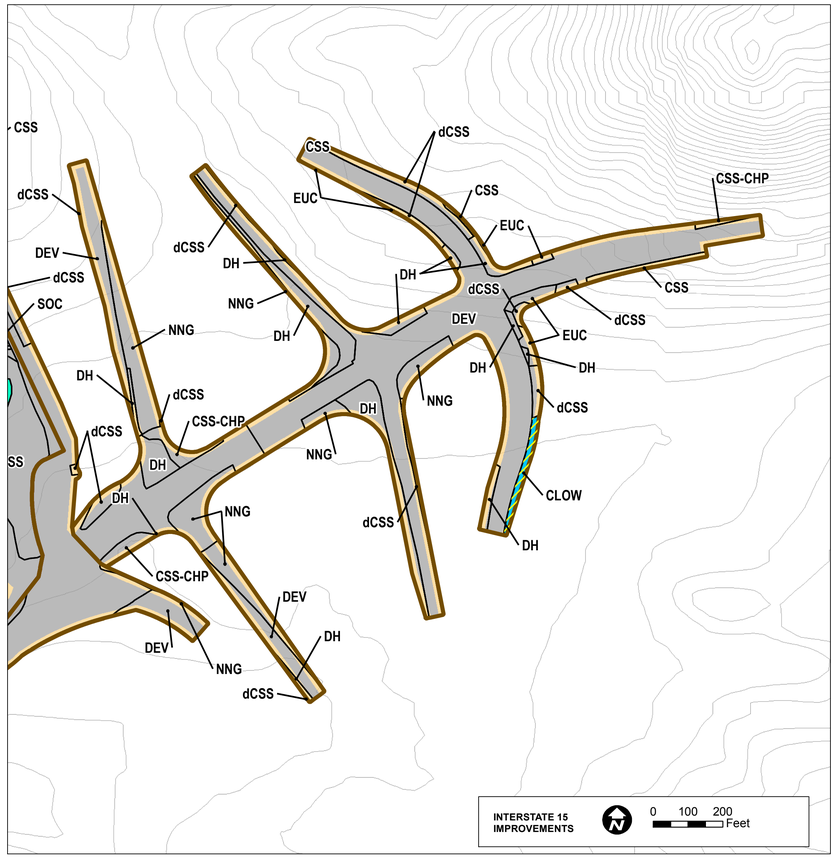
Vegetation Communities
- AGR,
- CLOW, Coast live oak woodland
- CSS, Diegan coastal sage scrub
- CSS-CHP, Coastal sage - chaparral transition
- CSSB, Coastal sage scrub - Baccharis dominated
- DEV, Urban/developed
- DH, Disturbed habitat
- DW, Disturbed Wetland
- EAGR,
- EUC, Eucalyptus woodland
- FWM, Freshwater marsh
- IAGR, Intensive agriculture
- MFS, Mulefat scrub
- NNG, Non-native grassland
- NNW, Non-native Woodland
- ORC, Orchard and vineyards
- ORF, Southern coast live oak riparian forest
- SMX, Southern mixed chaparral
- SOC, Scrub oak chaparral
- SWS, Southern willow scrub
- SWS/TS, Southern willow scrub/tamarisk scrub
- dBSC, Flat-topped buckwheat - disturbed
- dCLOW, Coast Live Oak Woodland - disturbed
- dCSS, Diegan coastal sage scrub - disturbed
- dCSSB, Coastal sage scrub - Baccharis dominated - disturbed
- dSMX, Southern mixed chaparral - disturbed











DUDEK

7608-01

SOURCE: SANDAG IMAGERY 2014; FUSCOE ENGINEERING 2016

FIGURE 12D
Impacts to Jurisdictionall Resources

INTENTIONALLY LEFT BLANK

30-Ft Off-Site Sewer Permanent Impact

100-Ft Buffer Of 30-Ft Sewer Easement

Vegetation Mapping

Jurisdictional Wetlands

ACOE/CDFW/RWQCB WETLANDS

Vegetation Communities/Land Covers

ARU, Arundo Dominated Riparian

DEV, Urban Developed Ornamental

DH, Disturbed Habitat

SWS, Southern Willow Scrub

N 0 60 120 Feet

SOURCE: AERIAL-SANDAG IMAGERY 2014

DUDEK

FIGURE 12E

Impacts to Jurisdictional Resources for Off-Site Wastewater Upgrade East of Twin Oaks Valley Road

Biological Resources Technical Report for the Newland Sierra Project

INTENTIONALLY LEFT BLANK

3 SPECIAL-STATUS SPECIES

3.1 Guidelines for the Determination of Significance

The County's Guidelines for Determining Significance (County of San Diego 2010a) that follow are based on the criteria in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) and were used to analyze potential direct and indirect impacts to biological resources. The significance criteria directing the analysis include the following:

Guideline 4.1 The project would have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special-status species listed in local or regional plans, policies, or regulations, or by CDFG or USFWS.

A. The project would impact one or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern (SSC). Impacts to these species are considered significant; however, impacts of less than 5 percent of the individual plants or of the sensitive species' habitat on a project Site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of that plant or animal taxon.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

D. The project may impact arroyo toad aestivation, foraging, or breeding habitat. Any alteration of suitable habitat within 1 kilometer (3,280 feet) in any direction of occupied breeding habitat or suitable stream segments (unless very steep slopes or other barriers constrain movement) could only be considered less than significant if a biologically based determination can be made that the project would not impact the aestivation or breeding behavior of arroyo toads.

E. The project would impact golden eagle habitat. Any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles.

F. The project would result in the loss of functional foraging habitat for raptors. Impacts to raptor foraging habitat is considered significant; however, impacts of less than 5 percent of the raptor foraging habitat on a project Site may be considered less than significant if a biologically based determination can be made that the project would not have a substantial adverse effect on the local long-term survival of any raptor species.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, although smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species. Alteration of any portion of a core habitat could only be considered less than significant if a biologically based determination can be made that the project would not have a substantially adverse effect on the core area and the species it supports.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing undeveloped lands or other natural habitat areas, to levels that would likely harm sensitive species over the long term. The following issues should be addressed in determining the significance of indirect impacts: increasing human access; increasing predation or competition from domestic animals, pests, or exotic species; altering natural drainage; and increasing noise and/or nighttime lighting to a level above ambient that has been shown to adversely affect sensitive species.

I. The project would impact occupied burrowing owl habitat.

J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

K. The project would impact occupied Hermes copper habitat.

L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire-fuel modification, and/or other noise-generating activities such as construction.

Species	Breeding Season
Coastal cactus wren	February 15 to August 15
Least Bell's vireo	March 15 to September 15
Southwestern willow flycatcher	May 1 to September 1
Tree-nesting raptors	January 15 to July 15
Ground-nesting raptors	February 1 to July 15

Species	Breeding Season
Golden eagle	January 1 to July 31
Light-footed clapper rail	February 15 to September 30

3.2 Analysis of Project Effects

3.2.1 Project Effects Relevant to Guideline 4.1.A (Federally Listed and State-Listed Species)

There are no federally listed or state-listed endangered or threatened plant species known to occur on Site. However, one federally threatened wildlife species was detected on Site. Coastal California gnatcatcher was observed occurring in the project Site, and the project Site may support foraging and nesting opportunities that would be impacted by the project footprint.

Impact W-1: Temporary Direct Impacts to Special-Status Wildlife (Listed Species)

Loss of coastal California gnatcatcher from construction-related activities including unintentional habitat loss, soil loss, water quality impacts, introduction of invasive species, and disruption of wildlife activities by construction activities adjacent to remaining suitable habitat would be considered significant **(Impact W-1)**. If any active nests or the young of this species are impacted through direct grading, these impacts would also be considered significant **(Impact W-1)**, based on FESA and MBTA.

The project includes construction monitoring to avoid unintentional species and habitat impacts (M-BIO-1); construction areas would have temporary construction fencing to avoid inadvertent habitat destruction (M-BIO-2); there would be monitoring verification through preparation of a biological monitoring report (M-BIO-3); landscape plans would prohibit invasive species and landscape products would be verified on the job Site (M-BIO-4); nesting birds would be avoided through preconstruction surveys and buffer setbacks (M-BIO-5); vegetation would be replaced through a vegetation plan where possible for temporary vegetation impacts (M-BIO-6); and outdoor night lighting would be in compliance with the Light Pollution Code (M-BIO-7). With these measures, impacts that would impact coastal California gnatcatcher and other sensitive status species would be significant and mitigated. The full text of mitigation measures is presented in Section 3.4, Mitigation Measures and Design Considerations.

