

CITY OF CARMEL-BY-THE-SEA

RIO PARK/LARSON FIELD PATHWAY PROJECT

DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

VOLUME II: APPENDICES



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P.O. BOX G
E/S MONTE VERDE BETWEEN OCEAN AND 7TH
CARMEL, CA 93921

Prepared by:

Michael Baker
INTERNATIONAL

60 GARDEN COURT, SUITE 230
MONTEREY, CA 93940

SEPTEMBER 2015

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Appendix A1

Biological Resources - Database Query Results

Michael Baker International

CNDDDB 9-Quad Species List 234 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3612147	Mt. Carmel	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3612157	Seaside	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3612158	Monterey	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	SSC	-	3612167	Marina	Mapped	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Batrachoseps luciae	Santa Lucia slender salamander	AAAAD02160	None	None	-	-	3612158	Monterey	Unprocessed	Animals - Amphibians - Plethodontidae - Batrachoseps luciae
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3612158	Monterey	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3612157	Seaside	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3612147	Mt. Carmel	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3612148	Soberanes Point	Mapped	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3612167	Marina	Mapped	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Amphibians	Taricha torosa	Coast Range newt	AAAAF02032	None	None	SSC	-	3612147	Mt. Carmel	Unprocessed	Animals - Amphibians - Salamandridae - Taricha torosa
Animals - Amphibians	Taricha torosa	Coast Range newt	AAAAF02032	None	None	SSC	-	3612157	Seaside	Unprocessed	Animals - Amphibians - Salamandridae - Taricha torosa
Animals - Amphibians	Taricha torosa	Coast Range newt	AAAAF02032	None	None	SSC	-	3612158	Monterey	Unprocessed	Animals - Amphibians - Salamandridae - Taricha torosa
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3612167	Marina	Mapped	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3612167	Marina	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3612167	Marina	Mapped	Animals - Birds - Alaudidae - Eremophila alpestris actia
Animals - Birds	Ptychoramphus aleuticus	Cassin's auklet	ABNNN08010	None	None	SSC	-	3612167	Marina	Unprocessed	Animals - Birds - Alcidae - Ptychoramphus aleuticus

Animals - Birds	Cypseloides niger	black swift	ABNUA01010	None	None	SSC	-	3612158	Monterey	Mapped	Animals - Birds - Apodidae - Cypseloides niger
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3612158	Monterey	Mapped	Animals - Birds - Charadriidae - Charadrius alexandrinus nivosus
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3612157	Seaside	Mapped	Animals - Birds - Charadriidae - Charadrius alexandrinus nivosus
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Birds - Charadriidae - Charadrius alexandrinus nivosus
Animals - Birds	Riparia riparia	bank swallow	ABPAU08010	None	Threatened	-	-	3612167	Marina	Mapped	Animals - Birds - Hirundinidae - Riparia riparia
Animals - Birds	Oceanodroma homochroa	ashy storm-petrel	ABNDC04030	None	None	SSC	-	3612148	Soberanes Point	Mapped	Animals - Birds - Hydrobatidae - Oceanodroma homochroa
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBX0020	None	Endangered	SSC	-	3612147	Mt. Carmel	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBX0020	None	Endangered	SSC	-	3612157	Seaside	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBX0020	None	Endangered	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3612157	Seaside	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Larus californicus	California gull	ABNNM03110	None	None	WL	-	3612167	Marina	Unprocessed	Animals - Birds - Laridae - Larus californicus
Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3612158	Monterey	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	3612158	Monterey	Mapped and Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	3612148	Soberanes Point	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Pelecanus occidentalis californicus	California brown pelican	ABNFC01021	Delisted	Delisted	FP	-	3612167	Marina	Unprocessed	Animals - Birds - Pelecanidae - Pelecanus occidentalis californicus
Animals - Birds	Rallus longirostris obsoletus	California clapper rail	ABNME05016	Endangered	Endangered	FP	-	3612158	Monterey	Unprocessed	Animals - Birds - Rallidae - Rallus longirostris obsoletus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3612158	Monterey	Mapped	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3612157	Seaside	Mapped	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia

Animals - Birds	<i>Strix occidentalis occidentalis</i>	California spotted owl	ABNSB12013	None	None	SSC	-	3612157	Seaside	Unprocessed	Animals - Birds - Strigidae - <i>Strix occidentalis occidentalis</i>
Animals - Birds	<i>Strix occidentalis occidentalis</i>	California spotted owl	ABNSB12013	None	None	SSC	-	3612148	Soberanes Point	Unprocessed	Animals - Birds - Strigidae - <i>Strix occidentalis occidentalis</i>
Animals - Birds	<i>Strix occidentalis occidentalis</i>	California spotted owl	ABNSB12013	None	None	SSC	-	3612147	Mt. Carmel	Unprocessed	Animals - Birds - Strigidae - <i>Strix occidentalis occidentalis</i>
Animals - Crustaceans	<i>Linderiella occidentalis</i>	California linderiella	ICBRA06010	None	None	-	-	3612157	Seaside	Mapped and Unprocessed	Animals - Crustaceans - Linderiellidae - <i>Linderiella occidentalis</i>
Animals - Crustaceans	<i>Linderiella occidentalis</i>	California linderiella	ICBRA06010	None	None	-	-	3612167	Marina	Mapped	Animals - Crustaceans - Linderiellidae - <i>Linderiella occidentalis</i>
Animals - Fish	<i>Eucyclogobius newberryi</i>	tidewater goby	AFCQN04010	Endangered	None	SSC	-	3612167	Marina	Mapped	Animals - Fish - Gobiidae - <i>Eucyclogobius newberryi</i>
Animals - Fish	<i>Oncorhynchus mykiss irideus</i>	steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	SSC	-	3612157	Seaside	Mapped	Animals - Fish - Salmonidae - <i>Oncorhynchus mykiss irideus</i>
Animals - Fish	<i>Oncorhynchus mykiss irideus</i>	steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	SSC	-	3612147	Mt. Carmel	Mapped	Animals - Fish - Salmonidae - <i>Oncorhynchus mykiss irideus</i>
Animals - Fish	<i>Oncorhynchus mykiss irideus</i>	steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	SSC	-	3612148	Soberanes Point	Mapped	Animals - Fish - Salmonidae - <i>Oncorhynchus mykiss irideus</i>
Animals - Fish	<i>Oncorhynchus mykiss irideus</i>	steelhead - south/central California coast DPS	AFCHA0209H	Threatened	None	SSC	-	3612158	Monterey	Mapped and Unprocessed	Animals - Fish - Salmonidae - <i>Oncorhynchus mykiss irideus</i>
Animals - Insects	<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	IILEPG2026	Endangered	None	-	-	3612158	Monterey	Mapped	Animals - Insects - Lycaenidae - <i>Euphilotes enoptes smithi</i>
Animals - Insects	<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	IILEPG2026	Endangered	None	-	-	3612148	Soberanes Point	Mapped	Animals - Insects - Lycaenidae - <i>Euphilotes enoptes smithi</i>
Animals - Insects	<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	IILEPG2026	Endangered	None	-	-	3612147	Mt. Carmel	Mapped	Animals - Insects - Lycaenidae - <i>Euphilotes enoptes smithi</i>
Animals - Insects	<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	IILEPG2026	Endangered	None	-	-	3612157	Seaside	Mapped and Unprocessed	Animals - Insects - Lycaenidae - <i>Euphilotes enoptes smithi</i>
Animals - Insects	<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	IILEPG2026	Endangered	None	-	-	3612167	Marina	Mapped and Unprocessed	Animals - Insects - Lycaenidae - <i>Euphilotes enoptes smithi</i>
Animals - Insects	<i>Danaus plexippus pop. 1</i>	monarch - California overwintering population	IILEPP2012	None	None	-	-	3612157	Seaside	Mapped and Unprocessed	Animals - Insects - Nymphalidae - <i>Danaus plexippus pop. 1</i>
Animals - Insects	<i>Danaus plexippus pop. 1</i>	monarch - California overwintering population	IILEPP2012	None	None	-	-	3612148	Soberanes Point	Mapped and Unprocessed	Animals - Insects - Nymphalidae - <i>Danaus plexippus pop. 1</i>
Animals - Insects	<i>Danaus plexippus pop. 1</i>	monarch - California overwintering population	IILEPP2012	None	None	-	-	3612158	Monterey	Mapped and Unprocessed	Animals - Insects - Nymphalidae - <i>Danaus plexippus pop. 1</i>

Animals - Insects	Coelus globosus	globose dune beetle	IICOL4A010	None	None	-	-	3612157	Seaside	Mapped	Animals - Insects - Tenebrionidae - Coelus globosus
Animals - Insects	Coelus globosus	globose dune beetle	IICOL4A010	None	None	-	-	3612158	Monterey	Mapped	Animals - Insects - Tenebrionidae - Coelus globosus
Animals - Mammals	Neotoma macrotis luciana	Monterey dusky-footed woodrat	AMAFF08083	None	None	SSC	-	3612167	Marina	Unprocessed	Animals - Mammals - Muridae - Neotoma macrotis luciana
Animals - Mammals	Neotoma macrotis luciana	Monterey dusky-footed woodrat	AMAFF08083	None	None	SSC	-	3612157	Seaside	Unprocessed	Animals - Mammals - Muridae - Neotoma macrotis luciana
Animals - Mammals	Reithrodontomys megalotis distichlis	Salinas harvest mouse	AMAFF02032	None	None	-	-	3612157	Seaside	Mapped	Animals - Mammals - Muridae - Reithrodontomys megalotis distichlis
Animals - Mammals	Reithrodontomys megalotis distichlis	Salinas harvest mouse	AMAFF02032	None	None	-	-	3612167	Marina	Mapped	Animals - Mammals - Muridae - Reithrodontomys megalotis distichlis
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3612157	Seaside	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Callorhinus ursinus	northern fur-seal	AMAJC01010	None	None	-	-	3612167	Marina	Unprocessed	Animals - Mammals - Otariidae - Callorhinus ursinus
Animals - Mammals	Sorex ornatus salarius	Monterey shrew	AMABA01105	None	None	SSC	-	3612167	Marina	Unprocessed	Animals - Mammals - Soricidae - Sorex ornatus salarius
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	SSC	-	3612148	Soberanes Point	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Lasiurus cinereus	hoary bat	AMACC05030	None	None	-	-	3612158	Monterey	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus cinereus
Animals - Mollusks	Haliotis cracherodii	black abalone	IMGASV2030	Endangered	None	-	-	3612158	Monterey	Unprocessed	Animals - Mollusks - Haliotidae - Haliotis cracherodii
Animals - Mollusks	Haliotis kamtschatkana	pinto abalone	IMGASV2040	None	None	-	-	3612158	Monterey	Unprocessed	Animals - Mollusks - Haliotidae - Haliotis kamtschatkana
Animals - Reptiles	Anniella pulchra nigra	black legless lizard	ARACC01011	None	None	SSC	-	3612158	Monterey	Mapped and Unprocessed	Animals - Reptiles - Anniellidae - Anniella pulchra nigra
Animals - Reptiles	Anniella pulchra nigra	black legless lizard	ARACC01011	None	None	SSC	-	3612157	Seaside	Mapped and Unprocessed	Animals - Reptiles - Anniellidae - Anniella pulchra nigra

Animals - Reptiles	Anniella pulchra nigra	black legless lizard	ARACC01011	None	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Reptiles - Anniellidae - Anniella pulchra nigra
Animals - Reptiles	Anniella pulchra pulchra	silvery legless lizard	ARACC01012	None	None	SSC	-	3612167	Marina	Mapped	Animals - Reptiles - Anniellidae - Anniella pulchra pulchra
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3612157	Seaside	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3612147	Mt. Carmel	Mapped	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3612158	Monterey	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3612158	Monterey	Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3612147	Mt. Carmel	Mapped	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3612157	Seaside	Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3612167	Marina	Mapped and Unprocessed	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Central Dune Scrub	Central Dune Scrub	CTT21320CA	None	None	-	-	3612167	Marina	Mapped	Community - Terrestrial - Central Dune Scrub
Community - Terrestrial	Central Dune Scrub	Central Dune Scrub	CTT21320CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Central Dune Scrub
Community - Terrestrial	Central Maritime Chaparral	Central Maritime Chaparral	CTT37C20CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Central Maritime Chaparral
Community - Terrestrial	Central Maritime Chaparral	Central Maritime Chaparral	CTT37C20CA	None	None	-	-	3612157	Seaside	Mapped	Community - Terrestrial - Central Maritime Chaparral
Community - Terrestrial	Central Maritime Chaparral	Central Maritime Chaparral	CTT37C20CA	None	None	-	-	3612148	Soberanes Point	Mapped	Community - Terrestrial - Central Maritime Chaparral
Community - Terrestrial	Central Maritime Chaparral	Central Maritime Chaparral	CTT37C20CA	None	None	-	-	3612167	Marina	Mapped	Community - Terrestrial - Central Maritime Chaparral
Community - Terrestrial	Monterey Cypress Forest	Monterey Cypress Forest	CTT83150CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Monterey Cypress Forest

Community - Terrestrial	Monterey Pine Forest	Monterey Pine Forest	CTT83130CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Monterey Pine Forest
Community - Terrestrial	Monterey Pine Forest	Monterey Pine Forest	CTT83130CA	None	None	-	-	3612148	Soberanes Point	Mapped	Community - Terrestrial - Monterey Pine Forest
Community - Terrestrial	Monterey Pine Forest	Monterey Pine Forest	CTT83130CA	None	None	-	-	3612157	Seaside	Mapped	Community - Terrestrial - Monterey Pine Forest
Community - Terrestrial	Monterey Pygmy Cypress Forest	Monterey Pygmy Cypress Forest	CTT83162CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Monterey Pygmy Cypress Forest
Community - Terrestrial	Northern Bishop Pine Forest	Northern Bishop Pine Forest	CTT83121CA	None	None	-	-	3612158	Monterey	Mapped	Community - Terrestrial - Northern Bishop Pine Forest
Community - Terrestrial	Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	CTT52110CA	None	None	-	-	3612167	Marina	Mapped	Community - Terrestrial - Northern Coastal Salt Marsh
Community - Terrestrial	Valley Needlegrass Grassland	Valley Needlegrass Grassland	CTT42110CA	None	None	-	-	3612157	Seaside	Mapped	Community - Terrestrial - Valley Needlegrass Grassland
Plants - Bryophytes	Tortula californica	California screw moss	NBMUS7L090	None	None	-	1B.2	3612148	Soberanes Point	Mapped	Plants - Bryophytes - Pottiaceae - Tortula californica
Plants - Lichens	Bryoria spiralifera	twisted horsehair lichen	NLTEST5460	None	None	-	1B.1	3612158	Monterey	Mapped	Plants - Lichens - Parmeliaceae - Bryoria spiralifera
Plants - Lichens	Ramalina thrausta	angel's hair lichen	NLLEC3S340	None	None	-	2B.1	3612158	Monterey	Mapped	Plants - Lichens - Ramalinaceae - Ramalina thrausta
Plants - Vascular	Allium hickmanii	Hickman's onion	PMLIL02140	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Alliaceae - Allium hickmanii
Plants - Vascular	Allium hickmanii	Hickman's onion	PMLIL02140	None	None	-	1B.2	3612167	Marina	Mapped	Plants - Vascular - Alliaceae - Allium hickmanii
Plants - Vascular	Allium hickmanii	Hickman's onion	PMLIL02140	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Alliaceae - Allium hickmanii
Plants - Vascular	Lomatium parvifolium	small-leaved lomatium	PDAPI1B1F0	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Apiaceae - Lomatium parvifolium
Plants - Vascular	Lomatium parvifolium	small-leaved lomatium	PDAPI1B1F0	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Apiaceae - Lomatium parvifolium
Plants - Vascular	Lomatium parvifolium	small-leaved lomatium	PDAPI1B1F0	None	None	-	4.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Apiaceae - Lomatium parvifolium
Plants - Vascular	Perideridia gairdneri ssp. gairdneri	California Gairdner's yampah	PDAPI1N062	None	None	-	4.2	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Apiaceae - Perideridia gairdneri ssp. gairdneri
Plants - Vascular	Centromadia parryi ssp. congdonii	Congdon's tarplant	PDAST4R0P1	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - Centromadia parryi ssp. congdonii
Plants - Vascular	Ericameria fasciculata	Eastwood's goldenbush	PDAST3L080	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - Ericameria fasciculata