As described under M-BIO-5, project construction should occur outside the typical nesting period for most bird species and raptors (i.e., outside the period February 1–August 31 and as early as January 1 for some raptor species) to limit impacts to nesting birds and raptors, or that a nesting bird survey is conducted within 72 hours of project implementation.

Impact W-2: Permanent Direct Impacts to Special-Status Wildlife (Listed Species)

Potential permanent direct impacts to coastal California gnatcatcher include the loss of both suitable nesting and foraging habitat (56.7 acres) and replacement with residential, commercial, recreational, and infrastructure uses (Tables 2-8 and 2-9). Permanent direct impacts to suitable foraging and nesting habitats are considered significant **(Impact W-2)**. These impacts would be mitigated by compensation with like (occupied) habitat and habitat management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E). To mitigate for the loss of coastal sage scrub habitat due to the project, the proposed project would preserve 25.2 acres of on-site open space and known individuals (M-BIO-8A). A portion of the existing southeastern territory where California gnatcatcher was observed in 2002-2003 would be in open space. In addition, a California gnatcatcher location in the central portion of the open space would be preserved which identified a California gnatcatcher in June 2013 and August 2014. Additionally, the proposed project would preserve 106.4 acres of coastal sage scrub habitat on an off-site mitigation parcel in Ramona that has been designated as a PAMA by the draft North County Plan. The on-site and off-site habitat preserves would provide for long-term viability of suitable habitat that connects to high-value districts and potential to support listed species. Other areas adjacent to the project Site, within the I-15 right-of-way and historically occupied by California gnatcatchers, would be buffered from any project effects through project design and would continue to support the species. In addition, the project would need to obtain a habitat loss permit from the County of San Diego with written concurrence from the wildlife agencies.

3.2.2 Project Effects Relevant to Guideline 4.1.B (County-Designated Sensitive Species)

3.2.2.1 Special-Status Plant Species (County List A and B Species)

Impact SP-1: Temporary Direct Impacts to Special-Status Plant Species (List A)

Short-term, construction-related, or temporary direct impacts to County List A plant species would primarily result from construction activities. Clearing, trampling, or grading of special-status plants outside designated construction zones could be significant. Potential short-term temporary impacts to County List A and B plant species would be significant **(Impact SP-1)**. Impacts to special-status plant species within a temporary construction area are considered permanent impacts and are discussed below (Table 3-1).

The project includes construction monitoring to avoid unintentional species and habitat impacts (M-BIO-1); construction areas would have temporary construction fencing to avoid inadvertent habitat destruction (M-BIO-2); there would be monitoring verification through preparation of a

biological monitoring report (M-BIO-3); and relocation of Ramona horkelia would be done through a revegetation plan (M-BIO-9). Short-term direct impacts to plant species would be mitigated to less than significant through implementation of the above mitigation measures, which are presented in Section 3.4, Mitigation Measures and Design Considerations.

Two County List A plant species would be directly impacted by the proposed project—summer holly and Ramona horkelia. Figures 11A–11D shows the proposed project impacts to County List A plant species on the project Site.

Impact SP-2: Permanent Direct Impacts to Special-Status Plant Species (List A)

Approximately 196 individuals of summer holly, a County List A species with a CRPR 1B.2, would be directly impacted by the proposed project (14 percent of the on-site individuals). Approximately 62 individuals of Ramona horkelia, a County List A species with a CRPR 1B.3, would be directly impacted by the proposed project (100 percent of the on-site individuals). This proposed impact would be considered significant **(Impact SP-2)**. This project includes monitoring to avoid unintentional species and habitat impacts (M-BIO-1); habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); Mitigation and Monitoring Plan for the relocation of Ramona horkelia (M-BIO-9). With these measures, impacts to summer holly and Ramona horkelia and other sensitive status species which may not have been detected during focused surveys due to dense vegetation (see Section 1.3.6, Survey Limitations), would be significant and mitigated. Preservation of 1,160 individuals of summer holly within the preserve would provide a mitigation ratio of approximately 6:1, which exceeds the maximum 3:1 required ratio for list A plant species. All individuals of Ramona horkelia would be mitigated through transplantation of the existing plants into the preserve per M-BIO-9. Table 3-1 summarizes the proposed direct impacts to County List A Species and the significance of the impacts prior to mitigation. There would be no direct impacts to County List B plant species resulting from implementation of the proposed project.

Table 3-1
Summary of Direct Impacts to County List A Species and Significance Prior to Mitigation

Species	CRPR	Approximate Number of Individuals within Project Site	Approximate Number of Individuals within On-Site Development Footprint	Estimated Percentage of Occurrences Impacted On Site	Significance Prior to Mitigation
Comarostaphylis diversifolia ssp. *diversifolia* Summer holly	1B.2	1,356	196[1]	14%	Significant
Horkelia truncata Ramona horkelia	1B.3	62	62	100%	Significant

[1] This total includes one individual plant which is located within a temporary 15-foot construction area. Although vegetation within this area would be restored, and the impact is therefore considered temporary, impacts to special-status plants within the temporary area are considered permanent.

3.2.2.2 Special-Status Wildlife Species (County Group 1 or State SSC)

Impact W-3: Temporary Direct Impacts to Special-Status Wildlife (Group 1 and/or SSC)

Thirteen County Group 1 and/or state SSC animal species were detected within the project Site during biological surveys: western spadefoot, Cooper's hawk, sharp-shinned hawk,[5] Bell's sage sparrow, red-shouldered hawk, turkey vulture, yellow warbler, coastal California gnatcatcher, coastal whiptail, red-diamond rattlesnake, Blainville's horned lizard, coast patch-nosed snake, and San Diego desert woodrat (see Section 1.4.6). Figures 11A–11E shows the proposed project impacts in relation to the special-status wildlife observations mapped on Site.

In addition, one County Group 1 and/or state SSC wildlife species has a high potential to occur within the project Site: northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*). Impacts to wildlife species are discussed in detail in Section 2.4.1.

Loss of special-status wildlife species (County Group 1 or state SSC animals) including individual amphibians, reptiles, and small mammals from construction-related activities would result in short-term direct impacts that would be considered significant **(Impact W-3)**. The project includes biological monitoring to avoid unintentional species and habitat impacts (M-BIO-1); temporary construction fencing (M-BIO-2); monitoring verification through preparation of a biological monitoring report (M-BIO-3); reduction of invasive species through biological review of landscape plans (M-BIO-4); avoidance by preconstruction surveys for nesting birds and setbacks (M-BIO-5); vegetation would be replaced through a vegetation plan where possible for temporary vegetation impacts (M-BIO-6); and minimize night and outdoor lighting (M-BIO-7). As described under M-BIO-5, project construction should occur outside the typical nesting period for most bird species and raptors (i.e., outside the period of February 1 through August 31, and as early as January 1 for some raptor species) to limit impacts to nesting birds and raptors, or that a nesting bird survey is conducted within 72 hours of project implementation. If any active nests or the young of nesting special-status bird species (County Group 1 or state SSC animals) are impacted through direct grading, these impacts would be considered significant, based on the MBTA. This impact would be mitigated through mitigation measure M-BIO-5 (avoidance by preconstruction surveys for nesting birds and setbacks). With these measures, impacts that would impact nesting birds and raptors and other sensitive status species would be significant and mitigated.

[5] Sharp-shinned hawk has a high potential to forage in the project Site, but not nest.

Impact W-4: Permanent Direct Impacts to Special-Status Wildlife (Group 1 and/or SSC)

Potential permanent direct impacts to the wildlife species described previously include removal of suitable nesting and/or foraging habitat, summarized in Tables 2-8 and 2-9. Loss of suitable nesting/foraging habitat is considered a significant impact **(Impact W-4)**. These impacts would be mitigated through habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); and development of a resource management plan (M-BIO-8D).

3.2.3 Project Effects Relevant to Guideline 4.1.C (Special-Status Species)

3.2.3.1 Special-Status Plant Species (County List C and D Species)

There would be no direct impacts to County List C plant species resulting from implementation of the proposed project. The project will, however, cause direct impacts to three County List D plant species: chaparral rein orchid, Engelmann oak, and ashy spike-moss. Figures 11A–11E show the proposed project impacts to County List D plant species on the project Site. Chaparral rein orchid and Engelmann oak are listed as CRPR 4.2, while ashy-spike moss is listed as CRPR 4.1. Specifically, the proposed project would impact all five occurrences of chaparral rein orchard individuals, 64 percent of the Engelmann oaks mapped on Site, and one of three occurrences of ashy spike-moss (Table 3-2). These proposed impacts to County List D species would be not considered significant because, based on the species CRPR of 4, these species are of limited distribution but not considered "rare" from a statewide perspective; therefore, proposed impacts are not expected to substantially affect long-term survival of the species (CNPS 2014). Although impacts to these species are not considered significant, suitable habitat for these species would be preserved within the open space (M-BIO-8A).