Plants - Vascular	<i>Ericameria fasciculata</i>	Eastwood's goldenbush	PDAST3L080	None	None	-	1B.1	3612147	Mt. Carmel	Mapped	Plants - Vascular - Asteraceae - <i>Ericameria fasciculata</i>
Plants - Vascular	<i>Ericameria fasciculata</i>	Eastwood's goldenbush	PDAST3L080	None	None	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Asteraceae - <i>Ericameria fasciculata</i>
Plants - Vascular	<i>Ericameria fasciculata</i>	Eastwood's goldenbush	PDAST3L080	None	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Asteraceae - <i>Ericameria fasciculata</i>
Plants - Vascular	<i>Lasthenia conjugens</i>	Contra Costa goldfields	PDAST5L040	Endangered	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Asteraceae - <i>Lasthenia conjugens</i>
Plants - Vascular	<i>Lasthenia conjugens</i>	Contra Costa goldfields	PDAST5L040	Endangered	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - <i>Lasthenia conjugens</i>
Plants - Vascular	<i>Layia carnosa</i>	beach layia	PDAST5N010	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Asteraceae - <i>Layia carnosa</i>
Plants - Vascular	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	PDAST660C2	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - <i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>
Plants - Vascular	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	PDAST660C2	None	None	-	1B.2	3612147	Mt. Carmel	Mapped	Plants - Vascular - Asteraceae - <i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>
Plants - Vascular	<i>Microseris paludosa</i>	marsh microseris	PDAST6E0D0	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Asteraceae - <i>Microseris paludosa</i>
Plants - Vascular	<i>Microseris paludosa</i>	marsh microseris	PDAST6E0D0	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - <i>Microseris paludosa</i>
Plants - Vascular	<i>Microseris paludosa</i>	marsh microseris	PDAST6E0D0	None	None	-	1B.2	3612167	Marina	Mapped	Plants - Vascular - Asteraceae - <i>Microseris paludosa</i>
Plants - Vascular	<i>Monolopia gracilens</i>	woodland woollythreads	PDAST6G010	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Asteraceae - <i>Monolopia gracilens</i>
Plants - Vascular	<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	PDAST6E050	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Asteraceae - <i>Stebbinsoseris decipiens</i>
Plants - Vascular	<i>Cryptantha rattanii</i>	Rattan's cryptantha	PDBOR0A2H0	None	None	-	4.3	3612158	Monterey	Unprocessed	Plants - Vascular - Boraginaceae - <i>Cryptantha rattanii</i>
Plants - Vascular	<i>Cryptantha rattanii</i>	Rattan's cryptantha	PDBOR0A2H0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Boraginaceae - <i>Cryptantha rattanii</i>
Plants - Vascular	<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	Hickman's popcornflower	PDBOR0V062	None	None	-	4.2	3612157	Seaside	Unprocessed	Plants - Vascular - Boraginaceae - <i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>
Plants - Vascular	<i>Plagiobothrys uncinatus</i>	hooked popcornflower	PDBOR0V170	None	None	-	1B.2	3612147	Mt. Carmel	Mapped	Plants - Vascular - Boraginaceae - <i>Plagiobothrys uncinatus</i>
Plants - Vascular	<i>Erysimum ammophilum</i>	sand-loving wallflower	PDBRA16010	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Brassicaceae - <i>Erysimum ammophilum</i>

Plants - Vascular	<i>Erysimum ammophilum</i>	sand-loving wallflower	PDBRA16010	None	None	-	1B.2	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - <i>Erysimum ammophilum</i>
Plants - Vascular	<i>Erysimum menziesii</i>	Menzies' wallflower	PDBRA160R0	Endangered	Endangered	-	1B.1	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - <i>Erysimum menziesii</i>
Plants - Vascular	<i>Erysimum menziesii</i>	Menzies' wallflower	PDBRA160R0	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - <i>Erysimum menziesii</i>
Plants - Vascular	<i>Hesperocyparis goveniana</i>	Gowen cypress	PGCUP04031	Threatened	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Cupressaceae - <i>Hesperocyparis goveniana</i>
Plants - Vascular	<i>Hesperocyparis macrocarpa</i>	Monterey cypress	PGCUP04060	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Cupressaceae - <i>Hesperocyparis macrocarpa</i>
Plants - Vascular	<i>Arctostaphylos edmundsii</i>	Little Sur manzanita	PDERI04260	None	None	-	1B.2	3612148	Soberanes Point	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos edmundsii</i>
Plants - Vascular	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	PDERI040J1	None	None	-	1B.2	3612148	Soberanes Point	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>
Plants - Vascular	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	PDERI040J1	None	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>
Plants - Vascular	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	PDERI040J1	None	None	-	1B.2	3612157	Seaside	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>
Plants - Vascular	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	PDERI040J1	None	None	-	1B.2	3612167	Marina	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>
Plants - Vascular	<i>Arctostaphylos montereyensis</i>	Toro manzanita	PDERI040R0	None	None	-	1B.2	3612167	Marina	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos montereyensis</i>
Plants - Vascular	<i>Arctostaphylos montereyensis</i>	Toro manzanita	PDERI040R0	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos montereyensis</i>
Plants - Vascular	<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	PDERI04100	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos pajaroensis</i>
Plants - Vascular	<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	PDERI04100	None	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Ericaceae - <i>Arctostaphylos pajaroensis</i>
Plants - Vascular	<i>Arctostaphylos pumila</i>	sandmat manzanita	PDERI04180	None	None	-	1B.2	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos pumila</i>
Plants - Vascular	<i>Arctostaphylos pumila</i>	sandmat manzanita	PDERI04180	None	None	-	1B.2	3612157	Seaside	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos pumila</i>
Plants - Vascular	<i>Arctostaphylos pumila</i>	sandmat manzanita	PDERI04180	None	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos pumila</i>
Plants - Vascular	<i>Arctostaphylos pumila</i>	sandmat manzanita	PDERI04180	None	None	-	1B.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Ericaceae - <i>Arctostaphylos pumila</i>

Plants - Vascular	<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	PDFAB0F641	None	None	-	4.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Fabaceae - <i>Astragalus nuttallii</i> var. <i>nuttallii</i>
Plants - Vascular	<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	PDFAB0F641	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Fabaceae - <i>Astragalus nuttallii</i> var. <i>nuttallii</i>
Plants - Vascular	<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch	PDFAB0F641	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Fabaceae - <i>Astragalus nuttallii</i> var. <i>nuttallii</i>
Plants - Vascular	<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Fabaceae - <i>Astragalus tener</i> var. <i>titi</i>
Plants - Vascular	<i>Hosackia gracilis</i>	harlequin lotus	PDFAB2A0D0	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Fabaceae - <i>Hosackia gracilis</i>
Plants - Vascular	<i>Lupinus albifrons</i> var. <i>abramsii</i>	Abrams' lupine	PDFAB2B010	None	None	-	3.2	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Fabaceae - <i>Lupinus albifrons</i> var. <i>abramsii</i>
Plants - Vascular	<i>Lupinus tidestromii</i>	Tidestrom's lupine	PDFAB2B3Y0	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Fabaceae - <i>Lupinus tidestromii</i>
Plants - Vascular	<i>Trifolium buckwestiorum</i>	Santa Cruz clover	PDFAB402W0	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Fabaceae - <i>Trifolium buckwestiorum</i>
Plants - Vascular	<i>Trifolium buckwestiorum</i>	Santa Cruz clover	PDFAB402W0	None	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Fabaceae - <i>Trifolium buckwestiorum</i>
Plants - Vascular	<i>Trifolium hydrophilum</i>	saline clover	PDFAB400R5	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Fabaceae - <i>Trifolium hydrophilum</i>
Plants - Vascular	<i>Trifolium polyodon</i>	Pacific Grove clover	PDFAB402H0	None	Rare	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Fabaceae - <i>Trifolium polyodon</i>
Plants - Vascular	<i>Trifolium polyodon</i>	Pacific Grove clover	PDFAB402H0	None	Rare	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Fabaceae - <i>Trifolium polyodon</i>
Plants - Vascular	<i>Trifolium polyodon</i>	Pacific Grove clover	PDFAB402H0	None	Rare	-	1B.1	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Fabaceae - <i>Trifolium polyodon</i>
Plants - Vascular	<i>Trifolium trichocalyx</i>	Monterey clover	PDFAB402J0	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Fabaceae - <i>Trifolium trichocalyx</i>
Plants - Vascular	<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	PDLAM18162	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Lamiaceae - <i>Monardella sinuata</i> ssp. <i>nigrescens</i>
Plants - Vascular	<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	PDLAM18162	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Lamiaceae - <i>Monardella sinuata</i> ssp. <i>nigrescens</i>
Plants - Vascular	<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	PDLAM18162	None	None	-	1B.2	3612167	Marina	Mapped	Plants - Vascular - Lamiaceae - <i>Monardella sinuata</i> ssp. <i>nigrescens</i>

Plants - Vascular	Calochortus uniflorus	pink star-tulip	PMLIL0D1F0	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Liliaceae - Calochortus uniflorus
Plants - Vascular	Fritillaria agrestis	stinkbells	PMLIL0V010	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Liliaceae - Fritillaria agrestis
Plants - Vascular	Fritillaria liliacea	fragrant fritillary	PMLIL0V0C0	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Liliaceae - Fritillaria liliacea
Plants - Vascular	Malacothamnus palmeri var. involucratus	Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Malvaceae - Malacothamnus palmeri var. involucratus
Plants - Vascular	Malacothamnus palmeri var. involucratus	Carmel Valley bush-mallow	PDMAL0Q0B1	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Malvaceae - Malacothamnus palmeri var. involucratus
Plants - Vascular	Malacothamnus palmeri var. palmeri	Santa Lucia bush-mallow	PDMAL0Q0B5	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Malvaceae - Malacothamnus palmeri var. palmeri
Plants - Vascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	3612158	Monterey	Mapped	Plants - Vascular - Malvaceae - Sidalcea malachroides
Plants - Vascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	3612147	Mt. Carmel	Mapped	Plants - Vascular - Malvaceae - Sidalcea malachroides
Plants - Vascular	Sidalcea malachroides	maple-leaved checkerbloom	PDMAL110E0	None	None	-	4.2	3612148	Soberanes Point	Mapped	Plants - Vascular - Malvaceae - Sidalcea malachroides
Plants - Vascular	Clarkia jolonensis	Jolon clarkia	PDONA050L0	None	None	-	1B.2	3612148	Soberanes Point	Mapped	Plants - Vascular - Onagraceae - Clarkia jolonensis
Plants - Vascular	Clarkia jolonensis	Jolon clarkia	PDONA050L0	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Onagraceae - Clarkia jolonensis
Plants - Vascular	Clarkia jolonensis	Jolon clarkia	PDONA050L0	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Onagraceae - Clarkia jolonensis
Plants - Vascular	Clarkia lewisii	Lewis' clarkia	PDONA050N0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Onagraceae - Clarkia lewisii
Plants - Vascular	Clarkia lewisii	Lewis' clarkia	PDONA050N0	None	None	-	4.3	3612158	Monterey	Unprocessed	Plants - Vascular - Onagraceae - Clarkia lewisii
Plants - Vascular	Clarkia lewisii	Lewis' clarkia	PDONA050N0	None	None	-	4.3	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Onagraceae - Clarkia lewisii
Plants - Vascular	Clarkia lewisii	Lewis' clarkia	PDONA050N0	None	None	-	4.3	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Onagraceae - Clarkia lewisii
Plants - Vascular	Clarkia lewisii	Lewis' clarkia	PDONA050N0	None	None	-	4.3	3612167	Marina	Unprocessed	Plants - Vascular - Onagraceae - Clarkia lewisii
Plants - Vascular	Ophioglossum californicum	California adder's-tongue	PPOPH020G0	None	None	-	4.2	3612157	Seaside	Unprocessed	Plants - Vascular - Ophioglossaceae - Ophioglossum californicum
Plants - Vascular	Piperia michaelii	Michael's rein orchid	PMORC1X110	None	None	-	4.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Orchidaceae - Piperia michaelii
Plants - Vascular	Piperia michaelii	Michael's rein orchid	PMORC1X110	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Orchidaceae - Piperia michaelii
Plants - Vascular	Piperia michaelii	Michael's rein orchid	PMORC1X110	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Orchidaceae - Piperia michaelii

Plants - Vascular	<i>Piperia yadonii</i>	Yadon's rein orchid	PMORC1X070	Endangered	None	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Orchidaceae - <i>Piperia yadonii</i>
Plants - Vascular	<i>Piperia yadonii</i>	Yadon's rein orchid	PMORC1X070	Endangered	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Orchidaceae - <i>Piperia yadonii</i>
Plants - Vascular	<i>Piperia yadonii</i>	Yadon's rein orchid	PMORC1X070	Endangered	None	-	1B.1	3612148	Soberanes Point	Mapped	Plants - Vascular - Orchidaceae - <i>Piperia yadonii</i>
Plants - Vascular	<i>Piperia yadonii</i>	Yadon's rein orchid	PMORC1X070	Endangered	None	-	1B.1	3612157	Seaside	Mapped and Unprocessed	Plants - Vascular - Orchidaceae - <i>Piperia yadonii</i>
Plants - Vascular	<i>Castilleja ambigua</i> var. <i>insalutata</i>	pink Johnny-nip	PDSCR0D403	None	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Orobanchaceae - <i>Castilleja ambigua</i> var. <i>insalutata</i>
Plants - Vascular	<i>Castilleja ambigua</i> var. <i>insalutata</i>	pink Johnny-nip	PDSCR0D403	None	None	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Orobanchaceae - <i>Castilleja ambigua</i> var. <i>insalutata</i>
Plants - Vascular	<i>Castilleja latifolia</i>	Monterey Coast paintbrush	PDSCR0D1P0	None	None	-	4.3	3612158	Monterey	Unprocessed	Plants - Vascular - Orobanchaceae - <i>Castilleja latifolia</i>
Plants - Vascular	<i>Castilleja latifolia</i>	Monterey Coast paintbrush	PDSCR0D1P0	None	None	-	4.3	3612167	Marina	Unprocessed	Plants - Vascular - Orobanchaceae - <i>Castilleja latifolia</i>
Plants - Vascular	<i>Castilleja latifolia</i>	Monterey Coast paintbrush	PDSCR0D1P0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Orobanchaceae - <i>Castilleja latifolia</i>
Plants - Vascular	<i>Castilleja latifolia</i>	Monterey Coast paintbrush	PDSCR0D1P0	None	None	-	4.3	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Orobanchaceae - <i>Castilleja latifolia</i>
Plants - Vascular	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	PDSCR0J0P2	None	Endangered	-	1B.1	3612148	Soberanes Point	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>
Plants - Vascular	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	PDSCR0J0P2	None	Endangered	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Orobanchaceae - <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>
Plants - Vascular	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	PDSCR0J0P2	None	Endangered	-	1B.1	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>
Plants - Vascular	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	PDSCR0J0P2	None	Endangered	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Orobanchaceae - <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>
Plants - Vascular	<i>Pinus radiata</i>	Monterey pine	PGPIN040V0	None	None	-	1B.1	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Pinaceae - <i>Pinus radiata</i>
Plants - Vascular	<i>Pinus radiata</i>	Monterey pine	PGPIN040V0	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Pinaceae - <i>Pinus radiata</i>
Plants - Vascular	<i>Pinus radiata</i>	Monterey pine	PGPIN040V0	None	None	-	1B.1	3612148	Soberanes Point	Mapped	Plants - Vascular - Pinaceae - <i>Pinus radiata</i>
Plants - Vascular	<i>Collinsia multicolor</i>	San Francisco collinsia	PDSCR0H0B0	None	None	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Plantaginaceae - <i>Collinsia multicolor</i>
Plants - Vascular	<i>Eriastrum virgatum</i>	virgate eriastrum	PDPLM030D0	None	None	-	4.3	3612158	Monterey	Unprocessed	Plants - Vascular - Polemoniaceae - <i>Eriastrum virgatum</i>

Plants - Vascular	<i>Eriastrum virgatum</i>	virgate eriastrum	PDPLM030D0	None	None	-	4.3	3612167	Marina	Unprocessed	Plants - Vascular - Polemoniaceae - <i>Eriastrum virgatum</i>
Plants - Vascular	<i>Eriastrum virgatum</i>	virgate eriastrum	PDPLM030D0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Polemoniaceae - <i>Eriastrum virgatum</i>
Plants - Vascular	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	PDPLM041P2	Endangered	Threatened	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Polemoniaceae - <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>
Plants - Vascular	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	PDPLM041P2	Endangered	Threatened	-	1B.2	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Polemoniaceae - <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>
Plants - Vascular	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	PDPLM041P2	Endangered	Threatened	-	1B.2	3612158	Monterey	Mapped	Plants - Vascular - Polemoniaceae - <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>
Plants - Vascular	<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon	PDPLM090K0	None	None	-	4.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Polemoniaceae - <i>Leptosiphon grandiflorus</i>
Plants - Vascular	<i>Chorizanthe douglasii</i>	Douglas' spineflower	PDPGN040A0	None	None	-	4.3	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe douglasii</i>
Plants - Vascular	<i>Chorizanthe douglasii</i>	Douglas' spineflower	PDPGN040A0	None	None	-	4.3	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe douglasii</i>
Plants - Vascular	<i>Chorizanthe douglasii</i>	Douglas' spineflower	PDPGN040A0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe douglasii</i>
Plants - Vascular	<i>Chorizanthe douglasii</i>	Douglas' spineflower	PDPGN040A0	None	None	-	4.3	3612158	Monterey	Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe douglasii</i>
Plants - Vascular	<i>Chorizanthe douglasii</i>	Douglas' spineflower	PDPGN040A0	None	None	-	4.3	3612167	Marina	Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe douglasii</i>
Plants - Vascular	<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	PDPGN040M2	Threatened	None	-	1B.2	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe pungens</i> var. <i>pungens</i>
Plants - Vascular	<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	PDPGN040M2	Threatened	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe pungens</i> var. <i>pungens</i>
Plants - Vascular	<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	PDPGN040M2	Threatened	None	-	1B.2	3612157	Seaside	Mapped and Unprocessed	Plants - Vascular - Polygonaceae - <i>Chorizanthe pungens</i> var. <i>pungens</i>
Plants - Vascular	<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	PDPGN040Q2	Endangered	None	-	1B.1	3612167	Marina	Mapped	Plants - Vascular - Polygonaceae - <i>Chorizanthe robusta</i> var. <i>robusta</i>
Plants - Vascular	<i>Eriogonum elegans</i>	elegant wild buckwheat	PDPGN081Y0	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Polygonaceae - <i>Eriogonum elegans</i>
Plants - Vascular	<i>Eriogonum nortonii</i>	Pinnacles buckwheat	PDPGN08470	None	None	-	1B.3	3612158	Monterey	Unprocessed	Plants - Vascular - Polygonaceae - <i>Eriogonum nortonii</i>
Plants - Vascular	<i>Eriogonum nortonii</i>	Pinnacles buckwheat	PDPGN08470	None	None	-	1B.3	3612148	Soberanes Point	Mapped	Plants - Vascular - Polygonaceae - <i>Eriogonum nortonii</i>

Plants - Vascular	<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	PDRAN0B0A2	None	None	-	1B.2	3612157	Seaside	Mapped	Plants - Vascular - Ranunculaceae - <i>Delphinium californicum</i> ssp. <i>interius</i>
Plants - Vascular	<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	PDRAN0B0V0	None	None	-	1B.2	3612147	Mt. Carmel	Mapped	Plants - Vascular - Ranunculaceae - <i>Delphinium hutchinsoniae</i>
Plants - Vascular	<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	PDRAN0B0V0	None	None	-	1B.2	3612148	Soberanes Point	Mapped	Plants - Vascular - Ranunculaceae - <i>Delphinium hutchinsoniae</i>
Plants - Vascular	<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	PDRAN0B0V0	None	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Ranunculaceae - <i>Delphinium hutchinsoniae</i>
Plants - Vascular	<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	PDRAN0L1J0	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Ranunculaceae - <i>Ranunculus lobbii</i>
Plants - Vascular	<i>Ceanothus gloriosus</i> var. <i>gloriosus</i>	Point Reyes ceanothus	PDRHA040F5	None	None	-	4.3	3612157	Seaside	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus gloriosus</i> var. <i>gloriosus</i>
Plants - Vascular	<i>Ceanothus rigidus</i>	Monterey ceanothus	PDRHA04067	None	None	-	4.2	3612157	Seaside	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus rigidus</i>
Plants - Vascular	<i>Ceanothus rigidus</i>	Monterey ceanothus	PDRHA04067	None	None	-	4.2	3612148	Soberanes Point	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus rigidus</i>
Plants - Vascular	<i>Ceanothus rigidus</i>	Monterey ceanothus	PDRHA04067	None	None	-	4.2	3612147	Mt. Carmel	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus rigidus</i>
Plants - Vascular	<i>Ceanothus rigidus</i>	Monterey ceanothus	PDRHA04067	None	None	-	4.2	3612167	Marina	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus rigidus</i>
Plants - Vascular	<i>Ceanothus rigidus</i>	Monterey ceanothus	PDRHA04067	None	None	-	4.2	3612158	Monterey	Unprocessed	Plants - Vascular - Rhamnaceae - <i>Ceanothus rigidus</i>
Plants - Vascular	<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	PDR0S0W043	None	None	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Rosaceae - <i>Horkelia cuneata</i> var. <i>sericea</i>
Plants - Vascular	<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	PDR0S0W043	None	None	-	1B.1	3612167	Marina	Mapped and Unprocessed	Plants - Vascular - Rosaceae - <i>Horkelia cuneata</i> var. <i>sericea</i>
Plants - Vascular	<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	PDR0S0W043	None	None	-	1B.1	3612157	Seaside	Mapped	Plants - Vascular - Rosaceae - <i>Horkelia cuneata</i> var. <i>sericea</i>
Plants - Vascular	<i>Potentilla hickmanii</i>	Hickman's cinquefoil	PDR0S1B0U0	Endangered	Endangered	-	1B.1	3612158	Monterey	Mapped	Plants - Vascular - Rosaceae - <i>Potentilla hickmanii</i>
Plants - Vascular	<i>Rosa pinetorum</i>	pine rose	PDR0S1J0W0	None	None	-	1B.2	3612158	Monterey	Mapped and Unprocessed	Plants - Vascular - Rosaceae - <i>Rosa pinetorum</i>
Plants - Vascular	<i>Rosa pinetorum</i>	pine rose	PDR0S1J0W0	None	None	-	1B.2	3612148	Soberanes Point	Mapped	Plants - Vascular - Rosaceae - <i>Rosa pinetorum</i>

CNPS *California Native Plant* Rare and Endangered Plant Inventory

Plant List

72 matches found. *Click on scientific name for details*

Search Criteria

Found in 9 Quads around 36121E8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Agrostis lacuna-vernalis	vernal pool bent grass	Poaceae	annual herb	1B.1	S1	G1
Allium hickmanii	Hickman's onion	Alliaceae	perennial bulbiferous herb	1B.2	S2	G2
Arctostaphylos edmundsii	Little Sur manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2?	G2?
Arctostaphylos hookeri ssp. hookeri	Hooker's manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G3T2
Arctostaphylos montereyensis	Toro manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2?	G2?
Arctostaphylos pajaroensis	Pajaro manzanita	Ericaceae	perennial evergreen shrub	1B.1	S1	G1
Arctostaphylos pumila	sandmat manzanita	Ericaceae	perennial evergreen shrub	1B.2	S1	G1
Astragalus nuttallii var. nuttallii	ocean bluff milk-vetch	Fabaceae	perennial herb	4.2	S4	G4T4
Astragalus tener var. titi	coastal dunes milk-vetch	Fabaceae	annual herb	1B.1	S1	G2T1
Bryoria spiralifera	twisted horsehair lichen	Parmeliaceae	fruticose lichen (epiphytic)	1B.1	S1S2	G3
Castilleja ambigua var. insalutata	pink Johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S1	G4T1
Castilleja latifolia	Monterey Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	4.3	S4	G4
Ceanothus gloriosus var. gloriosus	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	4.3	S4	G4T4
Ceanothus rigidus	Monterey ceanothus	Rhamnaceae	perennial evergreen shrub	4.2	S34	G4
Centromadia parryi ssp. congdonii	Congdon's tarplant	Asteraceae	annual herb	1B.1	S2	G3T2
Chorizanthe douglasii	Douglas' spineflower	Polygonaceae	annual herb	4.3	S4	G4
Chorizanthe pungens var. pungens	Monterey spineflower	Polygonaceae	annual herb	1B.2	S2	G2T2
Chorizanthe robusta var. robusta	robust spineflower	Polygonaceae	annual herb	1B.1	S1	G2T1
Clarkia jolonensis	Jolon clarkia	Onagraceae	annual herb	1B.2	S2	G2

Clarkia lewisii	Lewis' clarkia	Onagraceae	annual herb	4.3	S4	G4
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	1B.2	S2	G2
Cordylanthus rigidus ssp. littoralis	seaside bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S2	G5T2
Corethrogyne leucophylla	branching beach aster	Asteraceae	perennial herb	3.2	S3	G3Q
Cryptantha rattanii	Rattan's cryptantha	Boraginaceae	annual herb	4.3	S4	G4
Delphinium californicum ssp. interius	Hospital Canyon larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3T3
Delphinium hutchinsoniae	Hutchinson's larkspur	Ranunculaceae	perennial herb	1B.2	S2	G2
Delphinium umbraculorum	umbrella larkspur	Ranunculaceae	perennial herb	1B.3	S3	G3
Ericameria fasciculata	Eastwood's goldenbush	Asteraceae	perennial evergreen shrub	1B.1	S2	G2
Eriogonum elegans	elegant wild buckwheat	Polygonaceae	annual herb	4.3	S3	G3
Eriogonum nortonii	Pinnacles buckwheat	Polygonaceae	annual herb	1B.3	S2	G2
Erysimum ammophilum	sand-loving wallflower	Brassicaceae	perennial herb	1B.2	S2	G2
Erysimum menziesii	Menzies' wallflower	Brassicaceae	perennial herb	1B.1	S1	G1
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Galium clementis	Santa Lucia bedstraw	Rubiaceae	perennial herb	1B.3	S3	G3
Gilia tenuiflora ssp. arenaria	Monterey gilia	Polemoniaceae	annual herb	1B.2	S2	G3G4T2
Grindelia hirsutula var. maritima	San Francisco gumplant	Asteraceae	perennial herb	3.2	S1	G5T1Q
Hesperocyparis goveniana	Gowen cypress	Cupressaceae	perennial evergreen tree	1B.2	S1	G1
Hesperocyparis macrocarpa	Monterey cypress	Cupressaceae	perennial evergreen tree	1B.2	S1	G1
Horkelia cuneata var. sericea	Kellogg's horkelia	Rosaceae	perennial herb	1B.1	S2?	G4T2
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	4.2	S3	G3
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	1B.1	S1	G1
Layia carnosa	beach layia	Asteraceae	annual herb	1B.1	S2	G2
Leptosiphon grandiflorus	large-flowered leptosiphon	Polemoniaceae	annual herb	4.2	S3	G3
Lomatium parvifolium	small-leaved lomatium	Apiaceae	perennial herb	4.2	S4	G4
Lupinus tidestromii	Tidestrom's lupine	Fabaceae	perennial rhizomatous herb	1B.1	S1	G1
Malacothamnus palmeri var. involucratus	Carmel Valley bush-mallow	Malvaceae	perennial deciduous shrub	1B.2	S3	G3T3Q
Malacothamnus palmeri var. palmeri	Santa Lucia bush-mallow	Malvaceae	perennial deciduous shrub	1B.2	S2	G3T2Q
Malacothrix saxatilis var. arachnoidea	Carmel Valley malacothrix	Asteraceae	perennial rhizomatous herb	1B.2	S2	G5T2

Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	3.2	S3S4	G3G4
Microseris paludosa	marsh microseris	Asteraceae	perennial herb	1B.2	S2	G2
Monardella antonina ssp. antonina	San Antonio Hills monardella	Lamiaceae	perennial rhizomatous herb	3	S1S3	G4T1T3Q
Monardella sinuata ssp. nigrescens	northern curly-leaved monardella	Lamiaceae	annual herb	1B.2	S2	G3T2
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	1B.2	S2S3	G2G3
Ophioglossum californicum	California adder's-tongue	Ophioglossaceae	perennial rhizomatous herb	4.2	S4	G4
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	Apiaceae	perennial herb	4.2	S4	G5T4
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	Boraginaceae	perennial herb	3.2	S3	G5?T3
Pinus radiata	Monterey pine	Pinaceae	perennial evergreen tree	1B.1	S1	G1
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	4.2	S3	G3
Piperia yadonii	Yadon's rein orchid	Orchidaceae	perennial herb	1B.1	S2	G2
Plagiobothrys chorisianus var. hickmanii	Hickman's popcorn-flower	Boraginaceae	annual herb	4.2	S3	G3T3Q
Plagiobothrys uncinatus	hooked popcorn-flower	Boraginaceae	annual herb	1B.2	S2	G2
Potentilla hickmanii	Hickman's cinquefoil	Rosaceae	perennial herb	1B.1	S1	G1
Ramalina thrausta	angel's hair lichen	Ramalinaceae	fruticose lichen (epiphytic)	2B.1	S2?	G5
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb	4.2	S3	G4
Rosa pinetorum	pine rose	Rosaceae	perennial shrub	1B.2	S2	G2Q
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	4.2	S3	G3
Stebbinsoseris decipiens	Santa Cruz microseris	Asteraceae	annual herb	1B.2	S2	G2
Tortula californica	California screw-moss	Pottiaceae	moss	1B.2	S2	G2?
Trifolium buckwestiorum	Santa Cruz clover	Fabaceae	annual herb	1B.1	S2	G2
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	1B.2	S2	G2
Trifolium polyodon	Pacific Grove clover	Fabaceae	annual herb	1B.1	S1	G1
Trifolium trichocalyx	Monterey clover	Fabaceae	annual herb	1B.1	S1	G1

Suggested Citation

CNPS, Rare Plant Program. 2015. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 10 April 2015].

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U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Ventura Fish and Wildlife Office
2493 PORTOLA ROAD, SUITE B
VENTURA, CA 93003
(805) 644-1766

Project Name:

Rio Park-Larson Field



U.S. Fish and Wildlife Service

Trust Resources List

Project Location Map:



Project Counties:

Monterey, CA

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-121.9204314 36.5418132, -121.9196157 36.5418863, -121.9185267 36.5410329, -121.9183926 36.5411062, -121.9180547 36.54077, -121.9167886 36.5416406, -121.9168047 36.5418346, -121.9165902 36.5416966, -121.9180332 36.5406752, -121.9182961 36.5408821, -121.9187467 36.5407183, -121.9204314 36.5418132)))

Project Type:

Recreation Construction / Maintenance



Trust Resources List

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of 23 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Amphibians	Status		Has Critical Habitat	Contact
California Tiger Salamander (<i>Ambystoma californiense</i>) Population: U.S.A. (Central CA DPS)	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
California red-legged frog (<i>Rana draytonii</i>) Population: Entire	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Birds				
California Least tern (<i>Sterna antillarum browni</i>)	Endangered	species info		Ventura Fish And Wildlife Office
California condor (<i>Gymnogyps californianus</i>) Population: Entire, except where listed as an experimental population	Endangered	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Least Bell's vireo (<i>Vireo bellii pusillus</i>) Population: Entire	Endangered	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Marbled murrelet (<i>Brachyramphus marmoratus</i>) Population: CA, OR, WA	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Southwestern Willow flycatcher (<i>Empidonax traillii extimus</i>) Population: Entire	Endangered	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
western snowy plover (<i>Charadrius nivosus ssp. nivosus</i>) Population: Pacific coastal pop.	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office



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Conifers and Cycads				
Gowen cypress (<i>Cupressus goveniana ssp. goveniana</i>)	Threatened	species info		Ventura Fish And Wildlife Office
Crustaceans				
Vernal Pool fairy shrimp (<i>Branchinecta lynchi</i>) Population: Entire	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Fishes				
Tidewater goby (<i>Eucyclogobius newberryi</i>) Population: Entire	Endangered	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Flowering Plants				
Beach layia (<i>Layia carnosa</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Clover lupine (<i>Lupinus tidestromii</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Coastal Dunes milk-vetch (<i>Astragalus tener var. titi</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Hickman's potentilla (<i>Potentilla hickmanii</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Marsh Sandwort (<i>Arenaria paludicola</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Menzies' wallflower (<i>Erysimum menziesii</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Monterey clover (<i>Trifolium trichocalyx</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Monterey gilia (<i>Gilia tenuiflora ssp. arenaria</i>)	Endangered	species info		Ventura Fish And Wildlife Office
Monterey spineflower (<i>Chorizanthe pungens var. pungens</i>)	Threatened	species info	Final designated critical habitat	Ventura Fish And Wildlife Office



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Yadon's piperia (<i>Piperia yadonii</i>)	Endangered	species info	Final designated critical habitat	Ventura Fish And Wildlife Office
Insects				
Smith's Blue butterfly (<i>Euphilotes enoptes smithi</i>) Population: Entire	Endangered	species info		Ventura Fish And Wildlife Office
Mammals				
Southern Sea otter (<i>Enhydra lutris nereis</i>) Population:	Threatened	species info		Ventura Fish And Wildlife Office

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges ([USFWS National Wildlife Refuges Program](#)).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds ([USFWS Migratory Bird Program](#)).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without



Trust Resources List

additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html>.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: <http://www.fws.gov/migratorybirds/CCMB2.htm>.

For information about conservation measures that help avoid or minimize impacts to birds, please visit:

<http://www.fws.gov/migratorybirds/CCMB2.htm>.

Migratory birds of concern that may be affected by your project:

There are **24** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to [the ECOS Help Desk](#).