Table 3-2
Summary of Direct Impacts to County List D Species and Significance Prior to Mitigation

Species	CRPR	Approximate Number of Individuals within Project Site	Approximate Number of Individuals within On-Site Development Footprint	Estimated Percentage of Occurrences Impacted On Site	Significance Prior to Mitigation
Piperia cooperi Chaparral rein orchid	4.2	5	5	100%	Less than Significant
Quercus engelmannii Engelmann oak	4.2	28	18	64%	Less than Significant
Selaginella cinerascens Ashy spike-moss	4.1	3	1	33%	Less than Significant

3.2.3.2 Special-Status Wildlife Species (County Group 2)

As summarized in Section 1.4.6, the following County Group 2 special-status wildlife species were incidentally observed either directly or indirectly (i.e., scat, tracks) within the project Site: Belding's orange-throated whiptail, San Diego ringneck snake, Coronado skink, western bluebird, barn owl, mule deer, and monarch butterfly. Figures 11A–11D show the proposed project impacts in relation to the special-status wildlife observations mapped on Site. Eight additional Group 2 species were observed but are analyzed in Section 3.2.2.2 because they are state SSC animals: western spadefoot, coastal whiptail, red-diamond rattlesnake, Blainville's horned lizard, coast patch-nosed snake, yellow warbler, northwestern San Diego pocket mouse, and San Diego desert woodrat. No additional County Group 2 species are determined to have a high potential to occur.

Construction-related activities may cause the loss of Group 2 special-status wildlife species that are not state SSC animals. This impact, however, is considered less than significant because the affected species has a widespread presence or the project Site is not of great importance to the species. The identified Group 2 wildlife species occur within a variety of habitats and through a wide geographic, topographic, and elevation ranges of which there are an abundance of these species in the region. Regardless of the significance of impacts to Group 2 species, M-BIO-8A ensures that suitable habitat for these species would be preserved within the open space.

Impact W-5: Temporary Direct Impacts to Special-Status Wildlife (Group 2)

However, if any active nests or young of nesting special-status bird species (County Group 2) are impacted through direct grading, these impacts would be considered significant **(Impact W-5)**, based on the MBTA. This impact would be mitigated through avoidance by preconstruction surveys for nesting birds and setbacks (M-BIO-5).

3.2.4 Project Effects Relevant to Guideline 4.1.D (Arroyo Toads)

No arroyo toads have been detected in the project Site nor are they expected to occur. No appropriate breeding habitat occurs on Site or in vicinity and the Site is not within 1 kilometer (0.6 mile) of any known breeding habitat (PSBS 2007). Closest species occurrences are documented approximately 4 miles northwest in the San Luis Rey River (USFWS 2014). Additional detections occur throughout the upper San Luis Rey River, approximately 5 miles north of the Site (CDFW 2014a; USFWS 2014).

3.2.5 Project Effects Relevant to Guideline 4.1.E (Golden Eagles)

Although the project Site contains a historic nest site for golden eagles (as described in PSBS 2007), no golden eagles were reported by PSBS (2007) or others in this region for many years.

There are no records of golden eagle on Site in the CNDDB (CDFW 2014a), and the closest species occurrences are of a male eagle approximately 4.5 miles to the east in 2015/2016, and another approximately 8 miles northeast in 1991 (nest located) and 2000 (adult and young flying over; CDFW 2014a). Additionally, the project Site is primarily composed of dense chaparral vegetation, in which eagles cannot efficiently conduct foraging activities.

3.2.6 Project Effects Relevant to Guideline 4.1.F (Raptor Foraging Habitat)

Impact W-6: Permanent Direct Impacts to Raptor Foraging Habitat

Foraging habitat for raptors is present throughout portions of the project Site. Suitable foraging habitat for raptors would be impacted (Tables 2-8 and 2-9). Therefore, impacts to raptor foraging habitat is considered a significant impact **(Impact W-6)**. Impacts to raptor foraging habitat would be mitigated through habitat preservation and management of existing populations of special-status species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E).

3.2.7 Project Effects Relevant to Guideline 4.1.G (Core Wildlife Area)

Impact CWA-1: Temporary Direct Impacts to Core Wildlife Area

The project Site is included in a core wildlife area, defined as a large block of habitat (typically 500 acres or more) that supports a viable population of multiple wildlife species.

Impacts to existing core wildlife area from construction-related activities would result in short-term direct impacts. Clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures (**Impact CWA-1**). The project includes monitoring to avoid unintentional species and habitat short-term direct impacts (M-BIO-1); temporary construction fencing (M-BIO-2); monitoring verification through preparation of a biological monitoring report (M-BIO-3); revegetation plan for temporary vegetation impacts (M-BIO-6); and outdoor night lighting would be in compliance with the Light Pollution Code (M-BIO-7). With these measures, short-term direct impacts that would impact the core wildlife area would be significant and mitigated.

Impact CWA-2: Permanent Direct Impacts to Core Wildlife Area

The proposed project would result in on-site impacts to 776.6 acres considered core wildlife area, and this would be a significant impact to viable populations of multiple wildlife species (**Impact CWA-2)** (see Table 1-7 for the species that were observed and the sensitive species that are

known or expected to occur). Impacts to core wildlife area would be mitigated through habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E).

Impact CWA-3: Temporary Indirect Impacts to Core Wildlife Area

Short-term indirect impacts to core wildlife area as a result of the proposed project are described in Section 2.6.2.1 and include short-term, construction-related, or temporary indirect impacts resulting in increased human activity during construction, lighting, and noise. Short-term indirect impacts to core wildlife area would be considered a significant impact **(Impact CWA-3)**. The proposed project includes construction monitoring to avoid unintentional species and habitat short-term indirect impacts (M-BIO-1); temporary construction fencing (M-BIO-2); monitoring verification through preparation of a biological monitoring report (M-BIO-3); revegetation plan for temporary vegetation impacts (M-BIO-6); and outdoor night lighting would be in compliance with the Light Pollution Code (M-BIO-7). With these measures, short-term indirect impacts to core wildlife area would be significant and mitigated. Long-term indirect impacts to habitat connectivity and wildlife corridors include habitat fragmentation, lighting, and noise from the proposed urban development and recreational facilities.

Impact CWA-4: Temporary Indirect Impacts to Core Wildlife Area

Long-term indirect impacts to core wildlife area as a result of the proposed project are described in Section 2.6.2.2 and include habitat fragmentation, human activity, lighting, and noise from the proposed urban development, recreational facilities, and human activity. Potential long-term direct impacts to the core wildlife area would be considered significant **(Impact CWA-4)**. However, these impacts to the core wildlife area will be mitigated to less than significant through habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E).

3.2.8 Project Effects Relevant to Guideline 4.1.H (Indirect Impacts)

3.2.8.1 Special-Status Plant Species

Impact SP-3: Temporary Indirect Impacts to Special-Status Plant (List A)

The short-term indirect impacts of the proposed project are described in Section 2.3.2.1 and include fugitive dust, changes in hydrology due to construction, and the introduction of chemical pollutants.

Short-term indirect impacts to County List A plant species would be considered a significant impact **(Impact SP-3)**. The project includes biological monitoring to avoid unintentional construction impacts (M-BIO-1); temporary construction fencing (M-BIO-2); and monitoring verification through preparation of a biological monitoring report (M-BIO-3). With these measures, impacts that would impact County list A species would be significant and mitigated.

Impact SP-3: Permanent Indirect Impacts to Special-Status Plant (List A)

Potential long-term or permanent indirect impacts to County List A plant species as result of the proposed project are described in Section 2.3.2.2 and include generation of fugitive dust, habitat fragmentation, chemical pollutants (herbicides), altered hydrology, non-native invasive species, alteration of the natural fire regime, and shading. Potential long-term indirect impacts to County List A plant species would be considered a significant impact **(Impact SP-4)**. The project includes reduction of invasive species through biological review of landscape plans (M-BIO-4); habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E); regulated herbicide application to control invasive species (M-BIO-10); and implementation of a fire protection plan to minimize the potential exposure of the project Site to fire hazards (M-BIO-11). With these measures, long-term indirect impacts that would impact County A list plants have been reduced to less than significant because human activity has been restricted to the project footprint, the risk of fire has been reduced, and release of exotic plants and animals has been minimized.

There would be no indirect impacts to County List B plant species resulting from implementation of the proposed project.