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
Allen's Hummingbird (<i>Selasphorus sasin</i>)	Yes	species info	Breeding
Ashy Storm-petrel (<i>Oceanodroma homochroa</i>)	Yes	species info	Breeding
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	species info	Year-round
Black Oystercatcher (<i>Haematopus bachmani</i>)	Yes	species info	Year-round
Black Swift (<i>Cypseloides niger</i>)	Yes	species info	Breeding
Burrowing Owl (<i>Athene cunicularia</i>)	Yes	species info	Year-round
Costa's Hummingbird (<i>Calypte costae</i>)	Yes	species info	Breeding
Flammulated owl (<i>Otus flammeolus</i>)	Yes	species info	Breeding



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Fox Sparrow (<i>Passerella iliaca</i>)	Yes	species info	Wintering
Lawrence's Goldfinch (<i>Carduelis lawrencei</i>)	Yes	species info	Breeding
Lesser Yellowlegs (<i>Tringa flavipes</i>)	Yes	species info	Wintering
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Yes	species info	Wintering
Long-Billed curlew (<i>Numenius americanus</i>)	Yes	species info	Wintering
Marbled Godwit (<i>Limosa fedoa</i>)	Yes	species info	Wintering
Nuttall's Woodpecker (<i>Picoides nuttallii</i>)	Yes	species info	Year-round
Oak Titmouse (<i>Baeolophus inornatus</i>)	Yes	species info	Year-round
Olive-Sided flycatcher (<i>Contopus cooperi</i>)	Yes	species info	Breeding
Peregrine Falcon (<i>Falco peregrinus</i>)	Yes	species info	Year-round
Red Knot (<i>Calidris canutus ssp. roselaari</i>)	Yes	species info	Wintering
Short-billed Dowitcher (<i>Limnodromus griseus</i>)	Yes	species info	Wintering
Short-eared Owl (<i>Asio flammeus</i>)	Yes	species info	Wintering
tricolored blackbird (<i>Agelaius tricolor</i>)	Yes	species info	Year-round
Whimbrel (<i>Numenius phaeopus</i>)	Yes	species info	Wintering
Yellow warbler (<i>dendroica petechia ssp. brewsteri</i>)	Yes	species info	Breeding



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NWI Wetlands ([USFWS National Wetlands Inventory](#)).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate [U.S. Army Corps of Engineers District](#).

Data Limitations, Exclusions and Precautions

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the



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advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.

Appendix A2

Biological Resources - Local Policy Consistency Table

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Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
Carmel Area Land Use Plan (Monterey County)		
<i>Environmentally Sensitive Habitats</i>		
General Policies		
<p>Policy 1: Development, including vegetation removal, excavation, grading, filling, and the construction of roads and structures, shall be avoided in critical and sensitive habitat areas, riparian corridors, wetlands, sites of known rare and endangered species of plants and animals, rookeries and major roosting and haul-out sites, and other wildlife breeding or nursery areas identified as critical. Resource-dependent uses, including nature education and research, hunting, fishing, and aquaculture, shall be allowed within environmentally sensitive habitats and only if such uses will not cause significant disruption of habitat values. Only small-scale development necessary to support the resource-dependent uses may be located in sensitive habitat areas if they can not feasibly be located elsewhere. Wetlands are defined as lands which may be covered periodically or permanently with shallow water and include saltwater marshes, fresh water marshes, open or closed brackish water marshes, swamps, mudflats and fens.</p>	Consistent	<p>Although a portion of the project is surrounded by riparian vegetation, the footprint of the proposed trail is almost entirely on disturbed land and existing access road. Minor trimming of riparian vegetation will occur as well as removal of primarily non-native groundcover on either side of the existing access road. All impacts to riparian vegetation will be properly mitigated for. In addition, the addition of project design features outline in mitigation measure MM BIO-6 will ensure future impacts are minimized and adds an educational component to the trail.</p>
<p>Policy 2: Land uses adjacent to locations of environmentally sensitive habitats shall be compatible with the long-term maintenance of the resource. New land uses shall be considered compatible only where they incorporate all site planning and design features needed to prevent habitat impacts and where they do not establish a precedent for continued land development which, on a cumulative basis, could degrade the resource.</p>	Consistent	<p>See above. Sensitive habitat will be left as open space. Mitigation measures MM BIO-2, MM BIO-6, and MM BIO-7 will prevent habitat impacts.</p>
<p>Policy 3: New development adjacent to environmentally sensitive habitat areas shall be allowed only at densities compatible with the protection and maintenance of the adjoining resources. New subdivisions shall be approved only where potential impacts to environmentally sensitive habitats from development of proposed parcels can be avoided.</p>	Consistent	<p>Density not increasing. Proposed trail footprint is almost entirely on disturbed land and existing access road.</p>
<p>Policy 5: Where private or public development is proposed in documented or expected locations of environmentally sensitive habitats - particularly those habitats identified in General Policy No. 1 - field surveys by qualified individuals or agency shall be required in order to determine precise locations of the habitat and to recommend mitigating measures to ensure its protection. This policy applies to the entire segment except the internal portions of Carmel Woods, Hatton Fields, Carmel Point (Night heron site excluded), Odello, Carmel Meadows, and Carmel Riviera. If any habitats are found on the site or within 100 feet from the site, the required survey shall document how the proposed development complies with all the applicable habitat policies.</p>	Consistent	<p>Survey conducted by biologist on April 9, 2015. See IS/MND and this table for project's compliance with local policies.</p>

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
<p>Policy 7: Where development is permitted in or adjacent to environmentally sensitive habitat areas, the County, through the development review process, shall restrict the removal of indigenous vegetation and land disturbance (grading, excavation, paving, etc.) to that needed for the structural improvements themselves.</p>	Consistent	<p>Most vegetation removed would be non-native ground cover. Indigenous willows will be trimmed as little as possible in order to comply with bikeway standards. Land disturbance will be restricted to the trail footprint. Mitigation measures MM BIO-2, MM BIO-6, and MM BIO-7 will prevent habitat impacts.</p>
<p>Policy 9: Where public access occurs or has been introduced in areas of environmentally sensitive habitats, it shall be limited to low-intensity recreational, scientific, or educational uses such as nature study and observation, education programs in which collecting is restricted, photography, and hiking. Access in such areas shall be controlled and confined to designated trails and paths. No access shall be approved which results in significant disruption of habitat.</p>	Consistent	<p>Trail use is expected to be low-intensity. The addition of project design features outline in mitigation measure MM BIO-6 will ensure future impacts are minimized and adds an educational component to the trail.</p>
<p>Specific Policies - Terrestrial Plant Habitats</p>		
<p>Policy 2: Public access to areas of rare, endangered, and sensitive plants should be actively discouraged and directed to less sensitive areas. Where allowed, public access should be strictly managed. Otherwise, the area should be closed.</p>	Consistent	<p>No known rare plant populations exist in or adjacent to the PSA.</p>
<p>Specific Policies - Riparian Corridors and Other Terrestrial Wildlife Habitats</p>		
<p>Policy 1: Riparian plant communities shall be protected by establishing setbacks consisting of a 150-foot open space buffer zone on each side of the bank of perennial streams and 50 feet on each side of the bank of intermittent streams, or the extent of riparian vegetation, whichever is greater. No new development, including structural flood control projects, shall be allowed within the riparian corridor. However, improvements to existing dikes and levees shall be allowed if riparian vegetation damage can be minimized and at least an equivalent amount and quality of replacement vegetation is planted. In addition, exceptions may be made for carefully sited recreational trails. The setback requirement may be modified if it can be demonstrated that a narrower corridor is sufficient to protect existing riparian vegetation. Riparian vegetation is an association of plant species which typically grows adjacent to freshwater courses and needs or tolerates a higher level of soil moisture than dryer upland vegetation.</p>	Consistent	<p>Proposed trail location has been sited to reduce impacts to sensitive vegetation to the greatest extent possible. It almost completely overlaps with previously disturbed lands, including an existing dirt access road that runs through the riparian zone. At its closest point, the trail footprint is set back roughly 140 feet from the Carmel River.</p>
<p>Policy 3: The County should encourage a program of riparian woodland restoration as a part of the development and environmental review process. As a condition of approval of projects adjacent to riparian corridors, the County, where appropriate, should require landscaping with native riparian species.</p>	Consistent	<p>All temporarily disturbed areas shall be reseeded with native vegetation. See mitigation measures MM BIO-2 and MM BIO-7.</p>
<p>Policy 4: To protect important wildlife habitat, all off-road recreational vehicle activity should be discouraged within riparian corridors and public access should be limited to designated areas. Accordingly, roads and trails should be sited to avoid impacts to riparian habitat.</p>	Consistent	<p>See mitigation measures MM BIO-2 and MM BIO-6. Proposed trail location has been sited to reduce impacts to sensitive vegetation to the greatest extent possible.</p>

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
Policy 5: Wildlife management considerations shall be included in the evaluation of development proposals, particularly land division proposals. Large, and where possible, contiguous areas of native vegetation should be retained in order to meet the various needs of those wildlife species requiring large areas of undisturbed habitat.	Consistent	Riparian corridor along Carmel River is being retained and kept as a large area of undisturbed habitat.
Policy 7: To allow for wildlife movement from one open space area to another, adequate corridors (greenbelts) connecting open space areas should be maintained or provided. Such a corridor shall be specifically retained for movement of wildlife to and from uplands east of Point Lobos Reserve and the Reserve itself.	Consistent	Proposed project hugs urban development to the north and does not divide open space areas.
Policy 8: Except where necessary to alleviate a hazardous situation, snag removal should be avoided in areas of Monterey pine, coast live oak, or coast redwood which are retained in open space use.	Consistent	No snags shall be removed in open space areas.
Water and Marine Resources		
General Policies		
Policy 1: The effects of all new development proposals or intensification of land use activities or water uses on the natural character and values of the Carmel coasts streams will be specifically considered in all land use decisions. Subjects to be addressed in such evaluations include protection of water quantity and quality, wildlife and fish habitat, and recreational and scenic values. Land use proposals determined to pose unacceptable impacts to the natural integrity of the stream must be modified accordingly. The County should request technical assistance from the State Department of Fish and Game in determining effects on fish and wildlife habitat and appropriate mitigation measures.	Consistent	Water quantity/quality is not expected to change. See mitigation measure MM 4-6 .
Policy 2: New development including access roads shall be sited, designed and constructed to minimize runoff, erosion, and resulting sedimentation. Land divisions shall be designed to minimize the need to clear erodible slopes during subsequent development. Runoff volumes and rates should be maintained at pre-development levels, unless provisions to implement this result in greater environmental damage.	Consistent	Slopes will not be cleared as a result of project implementation. Runoff will be minimized through BMPs (see mitigation measures MM BIO-2 and MM BIO-6).
Specific Policies - Water Pollution Control		
Policy 1: All dumping of spoils (dirt, garbage, refuse, etc.) into riparian corridors and other drainage courses should be prohibited.	Consistent	See mitigation measures MM BIO-2 and MM BIO-6 .
Specific Policies - Erosion and Sedimentation Control		
Policy 4: The native vegetation cover, temporary vegetation, seeding, mulching, or other suitable stabilization methods shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as soon as possible with planting of native annual grasses and shrubs, appropriate non-native plants, or with approved landscaping practices.	Consistent	All temporarily disturbed areas shall be reseeded with native vegetation. See mitigation measures MM BIO-2 and MM BIO-6 .
Policy 5: Provisions shall be made to conduct, surface water to storm drains or suitable watercourses to prevent erosion. Onsite drainage devices shall be designed to accommodate increased run-off resulting from site modification. Where appropriate, on-site retention of stormwater should be required.	Consistent	See mitigation measures MM BIO-2 and MM BIO-6 .

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
Public Access		
<i>Specific Policies - Scenic and Natural Resource Protection</i>		
Policy b: Where highly sensitive plant or wildlife habitat is present, access may be inappropriate and should not be permitted.	Consistent	May not be considered "highly sensitive". No known special-status species populations present within/adjacent to PSA.
Policy d: The water quality of Carmel River, other riparian corridors, and Carmel Bay should be protected by siting and designing improvements to public access areas in a manner compatible with these sensitive resources. Similarly, private water supplies should be protected by locating accessways an adequate distance from surface water, springs, and wells.	Consistent	See mitigation measures MM BIO-2 and MM BIO-6 .
<i>Specific Policies - Trails</i>		
Policy a: All plans to improve existing trails or create new ones should ensure that environmentally sensitive habitats are protected from overuse. Measures to prevent or reduce impacts will be used, including: - routing or re-routing of trails to avoid these habitats. - design features to screen or separate trails and destination points from sensitive resources. revegetation projects, sediment basins, and other site features. - restriction of the number of access points into an area. - 10 foot wide easements or dedications.	Consistent	See mitigation measures MM BIO-1 , MM BIO-2 , MM BIO-3 , MM BIO-6 , and MM BIO-7
Policy b: Trails along stream corridors should be sited and designed to avoid disturbance to riparian vegetation and wildlife and degradation of water quality. Measures include, but are not limited to, control or runoff and erosion, contouring and siting trails to conform to the natural topography, and separation and screening from important areas.	Consistent	See all mitigation measures in IS/MND.
General Plan/Coastal Land Use Plan (City of Carmel-by-the-Sea)		
<i>Coastal Resources Management Element</i>		
<i>Urban Forests, Parks and Open Spaces</i>		
Policy 5-47: Continue Carmel's tree preservation program and encourage the use of indigenous or native plants.	Consistent	Project will be consistent with tree ordinances.
Policy 5-64: New development shall be sited and designed to avoid or minimize significant adverse effects to the forest. Avoid projects that significantly increase building footprint to the detriment of trees. No grading, compaction of soils, construction of building walls or placement of impermeable surfaces within six feet of trees classified as significant shall be permitted.	Consistent	Building footprint will not significantly increase from already disturbed areas.
Policy 5-71: Evaluate, protect and preserve all trees (and their root zones) on sites prior to, during, and after construction. Ensure that all building sites abide by appropriate tree protection and preservation standards and guidelines provided in the Forest Management Plan.	Consistent	Project will be consistent with tree ordinances.

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
Policy 5-102: Minimize removal of native vegetation.	Consistent	The disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations and shall only occur within the defined work areas.
Policy 5-103: Identify and protect environmentally sensitive habitat areas against any significant disruption of habitat values. Only uses dependant upon those resources shall be allowed. For private lots of record within ESHA, establish a transfer of development rights program using credits of water, floor area, density or some other development parameter to relocate development to less sensitive areas.	Consistent	See all mitigation measures in IS/MND.
Policy 5-107: Provide for public access and passive enjoyment of City parks and open space.	Consistent	Project will accomplish this.
Environmentally Sensitive Habitat Areas		
Policy 5-158: Regulate the removal or alteration of riparian vegetation within identified ESHAs to protect riparian habitats.	Consistent	See all mitigation measures in IS/MND.
Policy 5-161: Avoid disturbance or degradation of resources when maintenance vehicles and equipment enter sensitive habitat areas.	Consistent	Equipment will restricted to roadway and designated construction areas. All temporarily disturbed areas will be restored to original conditions.
Water Quality, Drainage and Marine Resources		
Policy 5-196: New roads, bridges, culverts, and outfalls shall not cause or contribute to stream bank, hillside, or bluff erosion or creek or wetland siltation and shall include BMP's to minimize impacts to water quality including construction phase erosion control and polluted runoff control plans, and soil stabilization practices. Where space is available, dispersal of sheet flow from roads into vegetated areas or other on-site infiltration practices shall be incorporated into road and bridge design.	Consistent	See miitgation measures MM BIO-2 and MM BIO-6 .
Policy 5-208: New development shall minimize the development footprint and directly connected impervious surfaces, as well as the creation of and increases in impervious surfaces.	Consistent	The proposed trail will be the minimum width necessary to meet State standards. No excessive paving will be used.

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Local Policy Consistency Analysis

Policies	Consistency Determination	Analysis
<p>Policy 5-209: New development shall be sited and designed on the most suitable portion of the site while ensuring protection and preservation of natural and sensitive site resources by providing for the following:</p> <ul style="list-style-type: none"> • Protecting areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota and/or that are susceptible to erosion and sediment loss; • Analyzing the natural resources and hazardous constraints of planning areas and individual development site to determine locations most suitable for development; • Promoting clustering of development on the most suitable portions of a site taking into account geologic constraints, sensitive resources, and natural drainage features; • Preserving and protecting riparian corridors, wetlands, and buffer zones; • Minimizing disturbance of natural areas, including significant trees, native vegetation, and root structures; • Using natural drainage as a design element, maximizing the preservation of natural contours and native vegetation; • Limiting land disturbance activities such as clearing and grading, limiting cut and fill to reduce erosion and sediment loss, and avoiding steep slopes, unstable areas, and erosive soils. 	Consistent	Proposed trail location has been sited to reduce impacts to sensitive vegetation to the greatest extent possible. It almost completely overlaps with previously disturbed lands, including an existing dirt access road that runs through the riparian zone. At its closest point, the trail footprint is set back roughly 140 feet from the Carmel River.
<p>Policy 5-218: New development shall include construction phase erosion control and polluted runoff control plans. For example, such plans may include controls on timing of grading, BMP's for storage and disposal of construction materials, or design specifications of sedimentation basins.</p>	Consistent	See mitigation measure MM BIO-2 .
<p>Policy 5-219: New development that requires a grading/erosion control plan shall include landscaping and re-vegetation of graded or disturbed areas.</p>	Consistent	See mitigation measure MM BIO-2 .

Note: Only policies deemed relevant to the Rio Park-Larson Field Trail Project are included in this table.

Appendix A3

Biological Resources – Species Summary Table

Michael Baker International

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Included in Impact Analysis?	Rationale
Plants							
<i>Agrostis lacuna-vernalis</i>	vernal pool bent grass	FE	SE	1B.1	Vernal pools (mima mounds). Elev: 377-476 ft. (115-145 m.) Blooms: Apr-May (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Allium hickmanii</i>	Hickman's onion	-	-	1B.2	Found mostly in grassland (CDFW 2015d). Also associated with closed-cone coniferous forest, maritime chaparral, coastal prairie, coastal scrub, and valley and foothill grassland. Elev: 16-656 ft. (5-200 m.) Blooms: Mar-May (CNPS 2015).	N	Suitable habitat not present.
<i>Arctostaphylos edmundsii</i>	Little Sur manzanita	-	-	1B.2	Sandy soils in coastal bluff scrub and chaparral. Elev: 33-345 ft. (10-105 m.) Blooms: Nov-May (CNPS 2015).	N	Suitable habitat not present.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	-	-	1B.2	Sandy soil in closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. Elev: 197-1,759 ft. (60-536 m.) Blooms: Jan-June (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Arctostaphylos montereyensis</i>	Toro manzanita	-	-	1B.2	Sandy soil in maritime chaparral, cismontane woodland and coastal scrub. Elev: 98-2,395 ft. (30-730 m.) Blooms: Feb-Mar (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	-	-	1B.1	Sandy soil in chaparral. Elev: 98-2,493 ft. (30-760 m.) Blooms: Dec-Mar (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Arctostaphylos pumila</i>	sand-mat manzanita	-	-	1B.2	Sandy soils in openings in closed-cone coniferous forest, maritime chaparral, cismontane woodlands, coastal dunes and coastal scrub. Elev: 9-673 ft. (3-205 m.) Blooms: Feb-May (CNPS 2015).	N	Suitable habitat not present.
<i>Arenaria paludicola</i>	marsh sandwort	FE	SE	1B.1	Sandy soils in openings in freshwater or brackish marshes and swamps. Elev: 9-558 ft. (3-170 m.) Blooms: May-Aug (CNPS 2015).	N	Suitable habitat not present.
<i>Astragalus tener</i> var. <i>titi</i>	coastal dunes milk-vetch	FE	SE	1B.1	Often vernal mesic areas in sandy coastal bluff scrub, coastal dunes, and mesic coastal prairies. Elev: 3-164 ft. (1-50 m.) Blooms: Mar-May (CNPS 2015).	N	Suitable habitat not present.
<i>Bryoria spiralifera</i>	twisted horsehair lichen	-	-	1B.1	Usually on conifers in North Coast coniferous forests on the immediate coast. Elev: 0-98 ft. (0-30 m.) Blooms: N/A (CNPS 2015).	N	Suitable habitat not present.
<i>Castilleja ambigua</i> var. <i>insalutata</i>	pink Johnny-nip	-	-	1B.1	Coastal prairie and coastal scrub. Elev: 0-328 ft. (0-100 m.) Blooms: May-Aug (CNPS 2015).	N	Suitable habitat not present.
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	-	-	1B.1	755 ft. (0-230 m.) Blooms: May-Nov (CNPS 2015).	N	Suitable habitat not present.
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	FT	-	1B.2	Sandy soils in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland. Elev: 9-1,476 ft. (3-450 m.) Blooms: Apr-Aug (CNPS 2015).	N	Suitable habitat not present.
<i>Chorizanthe robusta</i> var. <i>robusta</i>	robust spineflower	FE	-	1B.1	Sandy or gravelly soils in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub. Elev: 9-984 ft. (3-300 m.) Blooms: Apr-Sept (CNPS 2015).	N	Suitable habitat not present.
<i>Clarkia jolonensis</i>	Jolon clarkia	-	-	1B.2	Chaparral, cismontane woodland, coastal scrub, and riparian woodland. Elev: 66-2,165 ft. (20-660 m.) Blooms: Apr-June (CNPS 2015).	N	PSA is below species elevation range.
<i>Collinsia multicolor</i>	San Francisco collinsia	-	-	1B.2	Closed-cone coniferous forest and coastal scrub, sometimes on serpentinite. Elev: 98-820 ft. (30-250 m.) Blooms: Mar-May (CNPS 2015).	N	Suitable habitat not present. Serpentinite soil not present (CGS 2010).
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	-	SE	1B.1	Sandy soils, often on disturbed sites, in closed-cone coniferous forest, maritime chaparral, cismontane woodlands, coastal dunes and coastal scrub. Elev: 0-1,690 ft. (0-515 m.) Blooms: Apr-Oct (CNPS 2015).	N	Suitable habitat not present.
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	-	-	1B.2	Coastal scrub, mesic cismontane woodland, and openings in chaparral. Elev: 640-6,398 ft. (195-1,095 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	-	-	1B.2	Broadleafed upland forest, chaparral, coastal prairie and coastal scrub. Elev: 0-1,400 ft. (0-427 m.) Blooms: Mar-June (CNPS 2015).	N	Suitable habitat not present.
<i>Delphinium umbracolum</i>	umbrella larkspur	-	-	1B.3	Chaparral and cismontane woodland. Elev: 1,312-5,249 ft. (400-1,600 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	-	-	1B.1	Sandy soils in openings in closed-cone coniferous forest, maritime chaparral, coastal dunes and coastal scrub. Elev: 98-902 ft. (30-275 m.) Blooms: Jul-Oct (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	-	-	1B.3	Sandy soils in chaparral and valley and foothill grasslands. Often on recent burns. Elev: 984-3,199 ft. (300-975 m.) Blooms: Apr-Sept (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Erysimum ammophilum</i>	sand-loving wallflower	-	-	1B.2	Sandy soils in openings in maritime chaparral, coastal dunes, and coastal scrub. Elev: 0-197 ft. (0-60 m.) Blooms: Feb-June (CNPS 2015).	N	Suitable habitat not present.
<i>Erysimum menziesii</i>	Menzies' wallflower	FE	SE	1B.1	Coastal dunes. Elev: 0-115 ft. (0-35 m.) Blooms: Mar-Sept (CNPS 2015).	N	Suitable habitat not present.
<i>Fritillaria liliaceae</i>	fragrant fritillary	-	-	1B.2	Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often on serpentinite. Elev: 9-1,345 ft. (3-410 m.) Blooms: Feb-Apr (CNPS 2015).	N	Suitable habitat not present. Serpentinite soil not present (CGS 2010).

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Included in Impact Analysis?	Rationale
<i>Galium clementis</i>	Santa Lucia bedstraw	-	-	1B.3	Rocky areas associated with granitic or serpentinite parent material in lower or upper montane coniferous forests. Elev: 3,707-5,741 ft. (1,130-1,780 m.) Blooms: May-July (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range. Serpentinite/granitic soil not present (CGS 2010).
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Monterey gilia	FE	ST	1B.2	Sandy openings in maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub. Elev: 0-148 ft. (0-45 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present.
<i>Hesperocyparis goveniana</i>	Gowen cypress	FT	-	1B.2	Closed-cone coniferous forest and maritime chaparral. Elev: 98-984 ft. (30-300 m.) Blooms: N/A (CNPS 2015).	N	Suitable habitat not present.
<i>Hesperocyparis macrocarpa</i>	Monterey cypress	-	-	1B.2	Closed-cone coniferous forest. Elev: 33-98 ft. (10-30 m.) Blooms: N/A (CNPS 2015).	Y	This species occurs in the PSA; however, the individuals onsite are not part of a native stand.
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia	-	-	1B.1	Sandy or gravelly soils in openings in closed-cone coniferous forest, maritime chaparral, coastal dunes and coastal scrub. Elev: 33-656 ft. (10-200 m.) Blooms: Apr-Sept (CNPS 2015).	N	Suitable habitat not present.
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE	-	1B.1	Mesic areas in cismontane woodland, vernal pools, alkaline playas, and valley and foothill grasslands. Elev: 0-1,542 ft. (0-470 m.) Blooms: Mar-June (CNPS 2015).	N	Suitable habitat not present.
<i>Layia camosa</i>	beach layia	FE	SE	1B.1	197 ft. (0-60 m.) Blooms: Mar-July (CNPS 2015).	N	Suitable habitat not present.
<i>Lupinus tidestromii</i>	Tidestrom's lupine	FE	SE	1B.1	Coastal dunes. Elev: 0-328 ft. (0-100 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present.
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush-mallow	-	-	1B.2	Chaparral, cismontane woodland, and coastal scrub. Elev: 98-3,609 ft. (30-1,100 m.) Blooms: Apr-Oct (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i>	Santa Lucia bush-mallow	-	-	1B.2	Rocky chaparral. Elev: 197-1,181 ft. (60-360 m.) Blooms: May-July (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Carmel Valley malacothrix	-	-	1B.2	Coastal scrub and rocky chaparral. Elev: 82-3,399 ft. (25-1,036 m.) Blooms: Mar-Dec (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Microseris paludosa</i>	marsh microseris	-	-	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland. Elev: 16-584 ft. (5-300 m.) Blooms: Apr-July (CNPS 2015).	N	Suitable habitat not present. Has not been observed on the Monterey Peninsula in over 40 years (CDFW 2015b).
<i>Monardella sinuata</i> ssp. <i>nigrescens</i>	northern curly-leaved monardella	-	-	1B.2	Sandy soils in coastal dunes and coastal scrub. In Santa Cruz County it is also found in chaparral and lower montane coniferous forest (ponderosa pine sandhills). Elev: 0-984 ft. (0-300 m.) Blooms: Apr-Sept (CNPS 2015).	N	Suitable habitat not present.
<i>Monolopia gracilens</i>	woodland woollythreads	-	-	1B.2	upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland. Elev: 328-3,937 ft. (100-1,200 m.) Blooms: Feb-July (CNPS 2015).	N	Suitable habitat not present. Serpentine soil not present (CGS 2010).
<i>Pinus radiata</i>	Monterey pine	-	-	1B.1	Closed-cone coniferous forest and cismontane woodland. Elev: 82-610 ft. (25-186 m.) Blooms: N/A (CNPS 2015).	N	Suitable habitat not present. Species not observed during reconnaissance-level survey.
<i>Piperia yadonii</i>	Yadon's rein orchid	FE	-	1B.1	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral communities. Elev: 33-1,673 ft. (10-510 m.) Blooms: Feb-Aug (CNPS 2015).	N	Suitable habitat not present.
<i>Plagiobothrys uncinatus</i>	hooked popcorn-flower	-	-	1B.2	grassland, and sandy chaparral. Elev: 984-2,493 ft. (300-760 m.) Blooms: Apr-May (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
<i>Potentilla hickmanii</i>	Hickman's cinquefoil	FE	SE	1B.1	Freshwater marshes, seeps, and small streams in open or forested areas along the coast, including coastal bluff scrub and closed-cone coniferous forest. Elev: 33-489 ft. (10-149 m.) Blooms: Apr-Aug (CDFW 2015; CNPS 2015).	N	Suitable habitat not present.
<i>Ramalina thrausta</i>	angel's hair lichen	-	-	2B.1	On dead twigs and other lichens in North Coast coniferous forests. Elev: Unkown Blooms: N/A (CNPS 2015).	N	Suitable habitat not present. Only confirmed occurrences in Del Norte and Sonoma counties (CDFW 2015b).
<i>Rosa pinetorum</i>	pine rose	-	-	1B.2	Closed-cone coniferous forest and cismontane woodland. Elev: 7-945 ft. (2-945 m.) Blooms: May-July (CNPS 2015).	N	Suitable habitat not present.
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris	-	-	1B.2	broadleaved upland forests, closed-cone coniferous forests, chaparral, coastal prairie, and valley and foothill grasslands. Elev: 33-1,640 ft. (10-500 m.) Blooms: Apr-May (CNPS 2015).	N	Suitable habitat not present.
<i>Tortula californica</i>	California screw-moss	-	-	1B.2	On sandy soil in chenopod scrub and valley and foothill grassland. Elev: 33-4,790 ft. (10-1,460 m.) Blooms: N/A (CNPS 2015).	N	Suitable habitat not present.
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	-	-	1B.1	Gravelly soils on margins in broadleaved upland forests, cismontane woodland, and coastal prairie. Elev: 345-2,001 ft. (105-610 m.) Blooms: Apr-Oct (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Included in Impact Analysis?	Rationale
<i>Trifolium hydrophilum</i>	saline clover	-	-	1B.2	alkaline valley and foothill grasslands. Elev: 0-984 ft. (0-300 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present.
<i>Trifolium polyodon</i>	Pacific Grove clover	-	SR	1B.1	Mesic areas in closed-cone coniferous forest, coastal prairie, meadows and seeps, and valley and foothill grassland. Elev: 16-394 ft. (5-120 m.) Blooms: Apr-July (CNPS 2015).	N	Suitable habitat not present.
<i>Trifolium trichocalyx</i>	Monterey clover	FE	SE	1B.1	Sandy soils in open, burned areas in closed-cone coniferous forests. Elev: 98-787 ft. (30-240 m.) Blooms: Apr-June (CNPS 2015).	N	Suitable habitat not present. PSA is below species elevation range.
Invertebrates							
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	-		Found only in vernal pools and vernal pool-like habitats (USFWS 2005).	N	Suitable habitat not present.
<i>Danaus plexippus</i> pop. 1	monarch butterfly - California overwintering population	-	-		Locally important species. Typically overwinter in groves of eucalyptus (<i>Eucalyptus</i> sp.), Monterey pine (<i>Pinus radiata</i>), or Monterey cypress (<i>Hesperocyparis macrocarpa</i>) along the California coast (IELP 2012).	Y	Monterey cypress provide suitable overwintering habitat for this species.
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	FE	-		(<i>Eriogonum latifolium</i>) and seacliff buckwheat (<i>Eriogonum parvifolium</i>). Known from primarily coastal dune habitats, but also recorded in chaparral, scrub and grassland (USFWS 2006).	N	Host plant not present. Suitable habitat not present.
<i>Haliotis cracherodii</i>	black abalone	FE	-		Found in rocky intertidal and subtidal habitats in areas of high to moderate surf. Often found wedged into crevices, cracks, or holes in rocks (Butler et al. 2009).	N	Suitable habitat not present.
Fish							
<i>Eucyclogobius newberryi</i>	tidewater goby	FE	SSC		Brackish water, shallow lagoons & lower stream reaches, still water (USFWS 2005).	N	Suitable habitat not present.
<i>Oncorhynchus mykiss irideus</i>	steelhead - south/central California coast DPS	FT	SSC		Spawning habitat = gravel-bottomed, fast-flowing, well-oxygenated rivers and streams. Non-spawning = estuarine, marine waters (Busby et al. 1996).	N	Known to occur in Carmel River; however, PSA is 200 feet from the river and no impacts to this species will occur.
Amphibians							
<i>Ambystoma californiense</i>	California tiger salamander	FT	ST		Breeding ponds are usually fish-free & ephemeral. Ponds form in winter and dry in summer. May also breed in slow streams and semi-permanent waters, including cattle ponds. Needs both suitable upland habitat and breeding ponds. Mostly fossorial & often utilizes mole/ground squirrel burrows. Typical habitat associations include grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest (Nafis 2015).	N	Suitable habitat not present. Carmel River is not suitable breeding habitat due to presence of predators.
<i>Rana draytonii</i>	California red-legged frog	FT	SSC		grasslands, coastal scrub, and streamsidess with plant cover in lowlands or foothills. Breeding habitat = permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. From sea level to 5,000 ft. (1,525 m.) (Nafis 2015).	Y	Numerous occurrences along the Carmel River. Footprint is roughly 160 feet from the river. PSA is roughly 140 feet from the river.
<i>Taricha torosa</i>	Coast Range newt	-	SSC		rolling grasslands. In southern California, drier chaparral, oak woodland and grassland are used. Found at elevations up to 4,200 ft. (Nafis 2015).	N	Nearest CNDDDB occurrence (#5) roughly 18 miles away (CDFW 2015b). Not known to occur in the vicinity.
Reptiles							
<i>Anniella pulchra nigra</i>	black legless lizard	-	SSC		Occurs in moist warm loose soil in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces (Nafis 2015).	N	Suitable habitat not present.
<i>Emys marmorata</i>	western pond turtle	-	SSC		Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. Logs, rocks, cattail mats, and exposed banks are required for basking (Nafis 2015).	Y	Carmel River, tributary drainage, and associated uplands may provide suitable habitat.
<i>Phrynosoma blainvilli</i>	coast horned lizard	-	SSC		Inhabits open country, especially sandy areas, washes, flood plains and wind-blown deposits in a wide variety of habitats. Occurs in valley-foothill hardwood, conifer and riparian habitats, as well as in pine-cypress, juniper and annual grassland habitats. Ranges up to 4,000 ft. (1,219 m.) in the Sierra Nevada foothills, and up to 6,000 ft. (1,800 m.) in the mountains of southern California (CDFW 2015c).	N	Suitable habitat not present.
Birds							
<i>Agelaius tricolor</i>	tricolored blackbird	-	SE		Nest in wetlands or in dense vegetation near open water. Dominant nesting substrates: cattails (<i>Typha</i> sp.), bulrushes (<i>Schoenoplectus</i> sp.), blackberry (<i>Rubus</i> sp.), agricultural silage. Nesting substrate must either be flooded, spinous, or in some way defended against predators (Hamilton 2004).	N	Suitable nesting substrate not present.