3.2.8.2 Special-Status Wildlife Species

Impact W-7: Temporary Indirect Impacts to Special-Status Wildlife

The project's short-term (temporary) indirect impacts to special-status wildlife species are described in Section 2.4.2.1 and include fugitive dust, noise, chemical pollutants, increased human activity during construction, and invasive predators and non-native animal species. Short-term indirect impacts to special-status wildlife species would be considered a significant impact (**Impact W-7**). This project includes biological monitoring to avoid unintentional construction impacts (M-BIO-1); temporary construction fencing (M-BIO-2); monitoring and verification through preparation of a biological monitoring report (M-BIO-3); reduction of invasive species through biological review of landscape plans (M-BIO-4); avoidance by preconstruction surveys for nesting birds and setbacks (M-BIO-5); revegetation plan for temporary vegetation impacts

(M-BIO-6); minimize night and outdoor lighting (M-BIO-7); and implementation of a fugitive dust control plan to prevent dust related impacts would be monitored through construction (M-BIO-1). With these measures short-term indirect impacts that would impact special-status wildlife species would be significant and mitigated.

Impact W-7: Permanent Indirect Impacts to Special-Status Wildlife

Potential long-term or permanent indirect impacts to special-status wildlife species are described in Section 2.4.2.2 and include generation of fugitive dust, off-road vehicle use, non-native, invasive plant and animal species, habitat fragmentation, alteration of the natural fire regime, and altered hydrology. Potential long-term indirect impacts to special-status wildlife species would be considered a significant impact (**Impact W-8**). This project includes reduction of invasive species through biological review of landscape plans (M-BIO-4); revegetation plan for temporary vegetation impacts (M-BIO-6); habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); open space fencing and signage (M-BIO-8E); and implementation of a fire protection plan minimize the potential exposure of the project Site to fire hazards (M-BIO-11). With these measures, long-term impacts that would impact special-status wildlife species have been reduced to less than significant because human activity has been limited to the project operational footprint, long-term preservation of on-site wildlife habitat movement corridor would be provided, the risk of fire has been reduced, and release of exotic plants and animals has been minimize.

3.2.9 Project Effects Relevant to Guideline 4.1.I (Burrowing Owl)

Burrowing owl was detected in 1998 surveys for Safa Ranch, which covered the northern part of the central valley of the present project Site. The 1998 report had no discussion on this species; any detection of this species was likely in the grassy area of the central valley. No observations have been made of burrowing owl in the numerous field visits . No burrowing owls have been detected in the project Site or are anticipated to occur. The closest CNDDB record is 5.6 miles south of project Site (CDFW 2015). Therefore, there are no impacts to occupied burrowing owl habitat.

3.2.10 Project Effects Relevant to Guideline 4.1.J (Cactus Wren)

No cactus wrens (*Campylorhynchus brunneicapillus*) have been detected in the project Site. No appropriate breeding habitat for this species occurs on Site or in the immediate vicinity. There have been numerous species occurrences in the vicinity of the Site, with the closest occurrence approximately 4.5 to 5.0 miles north of project Site. Additional occurrences are located north,

west, and south of the Site (CDFW 2014a). Due to the lack of suitable habitat on Site, there are no impacts to occupied cactus wren habitat.

3.2.11 Project Effects Relevant to Guideline 4.1.K (Hermes Copper Butterfly)

No Hermes copper butterflies have been detected in the project Site. Although the butterflies preferred adult nectaring plant, California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), occurs throughout the project Site; the requisite larval host plant (i.e., true limiting factor), spiny redberry (*Rhamnus crocea*), has not been detected during plant surveys. In addition, the project Site is north of most recent records for this species, and the closest occurrence is located 25 miles south of the project Site near Mission Trails (CDFW 2014a). Based on the lack of suitable habitat for this species, the project Site is not considered occupied Hermes copper butterfly habitat. Therefore, there are no impacts related to this guideline.

3.2.12 Project Effects Relevant to Guideline 4.1.L (Sensitive Bird Nesting)

Coastal cactus wren, least Bell's vireo, southwestern willow flycatcher, golden eagle, and light-footed clapper rail (*Rallus longirostris levipes*) do not nest in the project Site; therefore, the proposed project would not impact the nesting success of those species. No ground-nesting raptors (e.g., northern harrier (*Circus cyaneus*) and burrowing owl are expected to nest in the project Site. Therefore, the proposed project would not impact the nesting success of those species.

Impact W-9: Temporary Direct Impacts to Tree-nesting Raptors

Indirect impacts associated with construction, such as noise, could affect the nesting success of tree-nesting raptors. Construction-related impacts to the nesting success of tree-nesting raptors would be considered a significant impact **(Impact W-9)**, and would be mitigated through avoidance by preconstruction surveys for nesting birds and setbacks (M-BIO-5).

Impact W-10: Permanent Direct Impacts to Tree-nesting Raptors

Impacts to the nesting success of tree-nesting raptors (i.e., Cooper's hawk and red-tailed hawk) as a result of habitat removal associated with the proposed project are anticipated. Long-term direct impacts to nesting habitat for Cooper's hawk and red-shouldered hawk are summarized in Table 3-2, and impacts to general vegetation communities are described in Table 2-1. On- and off-site suitable nesting habitat consists of coast live oak woodland, eucalyptus woodland, southern coast live oak riparian forest, and scrub oak chaparral. Impacts to the nesting success of tree-nesting raptors associated with the loss of suitable nesting habitat would be considered significant **(Impact W-10).** The loss of suitable nesting habitat would be mitigated by habitat preservation and management of existing populations of sensitive species, suitable habitat, and

special-status vegetation communities (M-BIO-8A); easement for the open space (M-BIO-8B); limited building zone easement (M-BIO-8C); development of a resource management plan (M-BIO-8D); and open space fencing and signage (M-BIO-8E).

3.3 Cumulative Impact Analysis

Cumulative impacts are not assessed in this document; they are discussed thoroughly in the proposed project's Environmental Impact Report (EIR).

3.4 Mitigation Measures and Design Considerations

Mitigation measures and design considerations for special-status plant species will be determined following the impacts analysis.

M-BIO-1 **CONSTRUCTION MONITORING:** To prevent inadvertent disturbance to areas outside the limits of grading, all grading located shall be monitored by a biologist. A County of San Diego-approved "Project Biologist" shall be contracted to perform biological monitoring during all grading, clearing, grubbing, trenching, and construction activities.

The following shall be completed:

6. The Project Biologist shall perform the monitoring duties before, during, and after construction pursuant to the most current version of the *County of San Diego Report Format and Content Requirements, Biological Resources*, and this permit. The contract provided to the County of San Diego (County) shall include an agreement that this will be completed, and a Memorandum of Understanding (MOU) between the biological consulting company and the County shall be executed. The contract shall include a cost estimate for the monitoring work and reporting. In addition to performing monitoring duties pursuant to the most current version of the *County of San Diego Report Format and Content Requirements, Biological Resources*, the Project Biologist also will perform the following duties:

    a. Attend the preconstruction meeting with the contractor and other key construction personnel prior to clearing, grubbing, or grading to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).

    b. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas prior to clearing, grubbing, or grading. Perform weekly inspection of

fencing and erosion control measures (daily during rain events) near proposed preservation areas and report deficiencies immediately to the Department of Public Works (DPW) Construction Inspector.

c. Discuss procedures/training for minimizing harm to or harassment of wildlife encountered during construction with the contractor and other key construction personnel prior to clearing, grubbing, or grading.

d. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing, grubbing, or grading.

e. Conduct a field review of the staking to be set by the surveyor, designating the limits of all construction activity prior to clearing, grubbing, or grading.

f. Supervise and monitor vegetation clearing, grubbing, and grading to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved.

g. Flush special-status species (i.e., avian or other mobile species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities.

h. Verify that the construction site is implementing the following storm water pollution prevention plan (SWPPP) best management practices (BMPs): dust-control fencing, removal of construction debris and a clean work area, covered trash receptacles that are animal-proof and weather-proof, prohibition of pets on the construction site, and a speed limit of 15 miles per hour during the daylight and 10 miles per hour during dark hours.

i. Periodically monitor incoming landscape products for compliance with the prohibition on non-native invasive species and the requirement for landscaping composed of native species that do not require high irrigation rates.

j. Periodically monitor the construction site in accordance with the project's fugitive dust control plan in compliance with San Diego County Air Pollution Control Regulations to reduce particulate matter less than 10 microns (PM_{10}) and fine particulate matter less than 2.5 microns ($PM_{2.5}$) emissions during construction (refer to the Air Quality Technical Report). Periodically monitor the construction site to see that dust is minimized according to the fugitive dust control plan and that manufactured slopes are revegetated as soon as possible.