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Included in Impact Analysis?	Rationale
<i>Athene cunicularia</i>	burrowing owl	-	SSC		mammal burrows, including rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and human disturbed lands. Soils must be friable for burrows (Bates 2006).	N	Suitable habitat not present. No burrows observed during reconnaissance-level survey.
<i>Brachyramphus marmoratus</i>	marbled murrelet	FT	SE		pelagic habitats from the Oregon border to Santa Barbara County. Nests and roosts along coastlines in stands of mature redwood (<i>Sequoia sempervirens</i>) and Douglas fir (<i>Pseudotsuga menziesii</i>). Prefers to nest in tall trees (CDFW 2015c).	N	Suitable habitat not present.
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	SSC		salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds (Cornell 2015).	N	Suitable habitat not present.
<i>Circus cyaneus</i>	northern harrier	-	SSC		vegetation in undisturbed areas. Breed and forage in variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats and desert sinks (Shuford and Gardali 2008).	Y	Suitable habitat present.
<i>Contopus cooperi</i>	olive-sided flycatcher	-	SSC		Preferred nesting habitat includes mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir (<i>Abies magnifica</i>), and lodgepole pine (<i>Pinus contorta</i>). Requires large, tall trees, usually conifers for nesting and roosting (CDFW 2015c).	N	Suitable habitat not present.
<i>Cypseloides niger</i>	black swift	-	SSC		Breeding sites are very specific: behind or beside permanent or semipermanent waterfalls, on perpendicular cliffs near water and in sea caves (Shuford and Gardali 2008).	N	Suitable habitat not present.
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE		Dense riparian forest and scrub habitats associated with rivers, swamps, wetlands, lakes and reservoirs (USFWS 2002).	N	Outside known breeding range (Craig and Williams 1998).
<i>Falco peregrinus</i>	peregrine falcon	FD	SD/FP		Breeds mostly in woodland, forest, and coastal habitats, near wetlands, lakes, rivers or other water on high cliffs, banks, dunes, or mounds. Will nest of human-made structures, tree or snag cavities, or old nests of other raptors (CDFW 2015c).	Y	Suitable habitat present.
<i>Gymnogyps californianus</i>	California condor	FE	SE		Chaparral, coniferous forest and oak savannah in southern and central California. Nest in cliff cavities, large rock outcrops, or large trees. Roost on large cliffs or trees near feeding areas (USFWS 1996).	N	Suitable habitat not present.
<i>Haliaeetus leucocephalus</i>	bald eagle	FD	SE/FP		tree with open branchwork, especially ponderosa pine. Requires large bodies of water or rivers with abundant fish, and adjacent snags (CDFW 2015c).	N	Suitable habitat not present.
<i>Lanius ludovicianus</i>	loggerhead shrike	-	SSC		Breed in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground (Shuford and Gardali 2008).	N	Outside species breeding range (Shuford and Gardali 2008).
<i>Oceanodroma homochroa</i>	ashy storm petrel	-	SSC		Breeds on islands and offshore rocks from Mendocino County down to Baja California. Usually breed in crevices of talus slopes, rock walls, sea caves, cliffs, and driftwood (Shuford and Gardali 2008).	N	Suitable habitat not present.
<i>Pelecanus occidentalis californicus</i>	California brown pelican	FD	SD/FP		Warm coastal marine and estuarine environments. Rare inland. Breeds primarily on islands (Cornell 2015).	N	Suitable habitat not present.
<i>Ptychorampus aleuticus</i>	Cassin's auklet	-	SSC		Occurs in offshore California waters. Breed on islands free from non-native predators and large domestic mammals. Nest in earthen burrows, rocky crevices, debris piles, cracks under buildings, and large caves (Shuford and Gardali 2008).	N	Suitable habitat not present.
<i>Rallus longirostris obsoletus</i>	California clapper rail	FE	SE/FP		Require intricate network of sloughs with small natural berms along tidal channels with relatively tall vegetation (USFWS 2010a)	N	Suitable habitat not present.
<i>Riparia riparia</i>	bank swallow	-	ST		riverbanks. Also nest in earthen banks and bluffs, as well as sand and gravel pits (CDFW 2015c).	N	Suitable habitat not present. Outside species range (Garrison 1998).
<i>Setophaga petechia</i>	yellow warbler	-	SSC		meadows. Willow (<i>Salix</i> sp.) cover and Oregon ash (<i>Fraxinus latifolia</i>) important predictors of abundance in northern California (CDFW 2015c).	Y	Suitable habitat present.
<i>Sterna antillarum browni</i>	California least tern	FE	SE		Nest and roost in colonies on open beaches, forage near shore ocean waters and in shallow estuaries and lagoons (USFWS 2006).	N	Suitable habitat not present.
<i>Strix occidentalis occidentalis</i>	California spotted owl	-	SSC		Forests and woodlands with large mature trees and snags containing a high basal area, dense canopy (> 70%) cover, multiple canopy layers, and downed woody debris (CDFW 2015c).	N	Outside species range (Shuford and Gardali 2008). Suitable habitat not present.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE		Obligate riparian breeder. Cottonwood willow, oak woodlands, and mule fat scrub along watercourses (USFWS 1998).	N	Outside known breeding range (Kus 2002).

Mammals

Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	General Habitat Characteristics	Included in Impact Analysis?	Rationale
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	-	SCT/SSC		workings, occasionally found in buildings. Population concentrations in areas with cavity-forming rock and in old mining districts (Bolster 1998).	N	Suitable habitat not present.
<i>Enhydra lutris nereis</i>	southern sea otter	FT	FP		Occupy hard- and soft-sediment marine habitats from the littoral zone to depth of less than 330 ft. (100 m.), including protected bays and exposed outer coasts (USFWS 2003).	N	Suitable habitat not present.
<i>Neotoma macrotis luciana</i>	Monterey dusky-footed woodrat	-	SSC		Common to abundant in forest habitats of moderate canopy and moderate to dense understory. Can be abundant in chaparral habitats. Houses are built of sticks and leaves at the base of, or in a tree, around a shrub, or at the base of a hill (CDFW 2015c [Life History Account for <i>N. macrotis</i>]).	Y	Suitable habitat present.
<i>Sorex ornatus salarius</i>	Monterey shrew	-	SSC		Occupies a variety of habitats including coastal salt-marshes and adjacent sandhills, riparian areas, wetlands and uplands (Bolster 1998).	Y	Suitable habitat present.
<i>Taxidea taxus</i>	American badger	-	SSC		Open shrub, forest and herbaceous habitats with friable soils. Associated with treeless regions, prairies, park lands and cold desert areas. Range includes most of California, except the North Coast (CDFW 2015c).	N	Suitable habitat not present.

Key
Federal & State Status
(FE) Federal Endangered
(FT) Federal Threatened
(FC) Federal Candidate
(SE) State Endangered
(ST) State Threatened
(SSC) State Species of Special Concern
(FP) Fully Protected
CNPS Rare Plant Rank
<i>Rareness Ranks</i>
(1A) Presumed Extinct in California
(1B) Rare, Threatened, or Endangered in California and Elsewhere
(2) Rare, Threatened, or Endangered in California, But More Common Elsewhere
(3) More Species Information Needed
(4) Limited Distribution
<i>Threat Ranks</i>
(0.1) Seriously threatened in California
(0.2) Fairly threatened in California
(0.3) Not very threatened in California

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Appendix B

Archaeological Records Search and Site Reconnaissance

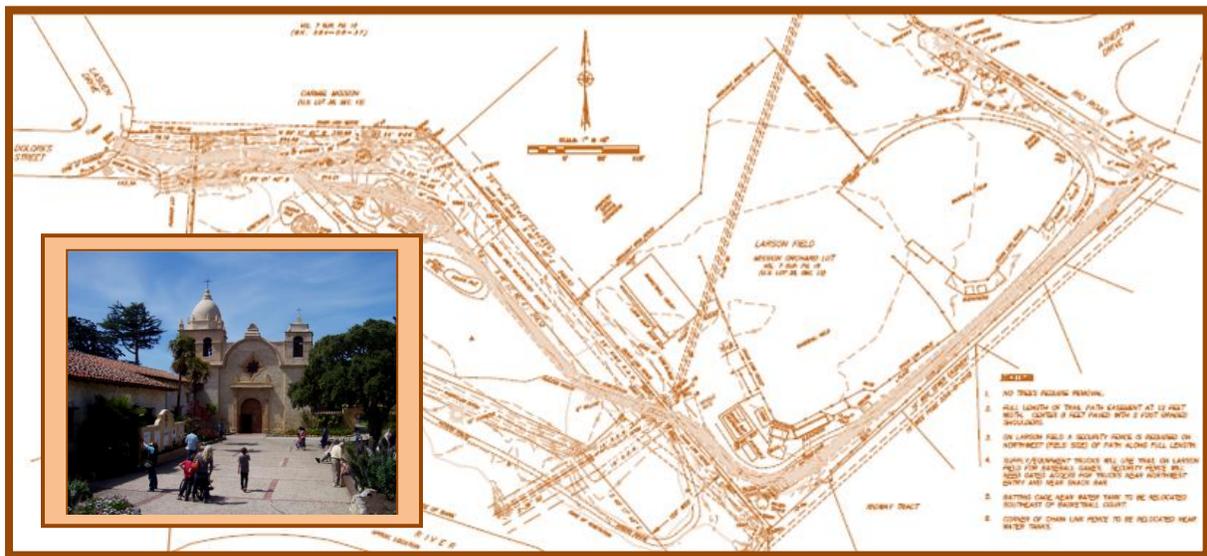
Holman and Associates

Archaeological Records Search and Site Reconnaissance Rio Park/Larsen Field Trail Project City of Carmel-By-The-Sea, Monterey County, California

By

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May 2015



Report Completed for

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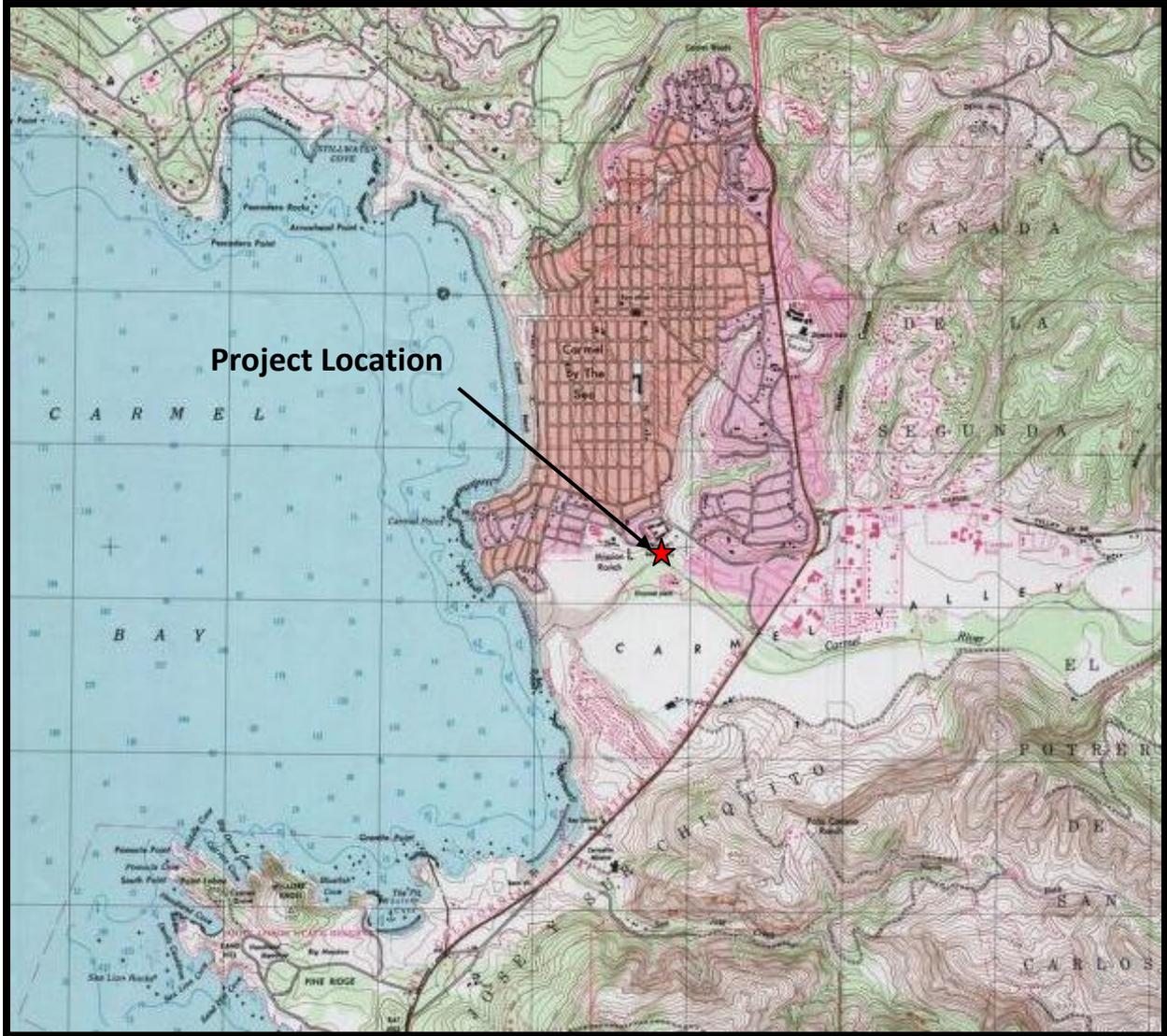
Introduction and Project Summary

In April 2015, Holman & Associates (H&A) completed archival research and a pedestrian reconnaissance of a 1,400-foot long and 12-foot wide project area between Rio Road and Lasuen Drive in the jurisdiction of both the City of Carmel-By-The-Sea (hereinafter Carmel) and Monterey County, California. The project area is planned for the development of an eight-foot wide paved pedestrian/bike path. This research was conducted for Pacific Municipal Consultants (PMC) and authorized for the property owners by Brian Roseth, Monterey Bay Planning Services, as part of the project's environmental review per the California Environmental Quality Act (CEQA). The project area is in close proximity to Mission San Carlos Borromeo de Carmelo (1770), aka Mission Carmel (California State Historic Landmark No. 135) and in a region known to have had a relatively dense prehistoric population.

This work entailed three steps. The first was a search of relevant records and maps maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University. Other documentary resources were also referenced with the assistance of local individuals having special knowledge of the history of Mission Carmel and its surroundings. As the second step, this author conducted a pedestrian survey of the project area. This report and the recommendations within are the third step of this cultural resources investigation of the subject property.

Notwithstanding that the pedestrian survey found no specific indication of surface or subsurface resources in the project area, archival research showed that the project's path runs through an area with known prehistoric archaeological resources and intersects property owned and operated by Mission Carmel beginning as early as 1771. Multiple archaeological investigations have been conducted that include portions of the project area resulting in the uniform opinion among researchers that the archaeological sensitivity of the area for both prehistoric and historical period resources is extremely high. Given the sensitivity of the area for potential archaeological resources, archaeological monitoring of all excavation and other ground disturbance related to the present project should be considered mandatory.

A copy of this report will be submitted to the NWIC as required by the State of California.



Map 1: Project Area Location
 (USGS “Monterey” 7.5 minute topographic quadrangle, 1997)

(Source: USGS)

Project Location and Legal Description

The project area is an east/west trending linear/curvilinear shaped area 12 feet wide and about 1,400 feet long located between Rio Road and Lasuen Drive south and west of the Mission Carmel/Junipero Serra School complex and Larson athletic fields. The project is in the jurisdiction of both Carmel and Monterey County about 200 feet north of the Carmel River and about 2,000 feet west of Highway 1. The property is contained on the U.S. Geological Survey (USGS) “Monterey” 7.5 minute topographic quadrangle, a portion of which is reproduced here as Map 1. The project area crosses four parcels designated by Assessor’s Parcel Number (APN) 009-511-011 (Mission Ranch), 009-521-001 (Carmel Area Wastewater District), 009-521-002 (Rio Park-City of Carmel-By-The-Sea), and 009-531-004 (Larsen Field-Mission Orchard Lot). All four parcels are listed as “unsectioned” in the Monterey County GIS database.

Environmental Setting

The project area lies on a low hill 200 feet north of the Carmel River at about 20 feet/6 meters above sea level. The surrounding area is defined by the Carmel River Valley which drains east to west from the Santa Lucia Range to the Pacific Ocean about 3,000 feet west of the project area.

Presently, the Carmel River Valley contains a variety of land uses including residential, commercial, active recreation (golf courses), open space recreation (Carmel River State Beach), water treatment facilities, and agriculture. Near the project area the river channel is lined with willow and other riparian plants. A row of mature cypress trees stands along the project path near Lasuen Drive while ground cover is mostly invasive passion vine, poison oak, wild berries, thick grasses and varieties of broom. Near Rio Road the project area is covered with mowed grass and gravel that is part of the Larson Field athletic area.

Brief Cultural History

Most radiocarbon dates obtained from prehistoric contexts in the Monterey Bay region suggest that permanent occupation of the region began about 5,000 to 6,000 Years Before Present (YBP). While it is not entirely clear how population movements affected cultural continuity in the area, it is well established that hunting and gathering or a combination of hunting and gathering and collecting, as described by Binford (1980), was the primary subsistence strategy used by the region's inhabitants up to the beginning of the Spanish colonial presence in 1769.

Moratto (1984) and Breschini and Haversat (2005), suggest the Ohlone, also called Costanoan—from the Spanish “costanos” for coast-dwellers, arrived in the north and northwest portion of Monterey County about 200 B.C., perhaps from the lower Sacramento Valley/Delta. Linguistically, the Ohlone were a language family in aboriginal times but many independent tribal groups maintained autonomous territories and spoke mutually unintelligible languages. The Rumsen Tribe of the Ohlone was associated with the lower Carmel River Valley including the entire Monterey Peninsula to the north and about as far south as Garrapata State Park (Milliken 1999b). Habitation was likely semi-sedentary with seasonal camps often reflecting climate patterns and seasonal resource availability. Discussions of the Ohlone include Kroeber (1925), Levy (1978), Margolin (1978), and other sources.

From 1769 to 1776, three Spanish expeditions to reconnoiter the region for colonization passed through the Central Coast. With the development of the Spanish Presidio at Monterey Bay and the Franciscan mission at Carmel in 1770, and later the missions at Soledad and Santa Cruz (1791), and San Juan Bautista (1797) aboriginal life changed profoundly for the Ohlone. The root cause of change was Spanish religious and political hegemony brought by the Franciscan missionaries and enforcement of their assumed authority by the Spanish military. Religious conversion, adoption of farming practices, lethal illnesses, and intermarriage with other groups also contributed to the disintegration of tribal culture. The effect of Mission Carmel on the Native population was dramatic. By 1790, the Rumsen and the five tribes surrounding their territory (Locuyusta in Calendaruc, Ensen, Eslanajan, Excelen, and Sargentarue) had all experienced significant absorption into the Mission system (Milliken 1999b).

Mission San Carlos Borromeo de Carmelo

Mission San Carlos Borromeo de Carmelo is arguably one of the most important historic sites on the west coast of The United States. The Mission was founded by Father Junípero Serra in June of 1770 at a Mission warehouse near the Spanish Presidio of Monterey Bay. In 1771 the Mission was moved to its present location on the Carmel River. Father Serra, the first Father-President of the mission system of Alta California, was pleased with the site and operated Mission Carmel as the administrative headquarters of the mission system until his death in August, 1784. The headquarters status continued until the death of subsequent Father-President, Father Lasuen, in 1803 (Lake 2006; Beebe and Senkewicz 2015).

Growth of the Mission under Father Serra and subsequent leaders was a priority. The first buildings were rough log shelters surrounded by a simple wood stockade. Reconstruction and expansion of the Mission church occurred eight times with a significant contribution of labor and skill from Native American apprentices. The present church was dedicated in 1797. The Mission evolved into perhaps the most unique in the California mission system with sandstone construction and Morrish-Gothic architectural features that provide an old world appearance compared to the rather plain style typical of the other churches (Krell 1979). It is thought that Father Serra was a strong influence regarding the architectural style (Lake 2006). Father Serra, Father Lasuen, and Father Crespi, chronicler of the Portola Expedition of 1769, are interred in the floor of the Mission Carmel church.

The Mission was at its most successful from 1771 to the first decade of the 19th century, when regional epidemics in 1802 and 1806 seriously depleted the Native population. After a long period of decline through the Mexican revolution of 1821, secularization in 1831-1832, and another epidemic in Monterey in 1844, Mission Carmel was left neglected and abandoned.

In 1884, Mission Carmel was partially restored by Father Angelo Casanova, a pastor in Monterey, for the centennial of the death of Father Serra. The main element of this work was replacement of the sanctuary roof, a treatment that was historically inaccurate but functional satisfactory. The fix was sufficient to stabilize the remaining structure until a more complete and historically sensitive restoration was undertaken in the 1930s. As a result of this rescue the Mission Carmel church is considered one of the most authentic buildings from the Mission Period (Krell 1979; Lake 2006). The restoration revived interest in the Mission. In 1960 the Vatican designated the Mission a minor basilica in recognition of its connection with Father Serra, who was made a candidate for sainthood in 1934 and canonized in 1988. Pope John Paul II visited the Mission in 1988, an event related to the canonization of Serra (Lake 2006). Mission Carmel is now an active parish and popular museum.

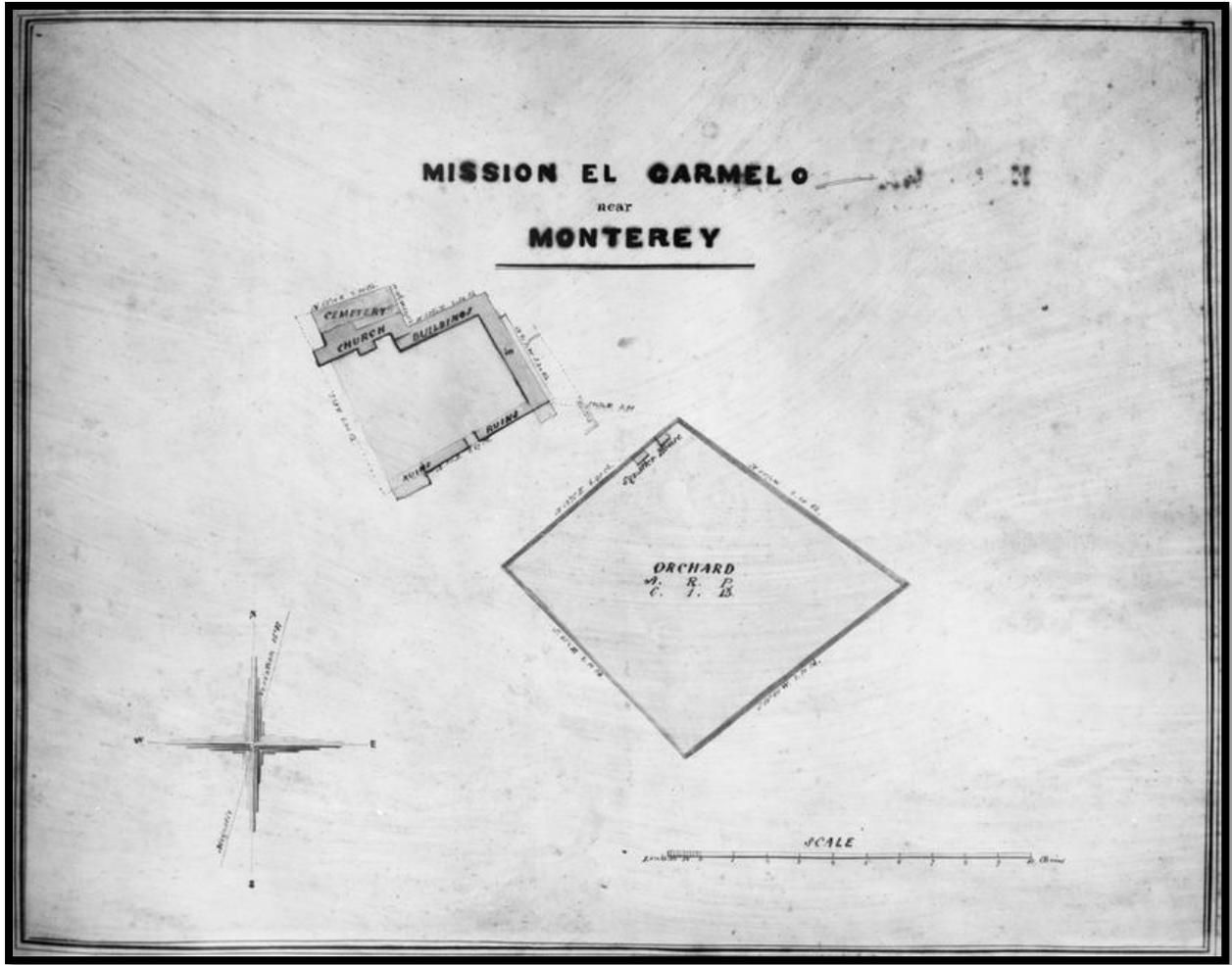


Figure 1: Mission Carmel and Mission Orchard (Source: Public Domain via Wikicommons)
 Historic American Buildings Survey U.S. Land Commission, Clerk - U.S. District Court of Northern California - Mission San Carlos Borromeo, Rio Road and Lausen Drive, Carmel-by HABS CAL,27-CARM.

Archaeological Sensitivity of the Project Area

While the location of the main Mission structures is relatively certain, the geography of the area around the Mission and the activities that may have taken place there is ambiguous. The Native American village associated with the Mission was mostly located to the north, but with an estimated 740 inhabitants in about 50 dwellings, the boundaries of the village are far from certain (from Lap erouse 1786 noted in Smith 1921).

South of the Mission near the project area the land uses appear to have been related to crops and animals. For example, French explorer Abel Du Petit-Thouars wrote in 1937 that a garden with fruit trees “...stretches out in a gentle slope from the mission to the edge of the river Carmelo...” (Quoted in Smith 1921:33), that is, south of the Mission. The Larsen Field area was the Mission orchard from 1779 until 1829. Figure 1 is an early 20th century government record almost certainly based on the “Alemany Plat” of 1854 (see Plate 5, Smith 1921:30). Encountering

archaeological evidence of the garden and orchard operation is therefore a possibility, although such evidence would likely be ephemeral. Other references also suggest there were structures outside the Mission. In 1771 there were “within sight some corrals for the mules and cattle” (Engelhardt 1973:33).

The lack of a map or other more precise location information to accompany these vague references is critical to the conclusion that the location of some Mission associated structures, land uses, and activities remains uncertain and that caution during ground disturbing work near the Mission is warranted.

Historical Resources Records Search Results

An archive search was conducted by Leigh Jordan, archivist, on April 13, 2015, at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University (NWIC File No. 14-1385). The records search showed that there are five archeological sites within one kilometer of the project area. The historic Mission Carmel (National Historic Landmark #214; State Historic Landmark #135; CA-MNT-18H) is located just north of the proposed trail route that intersects the south portion of Larsen Field, which contained the Mission orchard from 1779 until 1829. Evidence of shell midden is also noted in the original site record (Pilling 1948) perhaps associated with both the Mission period neophyte habitation near the Mission and an early prehistoric habitation of the same area. A separate prehistoric site (CA-MNT-188) was recorded in 1953 by Broadbent as a sparse shell midden on the hill just north of the Mission within the nearby built up neighborhood. The closest historic period site is the Mission Ranch complex west of the project area.

Nearby formal surveys include four archaeological reconnaissance studies which include land within or immediately adjacent to the project area (Doane and Haversat 2002, 2000; Runnings and Haversat 1995; Runnings and Breschini 1991)

The California Inventory of Historic Resources (March 1976), California Historical Landmarks, and the National Register of Historic Places were checked for listed cultural resources which might be present in the project area; none were discovered.

Project Area Reconnaissance

Methods

On April 9, 2015 a pedestrian survey for archaeological resources was conducted by this author on all accessible areas within and adjacent to the project area. The survey was a general surface reconnaissance (see King, Moratto, and Leonard 1973) that included careful inspection for prehistoric and historical period cultural materials, topographic indicators, as well as vegetation and soil characteristics that might indicate surface or subsurface cultural materials. Where exposed soil was encountered, a trowel was used to increase soil visibility by removing light vegetation.

Results

No indications of cultural resources were found during the survey. Passion vine covers the majority of the project area near Lasuen Drive and soil visibility in that area was only about 15 percent. In the west central portion of the project area the ground is completely obscured by large piles of cut logs and other debris related to the City's use of the Rio Park parcel as a maintenance yard. Farther east the project area coincides with an existing gravel road that limits views of the underlying soil to less than ten percent. On the Larsen Field property, the ground cover is a combination of gravel and mowed grass. This area provided adequate access to the soil, especially at the margins of the mowed grass that roughly corresponds to the project area route along the fence line south of Larson Field. Rodent activity was also evident in the east portions of the project area and back dirt from borrows was closely examined.

From the relatively small amount of soil that was observed during the survey, the project area appears to contain a fine medium gray alluvial silt/clay with very few rocks that is typical of river valley sediment.

Several structures and buildings are in or very close to the project area. At the west terminus of the project area there is a masonry post made of fired brick. The post defines the south limit of the Serra School parking lot driveway at Lasuen Drive and the west limit of the chain-link fence that separates the project area from south boundary of the school parking lot. The proposed path of the project also passes within about 130 feet of the Serra School gymnasium, a new building completed within the last few years. Near Larsen field there are several small buildings, a metal storage container, a chain-link backspot and batting cage, and both a chain-link and wood fence line that either cross or run parallel with the project area. With the exception of the batting cages and two small sections of a chain-link fence which are to be removed or relocated as part of the present project, no changes to any of these buildings and structures are proposed. All the buildings related to Larsen field are of modern construction.

Recommendation

Although no historic period archaeological materials were found during the survey of the project area, archival research showed that the project's path runs through an area with known prehistoric archaeological resources and intersects property owned and operated by Mission Carmel beginning as early as 1771. It is possible that significant subsurface deposits may have been obscured by the flooding of the Carmel River over many years and that modern land disturbance has covered resources that are vulnerable to adverse impact from the planned construction. The archaeological sensitivity of the area for both prehistoric and historical period resources is extremely high. Therefore we recommend the following which should be incorporated in the project's conditions of approval:

1. A qualified archaeologist should be present for all excavation and soil disturbance during the planned construction over the entire length of the project area and any equipment staging areas related to the project. If at any time potentially significant archaeological resources are discovered, the monitor should be authorized to halt excavation until a

determination of significance is made. If the find is determined to be significant, work may remain halted until a mitigation plan is developed and implemented.

2. Following the construction phase of the project, a monitoring report should be completed that includes the field methods used to find and identify potential resources, a preliminary evaluation of any resources found, a preliminary map of any resources found, and recommendations for additional research if warranted.

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Appendix C

Traffic Analysis

Hatch Mott MacDonald



September 9, 2015

Tad Stearn, Principal
PMC
60 Garden Court, Suite 230
Monterey, CA 93940

Re: Rio Park-Larson Field Trail Traffic Analysis, Carmel, California

Dear Tad,

This letter documents a transportation study for the proposed Rio Park-Larson Field Trail located in Carmel, California. The project involves the construction of a Class 1 Bicycle Path that would extend between Lasuen Drive and Rio Road. The trail would cross Rio Park, the perimeter of Carmel Mission's Larson Field, property owned by the Carmel Area Wastewater District (CAWD) and the Mission Ranch tennis court driveway. The trail would be approximately 1,400 feet in length and 12 feet wide. Exhibit 1 shows the location of the proposed trail with respect to the local road network and Exhibit 2 shows the conceptual bike trail alignment.

This traffic analysis evaluates traffic safety issues at the two street junctions – Rio Road and Lasuen Drive. The design of the path termini is evaluated including connectivity to other pedestrian and bicycle facilities, signing, markings and street crossing controls.