k. Periodically monitor the construction site to see that artificial security light fixtures are directed away from open space and are shielded.

l. Oversee the construction site so that cover and/or escape routes for wildlife from excavated areas shall be provided on a daily basis. All steep trenches, holes, and excavations during construction shall be covered at night with backfill, plywood, metal plates, or other means, and the edges covered with soils and plastic sheeting such that small wildlife cannot access them. Soil piles will be covered at night to prevent wildlife from burrowing in. The edges of the sheeting will be weighed down by sandbags. These areas may also be fenced to prevent wildlife from gaining access. Exposed trenches, holes, and excavations shall be inspected twice daily (i.e., each morning and prior to sealing the exposed area) by a qualified biologist to monitor for wildlife entrapment. Excavations shall provide an earthen ramp to allow for a wildlife escape route.

m. Stop or divert all work when deficiencies require mediation and notify DPW Construction Inspector and the County Construction Inspector within 24 hours; produce periodic (monthly during grading) and final reports and submit to the Wildlife Agencies and the PDS (final report will release bond);

n. Confer with the Wildlife Agencies and the County Construction Inspector within 24 hours any time protected habitat or gnatcatchers or other special-status species are being affected by construction;

o. Keep daily monitoring notes for the duration of the grading project for submittal in a final report to substantiate the biological supervision of the grading activities and the protection of the biological resources.

~~o.~~p. Make monthly updates available to the Wildlife Agencies and County based on the daily monitoring notes described above, until such time as the North County MSCP Plan is adopted, after which the MSCP plan provisions will replace this measure.

The cost estimate of the monitoring (provided in the contract) shall be added to the grading bonds that will be posted with the Department of Public Works (DPW), or bond separately with the Department of Planning & Development Services (PDS). The bond for monitoring will be released upon the acceptance of the monitoring report for each final map.

Documentation: The applicant shall submit the monitoring contract, cost estimate, and MOU to PDS for review and approval. The applicant shall provide verification that the cost of the monitoring has been added to the grading bond.

Timing: Monitoring shall be performed throughout the duration of the grading; if this project includes more than one Final Map, each shall have separate monitoring contracts and documentation.

Monitoring: The PDS shall review the contract, MOU, and cost estimate or separate bonds for compliance with this condition. The cost estimate shall be forwarded to the project manager for inclusion in the grading bond cost estimate and grading bonds. The DPW shall add the cost of the monitoring to the grading bond costs.

M-BIO-2 **CONSTRUCTION FENCING:** To prevent inadvertent disturbance to sensitive vegetation and species, temporary construction fencing shall be installed. The temporary fencing shall be placed to confine project activities to the areas approved for construction activities and to protect from inadvertent disturbance of all open space easements and preserve areas that do not allow grading, brushing or clearing. Temporary fencing shall also be required in all locations of the project where proposed grading or clearing is within 100 feet of open space or preserve boundaries. The placement of such fencing shall be approved by the PDS, Permit Compliance Section. Upon approval, the fencing shall remain in place until the conclusion of grading activities, after which the fencing shall be removed.

***Documentation*:** The applicant shall provide evidence that the fencing has been installed and have a California licensed surveyor certify that the fencing is located on the boundary of the open space easement(s). The applicant shall submit the certification letter to PDS for approval.

***Timing*:** Prior to the preconstruction conference for each Final Map area, and prior to any clearing, grubbing, trenching, grading, or any land disturbances the fencing shall be installed, and shall remain for the duration of the grading and clearing. This may be done in association with grading and improvement plans for each Final Map.

Monitoring: The County of San Diego Construction Inspector shall attend either the preconstruction conference and approve the installation of the temporary fencing, or review the certification and pictures provided by the applicant.

M-BIO-3 **MONITORING REPORT:** To ensure that the biological monitoring occurred during the grading phase of the project, a final biological monitoring report shall be prepared. The report shall substantiate the supervision of the grading activities and state that grading or construction activities did not impact any additional areas or any other sensitive biological resources. The report shall conform to the County of San Diego *Report Format and Content Requirements, Biological Resources*, and include the following items:

1. Photos of the temporary fencing that was installed during the trenching, grading, or clearing activities
2. Monitoring logs showing the date and time that the monitor was on site
3. Photos of the site after the grading and clearing activities
4. Lists of species observed with special-status species mapped.

***Documentation*:** The Project Biologist shall prepare the final report and submit it to the PDS for review and approval.

Timing: Upon approval of each Final Map, and prior to approval of the associated grading and improvement plans, the monitoring contract and bonding shall be submitted and complete. Upon completion of grading activities for each Final Map, and prior to rough grading final Inspection (Grading Ordinance SEC 87.421.a.2), the final report shall be completed and accepted by PDS.

***Monitoring*:** The PDS shall review the final report for compliance with this condition and the report format guidelines. Upon approval of the report, PDS shall inform DPW that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then PDS shall inform DPW to release the bond back to the applicant.

M-BIO-4 **INVASIVE SPECIES PROHIBITION:** The PDS Landscape Architect (PDS LA) shall require that all final landscape plans comply with the following: (1) no invasive plant species as included on the most recent version of the Cal-IPC California Invasive Plant Inventory for the project region shall be included, and (2) the plant palette shall be composed of native species that do not require high irrigation rates. The Project Biologist shall periodically check landscape products for compliance with this requirement.

***Monitoring*:** PDS shall approve the final landscape plans; M-BIO-1 includes periodic monitoring of landscaping products brought to the Site.

M-BIO-5 **NESTING BIRD MANAGEMENT, MONITORING, AND REPORTING PLAN:** To avoid impacts to nesting migratory birds and raptors and other nesting birds, which are a sensitive biological resource pursuant to CEQA, the MBTA and Fish and Game Code, breeding season avoidance shall be implemented on all plans.

DESCRIPTION OF REQUIREMENT: There shall be no brushing, clearing, blasting and/or grading allowed during the breeding season of migratory birds or raptors (between January 15 and August 31) or coastal California gnatcatcher (between February 15 and August 15). The Director of PDS [PDS, PCC] may waive this condition, through written concurrence from the USFWS and the CDFW (i.e., Wildlife Agencies), provided that no nesting or breeding birds are present within 300 feet of the brushing, clearing or grading (500 feet for raptors) based on a pre-construction survey conducted by a County-approved biological consultant within seven days prior to the proposed start of clearing/grading. Prior to preconstruction conference and prior to any clearing, grubbing, trenching, grading, or any land disturbances and throughout the duration of the grading and construction, compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies. If construction work must occur during the avian breeding season (February 1 to August 31, and as early as January 1 for some raptors), the applicant shall prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. This plan shall be designed in coordination with the Wildlife Agencies. To avoid impacts to nesting birds the applicant shall:

1. Prepare an NBMMRP that shall include the following: nest survey protocols describing the nest survey methodologies; a management plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks; a monitoring and reporting plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to monitor the applicant's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513; guidance for the monitoring biologists on reducing stress and harm to the nesting birds as a result of monitoring activities, including instructions on frequency of monitoring visits and distance to keep from the nest; the schedule for the submittal (usually weekly) of the NML; standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks; a detailed explanation of how the buffer widths were determined; and measures the applicant will implement to preclude birds from

using project-related structures (i.e., construction equipment, facilities, or materials) for nesting.

2. Conduct preconstruction nesting bird surveys within 72 hours ~~of~~ prior to construction-related activities and implement appropriate avoidance measures for identified nesting birds.
3. If feasible, conduct surveys beyond the project Site to determine presence of nesting birds that the project activities may affect—300 feet for passerine birds and 500 feet for raptors and coastal California gnatcatchers. The survey protocols should include a detailed description of methodologies used by CDFW-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols shall include the size of the Site being surveyed, method of search, and behavior that indicates active nests.
4. Include each nest identified in the project Site in the NMLs. The NMLs shall be updated daily and submitted to the CDFW weekly. Since the purpose of the NMLs is to allow the CDFW to track compliance, the NMLs shall include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet or 500 feet) and nests with buffer widths were reduced by encroachment of project-related activities. The NMLs shall provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs shall allow for tracking the success and failure of the buffers, and shall provide data on the adequacy of the buffers for certain species.
5. Rely on its avian biologists to coordinate with CDFW and USFWS to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths shall be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths shall consider the following factors:
    a. Nesting chronologies
    b. Geographic location
    c. Existing ambient conditions (human activity within line of sight—cars, bikes, pedestrians, dogs, noise)
    d. Type and extent of disturbance (e.g., noise levels and quality—punctuated, continual, ground vibrations—blasting-related vibrations

proximate to tern colonies are known to make the ground-nesting birds flush the nests)

e. Visibility of disturbance

f. Duration and timing of disturbance

g. Influence of other environmental factors

h. Species' site-specific level of habituation to the disturbance

i. Construction-related noise levels in coastal California gnatcatcher occupied habitat within 500 feet of construction activity would not exceed 60 dBA Leq or pre-construction ambient noise levels, whichever is greater. Project construction within 500 feet of occupied habitat would occur outside of the breeding season if possible. If necessary, construction activities during the breeding season would be managed to limit noise levels in occupied habitat within 500 feet of the project or noise attenuation measures, such as temporary sound walls, would be implemented to reduce noise levels below 60 dBA Leq or below existing ambient noise levels, whichever is greater.

6. Apply the standard buffer widths to avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.

7. Avoidance and buffering of nests in the process of being built on construction equipment or developed structures shall not be necessary. Additionally, although direct impacts to nests with eggs or chicks is not allowed, no buffer requirements will apply.

***Documentation*:** The applicant shall submit the NBMMRP for review and approval by the County and the Wildlife Agencies.

***Timing*:** The NBMMRP shall be submitted and approved prior to approval of the first Final Map. No grading shall occur until concurrence is received from the County and the Wildlife Agencies. The NMLs shall be submitted to the County and the Wildlife Agencies prior to preconstruction conference and prior to any clearing, grubbing, trenching, grading, or any land disturbances and throughout the duration of the grading and construction. Compliance with this condition is mandatory unless the requirement is waived by the County upon receipt of concurrence from the Wildlife Agencies.

***Monitoring*:** The County Construction Inspector shall not allow any grading during the specified dates, unless a concurrence from the Wildlife Agencies is received and reviewed by PDS.

M-BIO-6 **REVEGETATION PLAN:** To compensate for temporary impacts to special status vegetation and wildlife habitat impacts, a final Revegetation Plan shall be submitted and approved for temporary impacts from grading to areas within the preserve and outside the Limited Building Zone (LBZ) easement and Fire Management Zone (FMZ). The revegetation plan shall be in compliance with the conceptual restoration plan (Appendix J to this Biological Resources Technical Report) and provide replacement of comparable native vegetation. The final revegetation plan shall include, at a minimum, the implementation strategy; appropriate seed/source materials; (including seed sourced from the existing on-site native plants, to the extent feasible); appropriate planting method; an irrigation plan; quantitative and qualitative success criteria; a maintenance, monitoring, and reporting program; estimated completion time; and contingency measures. The revegetation plan shall conform to the most current version of the County of San Diego *Report Format and Content Requirements for Revegetation Plans*. To ensure project completion and success of the revegetation plan, a surety shall be provided and an agreement shall be executed with the County of San Diego and consist of a letter of credit, bond, or cash for 100 percent of the estimated costs associated with the implementation of the revegetation plan and a 10 percent cash deposit of the cost of all improvements (no less than $3,000; no more than $30,000). The surety shall be released upon completion of the revegetation plan provided the installed vegetation is in a healthy condition and meets the plan's success criteria.

***Documentation*:** The applicant shall prepare the Revegetation Plan and submit it for review with the applicable review fees and deposits.

***Timing*:** Prior to the approval of the first associated map and prior to the approval of the first associated plan or issuance of the first associated permit, the Revegetation Plan shall be approved by PDS.

***Monitoring*:** The PDS LA shall review the Revegetation Plan for conformance with this condition and the County's *Report Format and Content Requirements for Revegetation Plans*. Upon approval of the Revegetation Plan, a Director's Decision of approval shall be issued to the applicant, with the request for compliance with a Secured Agreement for the implementation of the Revegetation Plan. Upon receipt of the compliance letter, the PDS LA shall sign the Agreement

for the Director of PDS and ensure the cash deposit is collected. Upon acceptance of the Agreement, securities and cash deposit, the PDS LA shall provide a confirmation letter acknowledging acceptance of securities.

M-BIO-7 **LIGHTING PLAN:** All artificial outdoor light fixtures shall be installed so they are directed away from open space and are shielded in accordance with the project's lighting plan standards as outlined in the Specific Plan for the project. Light fixtures shall be installed in conformance with the County Light Pollution Code, the Building Code, the Electrical Code, and lighting requirements specified in Section 6324 (Lighting Permitted in Required Yards) and Section 6326 (Lighting not in Required Yards) of the Zoning Ordinance, along with any other related state and federal regulations such as California Title 24.

Documentation: The applicant shall submit building plans to the County for review in compliance of the above regulations.

Timing: Prior to the approval of all building permits.

Monitoring: The County building inspector shall review structures for compliance with this condition. During construction, the Project Biologist shall review lighting for compliance with this measure as part of the construction monitoring requirement.

M-BIO-8A **PRESERVE:** The applicant shall preserve in permanent open space approximately 1,420.9 acres of native habitats generally consistent with the assemblage of vegetation communities impacted by the project in a proposed on-site and off-site open space preserve area (Table 4-1) (see Appendix K for the off-site mitigation site description). This shall include preservation of 1,420.9 acres of native habitats to mitigate for project impacts to 760.6 acres of special-status vegetation communities (both upland and riparian), thereby preserving compensatory habitat that provides equal to or greater benefit to plant and wildlife species. Proposed on-site open space preserve has already been evaluated and may be used to satisfy this requirement through M-BIO-8B through M-BIO-8E.

***Documentation*:** A Resource Management Plan (RMP) shall be prepared per M-BIO-8D and an application for the RMP shall be submitted to the PDS.

***Timing*:** Prior to issuance of a grading permit the mitigation shall occur.

***Monitoring*:** The PDS shall accept an application for an RMP, and PDS and DPR shall review the RMP submittal for compliance with this condition and the RMP Guidelines.

M-BIO-8B **BIOLOGICAL OPEN SPACE EASEMENT.** The County of San Diego (County) shall be granted a biological open space easement, as shown on the approved Tentative Map for the on-site open space and a separate open space easement exhibit for the off-site biological open space. These easements shall be for the protection of biological resources and all of the following shall be prohibited on any portion of the land subject to said easement: grading; excavation; placing soil, sand, rock, gravel, or other material; clearing of vegetation; constructing, erecting, or placing of any building or structure; vehicular activities; dumping trash; or using for any purpose other than as open space. Granting this open space shall authorize the County and its agents to periodically access the land to perform management and monitoring activities for species and habitat conservation. The only exception(s) to this prohibition are the following:

~~1. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard. Although clearing for fire management is not anticipated with the creation of this easement, such clearing may be deemed necessary in the future for the safety of lives and property. All fire clearing shall be pursuant to the applicable fire code of the fire authority having jurisdiction and the Memorandum of Understanding dated February 26, 1997, between the wildlife agencies and the fire districts and any subsequent amendments thereto.~~

~~2.~~1. Activities conducted pursuant to a revegetation or habitat management plan approved by the Director of PDS, DPR and DPW.

~~3.~~2. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the County of San Diego DEH.

~~4.~~3. Uses, activities, and placement of structures expressly permitted and shown on the plot plan.

~~5.~~4. Construction, use and maintenance of multi-use, non-motorized trails.

***Documentation*:** The applicant shall show the on-site open space easement on the Final Map and open space easement exhibit with the appropriate granting language on the title sheet concurrent with Final Map Review, then submit them for preparation and recordation with the *[DGS, RP]*, and pay all applicable fees

associated with preparation of the documents. For the off-site open space an easement will be dedicated to the County through a separate document.

Timing: Prior to the approval of each Final Map, and on the associated map and prior to the approval of any associated plan and issuance of any associated permit, the on-site and off-site biological open space easements shall be recorded.

Monitoring: For recordation on the map, the *[PDS, LDR]* shall route the Final Map to *[PDS, PCC]* for approval prior to map recordation. The *[PDS, PCC]* shall preapprove the language and estimated location of the easements prior to recordation. The *[PDS LDR]* shall satisfy the condition after map recordation.

M-BIO-8C **LIMITED BUILDING ZONE EASEMENT:** A Limited Building Zone (LBZ) Easement shall be granted to prohibit the building of structures that would require vegetation clearing within the protected biological open space for fuel management purposes. The easement must extend at least 100 feet from the Biological Open Space boundary.

DESCRIPTION OF REQUIREMENT: Grant to the County of San Diego a LBZ Easement as shown on the Tentative Map. The purpose of this easement is to limit the need to clear or modify vegetation for fire protection purposes within the adjacent biological open space easement and prohibit the construction or placement of any structure that would require vegetation clearing within the protected biological open space for fuel management purposes. The only exceptions to this prohibition are structures that do not require fuel modification/vegetation management.

***Documentation*:** The applicant shall show the easement on the Final Map with the appropriate granting language on the title sheet concurrent with Final Map Review, then submit them for preparation and recordation with the *[DGS, RP]*, and pay all applicable fees associated with preparation of the documents.

***Timing**:* Prior to the approval of each Final Map, and on the associated map and prior to the approval of any associated plan and issuance of any associated permit, the Limited Building Zone easements shall be recorded.

Monitoring: For recordation on the map, the *[PDS, LDR]* shall route the Final Map to *[PDS, PCC]* for approval prior to map recordation. The *[PDS, PCC]* shall preapprove the language and estimated location of the easements prior to recordation. The *[PDS LDR]* shall satisfy the condition after map recordation.

M-BIO-8D **RESOURCE MANAGEMENT PLAN:** To provide for the long-term management of the proposed biological open space preserve, a Resource Management Plan (RMP) shall be prepared and implemented. Conceptual RMPs are provided as Appendix L (on-site open space) and Appendix M (off-site open space) to this Biological Resources Technical Report.

DESCRIPTION OF REQUIREMENT: Submit to and receive approval from the Director of PDS, a RMP consistent with the project's RPP on file with as Environmental Review Number PDS2014-MPA-14-018. The final RMP cannot be approved until the following has been completed to the satisfaction of the Director of PDS, and, in cases where DPR has agreed to be the owner/manager, to the satisfaction of the Director of DPR:

1. The RMP shall be prepared and approved pursuant to the most current version of the County of San Diego Biological Report Format and Content Requirements.
2. The habitat land to be managed shall be completely purchased.
3. The biological open space easements shall be dedicated to ensure that the land is protected in perpetuity.
4. A Resource Manager shall be selected and evidence provided by applicant as to the acceptance of this responsibility by the proposed Resource Manager
5. The RMP funding costs, including a PAR (Property Assessment Record) or other equally adequate forecast. The funding mechanism (endowment or other equally adequate mechanism) to fund annual costs for the RMP and the holder of the security shall be identified and approved by the County.
6. A contract between the applicant and County shall be executed for the implementation of the RMP.
7. Annual reports shall include an accounting of all required tasks and details of tasks addressed during the reporting period, and an accounting of all expenditures and demonstration that the funding source remains adequate.

Documentation: The applicant shall prepare the RMP and submit it to PDS and pay all applicable review fees.

Timing: Prior to approval of the first Final Map, submit the RMP for review and approval.

Monitoring: PDS shall review the RMP for compliance with the content guidelines, the conceptual RMP, and this condition.

M-BIO-8E **BIOLOGICAL OPEN SPACE FENCING AND SIGNAGE:** To protect the proposed open space easement from unauthorized entry or disturbance, permanent post and rail fencing, or similar permeable fence, shall be installed along the boundaries of the biological open space. Open space signage shall be placed approximately every 200 feet along the fencing (Figure 13).

DESCRIPTION OF REQUIREMENT: Open space fencing or walls shall be placed adjacent to residential uses and roads, as shown on Figure 13. Open space signage shall be installed as shown on Figure 13 and shall be corrosion resistant, a minimum of 6 inches by 9 inches, on posts not less than 3 feet in height from the ground surface, and must state the following:

Sensitive Environmental Resources
Area Restricted by Easement
Entry without express written permission from the County of San Diego is prohibited. To report a violation or for more information about easement restrictions and exceptions contact the County of San Diego,
Planning & Development Services
Reference: (PDS2015-ER-15-08-001)

Documentation: The applicant shall install the fencing or walls as indicated on Figure 13 and include them on the building plans. The applicant shall install the signage as indicated on Figure 13 and have them photographed and verified by a California Registered Engineer or licensed surveyor.

Timing*:* Prior to occupancy, the fencing or walls and signs shall be in place.

Monitoring: PDS shall verify compliance of the fencing or walls through review of the building permits and this condition. Evidence of the signage shall be site photos and a statement from a California Registered Engineer, or licensed surveyor that the open space signs have been installed in accordance with the open space fencing and signage plan.

M-BIO-9 **HORKELIA RELOCATION PLAN:** For any direct loss of Ramona horkelia, the applicant shall prepare and implement a Relocation Plan prior to the issuance of grading permits. The relocation plan shall provide for replacement of individual plants to be removed at a minimum 1:1 ratio, within suitable receptor sites(s) where no future construction-related disturbance will occur. The

relocation plan shall specify at minimum the following: (1) the location of the receptors site(s) in protected open space areas within the project Site; (2) appropriate methods for replacement (e.g., harvesting seeds, salvaging and transplantation of impacted plants, and/or nursery propagation); (3) receptor site preparation methods; (4) schedule and action plan for maintaining and monitoring the receptor site(s); (5) list of performance criteria and standards for successful mitigation; (6) measures to protect the receptor site(s) (e.g., trespass and erosion control, weeding); and (7) cost of implementing the plan.

Documentation: The applicant shall prepare the final Horkelia Mitigation Plan that complies with the Conceptual Restoration Plan and submit it for review with the applicable review fees and deposits (this is considered a Revegetation Plan submittal).

Timing: Prior to the approval of the first associated map and prior to the approval of the first associated plan or issuance of the first associated permit, the Horkelia Mitigation Plan shall be approved.

Monitoring: The PDS shall review the Horkelia Mitigation Plan for conformance with this condition and the applicable elements of the most current version of the County of San Diego *Report Format and Content Requirements for Revegetation Plans*. Upon approval of the Horkelia Mitigation Plan, security for success of the Horkelia Mitigation Plan shall be collected and the applicant shall provide a confirmation letter acknowledging acceptance of securities.

M-BIO-10 **CONTROL OF INVASIVE SPECIES:** The Resource Manager will map occurrences of perennial, non-native species that have a rating of moderate or high by the California Invasive Plant Council. If found, ~~W~~weed control treatments shall include all legally permitted chemical, manual, and mechanical methods applied with the authorization of the County of San Diego agriculture commissioner. The application of herbicides shall be in compliance with all state and federal laws and regulations under the prescription of a pest control advisor and implemented by a licensed applicator. Where manual and/or mechanical methods are used, disposal of the plant debris shall follow the regulations set by the County of San Diego agriculture commissioner. ~~The timing of the weed control treatment shall be determined for each plant species in consultation with the pest control advisor, County of San Diego agriculture commissioner, and California Invasive Plant Council with the goal of controlling populations before they start producing seeds.~~

***Timing**:* The timing of the weed control treatment shall be on an as-needed basis determined for each plant species in consultation with the pest control advisor, County of San Diego agriculture commissioner, and California Invasive Plant Council with the goal of controlling populations before they start producing seeds.

Monitoring: The County requires monthly monitoring of the open space. The Resource Manager shall visit the open space each month in order to monitor the overall conditions of the open space and determine if any management tasks are required. The Resource Manager shall monitor the treated areas until the invasive species are determined to be eradicated.

Documentation: An annual monitoring letter report will be submitted to the County at the end of January, which summarizes the overall condition of vegetation communities and sensitive species in the Open Space Preserve, outlines proposed management tasks for the following year, and provides results of management activities proposed in the previous report.

M-BIO-11 **FIRE PROTECTION PLAN:** To minimize the potential exposure of the project Site to fire hazards, all features of the Fire Protection Plan for the Newland Sierra Project shall be implemented in conjunction with development of the project.

3.5 Conclusions

3.5.1 Sensitive Plant Species

Impact SP-1 The significant short-term direct impacts to summer holly and Ramona horkelia will be reduced to less than significant through implementation of mitigation measures M-BIO-1, M-BIO-2, M-BIO-3, and M-BIO-9, which require biological monitoring, temporary construction fencing, preparation of a biological monitoring report, and relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan. These mitigation measures will prevent and document that construction will not cause additional impacts beyond the project footprint.

Impact SP-2 The significant long-term direct impacts to summer holly and Ramona horkelia will be reduced to less than significant through implementation of mitigation measures M-BIO-1, M-BIO-8A, and M-BIO-9, which require biological monitoring, provides commensurate on- or off-site habitat management and conservation that has been demonstrated to contain habitat for these species, and relocation of Ramona horkelia through implementation of a Mitigation and Monitoring Plan. This would reduce the impact to less than significant because there would be adequate numbers of individuals and habitat to preserve and manage the species in

perpetuity. Impacts to 14 percent of the summer holly population are mitigated with on-site preservation and management (M-BIO-8A). This would reduce the impact to less than significant because there would be adequate numbers of individuals and habitat to preserve and manage the species in perpetuity. Impacts to 100 percent of the Ramona horkelia population will be mitigated through a transplantation/revegetation program that will meet applicable standards and be regulated through a Revegetation Plan (M-BIO-9) (see Appendix J).

Impact SP-3 The significant short-term indirect impacts to summer holly and Ramona horkelia will be reduced to less than significant through implementation of mitigation measures M-BIO-1, M-BIO-2, and M-BIO-3, which require biological monitoring during construction, temporary construction fencing, and a biological monitoring report. These impacts have been reduced to less than significant because these measures will prevent and document that construction will not cause additional impacts beyond the project footprint.

Impact SP-4 The significant long-term indirect impacts to summer holly and Ramona horkelia will be reduced to less than significant through implementation of mitigation measures M-BIO-4, M-BIO-8A–8E, M-BIO-10, and M-BIO-11, which provide for biological review of landscape plans, habitat conservation and management of equivalent function and value, regulation of landscape installation and herbicide application, and implementation of a fire protection plan. Potential indirect impacts have been reduced to less than significant because human activity has been restricted to the project footprint, the risk of fire has been reduced, and release of exotic plants and animals has been minimized to the extent possible, and the Revegetation Plan includes adaptive management that will add measures to restore the population if needed (Appendix J).

3.5.2 Sensitive Wildlife Species

Impact W-1 Direct loss of federally threatened coastal California gnatcatcher nesting individuals (including nests and/or young) will be reduced to less than significant through implementation of mitigation measures M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-4, M-BIO-5, M-BIO-6, and M-BIO-7, which require biological monitoring during construction, temporary construction fencing, preparation of a biological monitoring report, review of landscape plans, preconstruction surveys for nesting birds and setbacks, and minimizing night lighting. Biological monitoring and reporting will ensure that additional habitat is not impacted during construction and that the BMPs outlined in the SWPPP are adhered to. Preconstruction surveys will identify locations of coastal California gnatcatchers

and other migratory bird nests and implement construction limitations or provide suitable buffers between these locations and construction. Review of the conceptual landscape plans has ensured that native species are being used, thus reducing the potential for invasive species to encroach upon existing native habitat. PDS will confirm use of native species during approval of the final landscape plans prior to grading. Minimizing night and outdoor lighting will reduce disruption of nocturnal wildlife movement. Therefore, implementation of these mitigation measures will reduce these impacts to less than significant.

Impact W-2 The significant long-term direct impacts to coastal California gnatcatcher as a result of removal of suitable habitat, will be reduced to less than significant through implementation of mitigation measures M-BIO-8A through M-BIO-8E, which provides commensurate on- or off-site habitat management and conservation that has been demonstrated to contain habitat for these species. The proposed project has been incorporated into the overall conservation strategy of the County's draft North County Plan, and the development areas and biological open space areas of the proposed project are identified as proposed hardline areas in the draft North County Plan (County of San Diego 2016). Loss of coastal sage scrub and any associated incidental take of California gnatcatcher would be authorized through the County's Section 4(d) HLP process or through Section 7 consultation with the USFWS. A Draft Habitat Loss Permit, including 4(d) findings has been provided in Appendix E. As demonstrated by the incorporation of the proposed project as a proposed hardline area in the draft North County Plan and by the draft HLP findings provided in Appendix E, the loss of coastal sage scrub associated with the proposed project would be consistent with the NCCP Guidelines, County's draft North County Plan, and the Section 4(d) Rule.

Impacts W-3 and W-7 Potential significant short-term direct and indirect impacts from loss of County Group I and/or SSC species. Species will be reduced to less than significant through implementation of mitigation measures M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-4, M-BIO-5, M-BIO-6, and M-BIO-7, which require biological monitoring during construction, preparation of a biological monitoring report, biological review of landscape plans, preconstruction surveys for nesting birds and setbacks, revegetation of temporarily impacted areas, and minimizing night and outdoor lighting. Biological monitoring and reporting will ensure that additional habitat is not impacted during construction and that the BMPs outlined in the SWPPP are adhered to. Preconstruction surveys will identify locations of nesting birds and implement construction limitations or provide suitable buffers between these locations and construction. The conceptual landscape plans

demonstrate that native species are being used, thus reducing the potential for invasive species to encroach upon existing native habitat. PDS will confirm use of native species during approval of the final landscape plans prior to grading. Minimizing night and outdoor lighting will reduce disruption of nocturnal wildlife movement while monitoring of excavated areas and soil piles will prevent entrapment, and potential death, of wildlife species. Therefore, implementation of these mitigation measures will reduce these impacts to less than significant because the measures will minimize the potential for loss of individuals.

Impact W-4 The significant long-term direct impacts to habitat for County Group I species (described in Table 3-2) as a result of removal of suitable habitat, and sensitive vegetation types will be reduced to less than significant through implementation of mitigation measure M-BIO-8A, which provides commensurate on- and off-site purchase of mitigation lands habitat management and conservation that has been demonstrated to contain habitat for these species, and off-site preservation of sensitive habitat and species, in accordance with the County *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*, through established mitigation ratios.

This would reduce the impact to less than significant because the amount of preserved habitat would be adequate to compensate for the rarity of the habitat types and be managed in perpetuity to provide equivalent function and value, all in accordance with the County *Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources*.

Impact W-5 The significant short-term direct impacts to active nests or the young of nesting Group II or SSC species will be reduced to less than significant through implementation of mitigation measure M-BIO-5, which requires preconstruction surveys for nesting birds and setbacks for active nests. These impacts have been reduced to less than significant by ensuring that nests and fledglings are not directly impacted by construction activities. Active nests will be mapped during the nesting bird surveys, and buffers, which eliminate construction activities near nests, will be applied.

Impact W-6 The significant long-term direct impacts to raptor foraging habitat will be reduced to less than significant through implementation of mitigation measure M-BIO-8A through M-BIO-8E, which provides commensurate on- and off-site habitat, management, and conservation that has been demonstrated to contain raptor foraging habitat.

Impact W-8 The significant long-term indirect impacts to special-status wildlife species would be reduced to less than significant through the implementation of mitigation measures M-BIO-4, M-BIO-6, M-BIO-8A-E, and M-BIO-11 which provide for biological review of landscape plans, revegetation of temporarily impacted areas, habitat conservation and management of equivalent function and value, and implementation of a fire protection plan. Potential indirect impacts have been reduced to less than significant because human activity has been restricted to the project footprint, the risk of fire has been reduced, and release of exotic plants and animals has been minimized to the extent possible, and the Revegetation Plan includes adaptive management that will add measures to restore the population if needed (Appendix J).

Impact W-9 The significant short-term indirect impacts to tree-nesting raptors as a result of project construction would be reduced to less than significant through mitigation measure M-BIO-5, which would provide for avoidance of impacts through setbacks, preconstruction surveys for nesting birds and implementation of nest buffers should nests be found.

Impact W-10 The significant long-term direct impacts to tree-nesting raptors, as a result of removal of suitable nesting habitat, as shown in Table 3-2 and discussed in Section 3.2.12, will be reduced to less than significant through implementation of mitigation measure M-BIO-8A through M-BIO-8E, which provides for off-site habitat management and conservation of equivalent or better function and value that has been demonstrated to contain habitat for these species. Avoidance of direct impacts on site for the individuals would be done during construction and operation of the project by a monitoring biologist.

3.5.3 Core Wildlife Area

Impacts CWA-1 and CWA-3 The significant impact to the existing core wildlife area from construction-related activities that would result from short-term direct impacts would be mitigated to less than significant through the implementation of M-BIO-1, M-BIO-2, M-BIO-3, M-BIO-6, and M-BIO-7. These mitigation measures require biological monitoring during construction, temporary construction fencing, preparation of a biological monitoring report, revegetation of temporary impacts, and minimization of night and outdoor lighting. Biological monitoring and reporting and temporary fencing will ensure that additional habitat is not impacted during construction and that the BMPs outlined in the SWPPP are adhered to. Revegetation of temporary impacts will ensure that native vegetation will be restored, thus reducing the potential for invasive species to encroach upon

existing native habitat. Minimizing night and outdoor lighting during construction will reduce disruption of nocturnal wildlife movement.

Impact CWA-2 and CWA-4

The significant long-term direct impacts to the core wildlife area and the subsequent viability populations of multiple wildlife species, as a result of removal of suitable habitat, will be reduced to less than significant through implementation of mitigation measure M-BIO-8A through M-BIO-8E, which provides habitat preservation and management of existing populations of sensitive species, suitable habitat, and special-status vegetation communities.