EXISTING CONDITIONS

Rio Road is a 2-lane arterial street near the project site and carries about 10,000 vehicles per day (Carmel General Plan/Coastal Land Use Plan, 2007 count data). Rio Road extends between Val Verde Drive, east of Highway 1, to Ridgewood Road, west of Highway 1, where it continues into the downtown area as Junipero Avenue. Rio Road is a designated Class III Bike Route in the City of Carmel.

At the project site, Rio Road is two-lanes wide with shoulders of varying width. There is an existing sidewalk on the south side of Rio Road that begins about 90 feet south of the proposed Rio Road terminus of the trail and ends at Mission Fields Road. The posted speed limit on Rio Road at the proposed terminus of the trail is 25 miles per hour. A marked crosswalk is provided across Rio Road on the west leg of the Rio Road/Ladera Drive intersection, which is located about 325 feet west of the proposed Rio Road trail terminus. The Larson Field security fence located at the Rio Road terminus of the trail is covered with vegetation.

Lasuen Drive is a two-lane local street with shoulders of limited width that extends from Rio Road to the rear driveway serving Carmel Mission. At the Carmel Mission rear driveway, Lasuen Drive continues west as Dolores Street. Lasuen Drive, Dolores Street and 15th Avenue is a designated Class III Bike Route in the City of Carmel.

Intersection turning movement counts were conducted on Wednesday, May 27, 2015 to determine the existing peak hour intersection volumes at the Rio Road/Atherton Drive and Lasuen Drive-Dolores Street/Carmel Mission/Mission Ranch Driveway intersections. The counts were conducted during the AM and PM peak commute hours (7 am to 9 am and 4 pm to 6 pm) and



during the afternoon peak period associated with school dismissal (2 pm to 4 pm). The existing peak hour intersection volumes are shown on Exhibits 3A and 3B.

Intersection traffic operations are evaluated based on the Level of Service (LOS) concept. LOS is a qualitative description of an intersection and roadway's operation, ranging from LOS A to LOS F. Level of service A represents free flow un-congested traffic conditions. Level of service F represents highly congested traffic conditions with unacceptable delay to vehicles on the road segments and at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. Appendix A provides additional description of the level of service concept. Intersection operations were evaluated using the SYNCHRO analysis software. The Rio Road/Atherton Drive and Lasuen Drive-Dolores Street/Carmel Mission/Mission Ranch Driveway intersections currently operate at LOS A with no worse than LOS C operations on the minor street, stop-controlled approach to the major street during the three peak hours. The two intersections currently operate at satisfactory levels of service.

The sight distance provided at the intersection of the proposed trail and Lasuen Drive-Dolores Street intersection is limited due to the sharp horizontal curvature of the road as it transitions between an approximate north-south alignment (Lasuen Drive) to an east-west alignment (Dolores Street). Vegetation located on the west side of the intersection restricts the visibility of motorists approaching the intersection on Dolores Street from the west and on Lasuen Drive from the north. The visibility looking from either the Carmel Mission Driveway, the Mission Ranch Driveway and the proposed location of the trail terminus is not restricted given the location of these facilities on the outside of the roadway horizontal curve.

The County of Monterey is currently in the process of making bikeway related improvements to Rio Road from Atherton Drive to Highway 1. These improvements include the following:

1. Pavement rehab (grind & pave of travel way)
2. Installation of bike lanes (eastbound & westbound)
3. Installation of No Parking signs in the westbound direction (from Atherton Drive to Oliver Road).

PROJECT DESCRIPTION

The bicycle path will extend between Rio Road and Lasuen Drive and will be constructed with an 8-foot wide paved surface with two-foot graded shoulders.

It is anticipated that the path will be designed to meet Class I bikeway standards, established by the State of California, over most of its length. This includes an 8-foot-wide surface, paved with asphalt, and bordered on each side by a 2-foot strip of turf, earth, or decomposed granite at the same grade as the paving. All 12 feet of this width will be clear of vegetation to a height of 10 feet above the ground for safe travel.

However, the City has not yet established the ultimate width and surface treatment for the path. The City's proposed design may deviate from Class I standards in locations where existing, mature cypress or oak trees would have overhanging branches that do not meet the requirement for 10 feet of vertical clearance. The City also has reserved the possibility of constructing a path



that is less intensive in design than a Class I bikeway. Such a path could be narrower and might be paved with compacted, decomposed granite (or a similar material) instead of asphalt.

At the Rio Road terminus of the path, the path project would include the following improvements:

1. Security fencing and some vegetation located in the northeast corner of Larson Field will be removed. A new security fence will be constructed to separate the path from Larson Field.
2. A new paved pathway or sidewalk will be constructed along the Rio Road frontage of Larson Field between the City boundary line, which is located on the eastern boundary of Larson Field, and the eastern most Larson Field driveway. A new crosswalk would be installed across Rio Road, west of Atherton Drive, near the terminus of the new sidewalk.
3. The path would be flared on the approach to the new sidewalk to create a “Y” intersection. A barrier would be installed in the center of the “Y” to divert bicyclists to the sidewalk.

At the Lasuen Drive terminus of the path, the path project would include the following improvements:

1. The existing fence that blocks access to the CAWD and Rio Park properties will be removed and a new gate would be installed across the access to the Rio Park property. Vehicle access to the CAWD and Rio Park properties will be preserved.
2. The existing ground vegetation located south of the fence separating the Mission Ranch property from the Carmel Mission property would be removed. The new trail would be installed adjacent to the fence, which will preserve the functionality of the Mission Ranch Driveway.
3. Vegetation on the fence between the Mission Ranch and Carmel Mission properties would be removed for a distance of about 15 feet from Lasuen Drive to improve sight visibility. As an alternative, the fence separating the trail from the Carmel Mission property could be replaced by a low-height wall or raised curb.
3. A new four-foot high, pedestrian-rated barrier would be installed parallel to the path directly opposite the entry to the tennis court parking area to prevent vehicles exiting the tennis court parking lot from encroaching onto the trail. Between this end of this wall and Lasuen Drive-Dolores Street, the trail easement would be marked with pavement markings, but there would be no physical constraint on where vehicles, bikes or pedestrians could travel. The path would be marked with a bike-trail stencil to differentiate the path from the driveway. A STOP sign would be installed at the end of the trail to stop bicyclists before entering Lasuen Drive and Dolores Street.
4. A locked bollard or post would be installed in the center of the trail near the end of the new pedestrian barrier. The bollard would be used for trail-use regulation signage and to prohibit unauthorized vehicles from accessing the trail.
5. Increasing the radius of the curve of paved asphalt along the western edge of the sloping Mission Ranch tennis court parking lot is being considered as a design option. Increasing the radius would improve the turning radius provided to large service trucks.
6. A crosswalk would be installed across Lasuen Drive north of the Carmel Mission driveway (roughly 100 feet north of the street/trail intersection). The crosswalk installation would include appropriate advance warning signage on Dolores Street and



Lasuen Drive. The crosswalk would locate crossing maneuvers for bicyclists approaching the trail on southbound Lasuen Drive to a location with increased visibility compared to the visibility provided at the trail terminus. Appropriate advance warning signs would be installed in advance of the crosswalk on each approach to the crosswalk.

Safety Evaluation

Path Design

Final details of the path design have not been established, but it is anticipated that the design will conform with Caltrans Class I bikeway standards. The objective of the Class I bikeway standards are to provide a safe and efficient bikepath design. If the bicycle path is not designed to Caltrans Class I bikeway standards, advance warning signs and markings are recommended to identify locations with non-standard design conditions.

Decomposed granite (or a similar material) is being considered as an alternative to asphalt for the pavement surface. Decomposed granite is an acceptable surface material for bikepaths if properly designed, constructed and maintained. Decomposed granite surfaces require regular maintenance to ensure that the integrity of the surface is maintained.

Rio Road Terminus

The project includes the construction of a new walkway on the south side of Rio Road from the City limits boundary on the east boundary of Larson Field to the eastern most driveway serving Larson Field. **Recommendation: As a future project, it is recommended that installation of an all-weather path be considered for the remainder of the Larson Field frontage (i.e., between the new crosswalk installed on Rio Road near the trail terminus and the existing crosswalk located on Rio Road near the westerly entrance driveway to the Rio Road parking lot).** Exhibit 4 shows the general location of the recommended all-weather path. Vegetation located on the south side of Rio Road would need to be cleared at least partially to install the path. Installation of the all-weather path would improve conditions for pedestrians walking on this segment of Rio Road.

The crosswalk across Rio Road is proposed to be located on the west side of the Atherton Drive intersection. This would place the crosswalk at the existing transit stops located on each side of Rio Road. In addition, this configuration will allow pedestrians and bicyclists accessing the trail from the west on Rio Road or Atherton Drive and pedestrians and bicyclists exiting the trail with destinations to the west to avoid crossing the Atherton Drive approach to Rio Road. However, the location of the crosswalk on the west side of Atherton Drive would encourage two-way bicycle usage on the walkway between the trail terminus and the crosswalk and would require pedestrian and bicycle traffic arriving from the east on Rio Road to cross Atherton Drive to reach the crosswalk. **Recommendation: The crosswalk across Rio Road at Atherton Drive should be located on the east side of the Rio Road/Atherton Drive intersection. This would allow westbound pedestrian and bicycle traffic exiting the trail and pedestrian and bicycle traffic arriving from the east and west destined to the trail to cross near the trail terminus. In the event that the crosswalk is located on the west side of the Rio Road/Atherton Drive intersection, the proposed walkway located on the south side of Rio Road between the trail**



terminus and the crosswalk should be constructed to a width of at least 10 feet to provide two-way pedestrian and bicycle travel.

Lasuen Drive Terminus

Given the restricted sight distance at the Lasuen Drive-Dolores Street intersection with the proposed trail terminus, the trail plan includes the installation of a crosswalk across Lasuen Drive about 100 feet north of the street trail intersection. **Recommendation: The crosswalk should be located to provide adequate stopping sight distance for motorists approaching the crosswalk in each direction on Dolores Street-Lasuen Drive. The crosswalk installation should include advance crosswalk warning signs on each approach as well as a combined Bicycle/Pedestrian (W11-15) sign at the crossing location.**

The crosswalk on Lasuen Drive will create two-way bicycle and pedestrian travel on the east side of Lasuen Drive between the crosswalk and the trail. **Recommendation: Installation of a two-way cycle track on the east side of Lasuen Drive between the new crosswalk and the new trail should be considered to delineate the area for two-way cycling on the east side of Lasuen Drive.** On-street parking would not be allowed in the cycle track, which would eliminate on-street parking spaces on the east side of Lasuen Drive, along the frontage of the school.

Lasuen Drive-Dolores Street-15th Avenue is designated in the Carmel General Plan as a Class III Bikeway (Bike Route). Class III Bikeways are shared facilities that are established by placing bike route signs along the roadway. **Recommendation: To enhance the Lasuen Drive-Dolores Street-15th Avenue Bike Route, it is recommended that shared lane roadway markings be installed on the route.** Appendix D contains a picture of the shared lane marking. The shared lane marking alerts motorists of the potential presence of bicyclists on the route.

Summary of Recommendations

Rio Road Terminus

1. It is recommended that installation of an all-weather path be considered for the remainder of the Larson Field frontage.
2. With the new Rio Road crosswalk located as proposed, the proposed sidewalk on the south side of Rio Road should be constructed to a width of at least 10 feet to provide two-way pedestrian and bicycle travel. As an alternative, locating the crosswalk on the east side of the Rio Road/Atherton Drive intersection should be considered. In this case, the sidewalk could be designed with a standard width.

Lasuen Drive Access

1. The crosswalk across Lasuen Drive should be located to provide adequate stopping sight distance for motorists approaching the crosswalk in each direction on Dolores Street-Lasuen Drive. The crosswalk installation should include advance crosswalk warning signs on each approach as well as combined Bicycle/Pedestrian (W11-15) sign at the crossing location.



2. Installation of a two-way cycle track on the east side of Lasuen Drive between the new crosswalk and the new trail should be considered to delineate the area for two-way cycling on the east side of Lasuen Drive.
3. To enhance the Lasuen Drive-Dolores Street-15th Avenue Bike Route, it is recommended that shared roadway markings be installed on the route.

If you have any questions regarding this report, please do not hesitate to contact me.

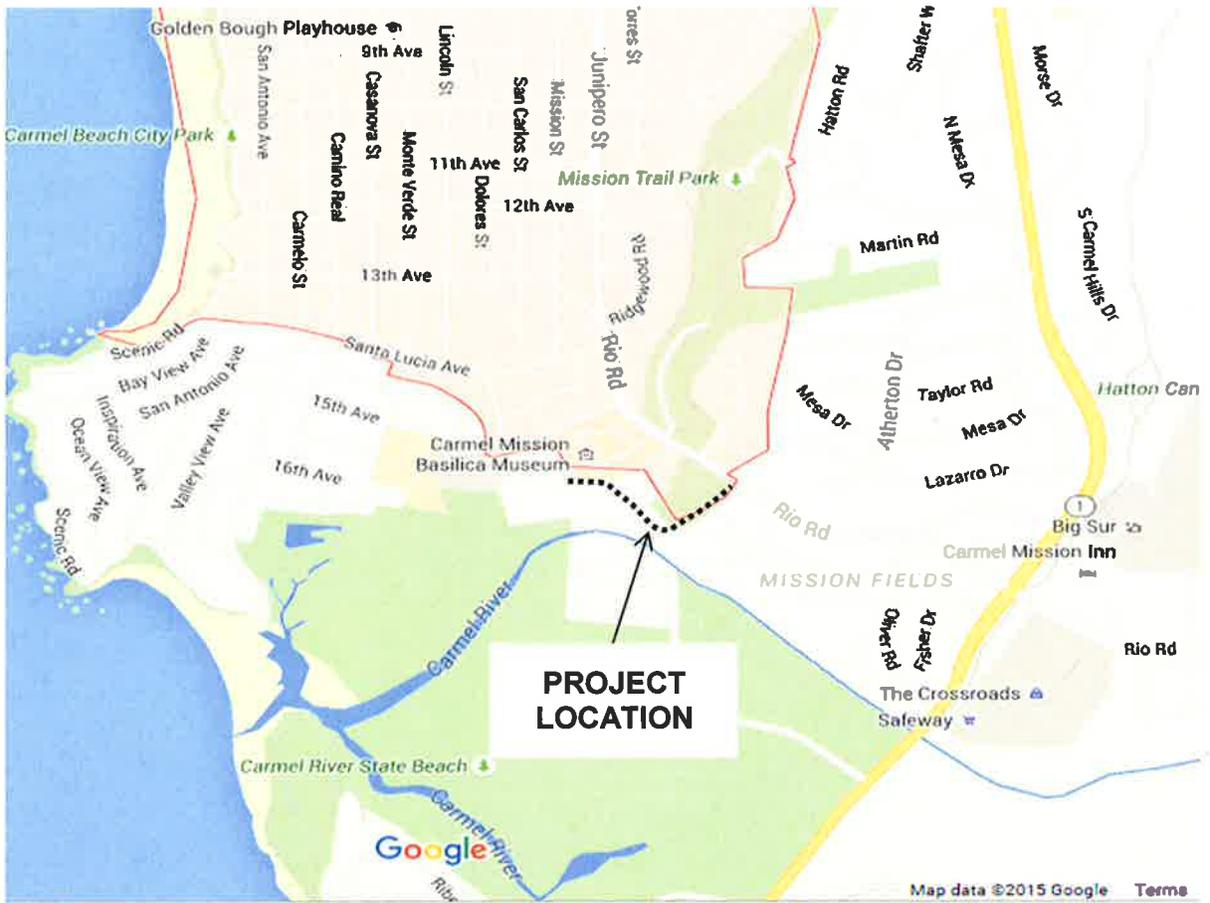
Respectfully submitted,

Hatch Mott MacDonald

A handwritten signature in blue ink, appearing to read "Keith B. Higgins".

Keith B. Higgins, PE, TE
Vice President

Attachments

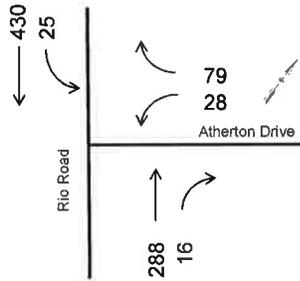


AM PEAK HOUR
8:00 AM - 9:00 AM

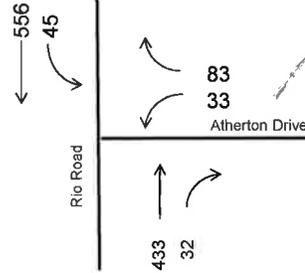
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2:45 PM - 3:45 PM

PM PEAK HOUR
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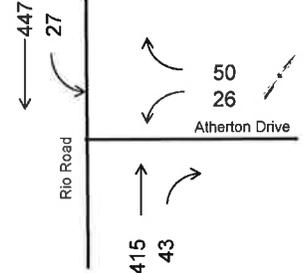
VEHICLES



Intersection LOS: A 1.9
WB Atherton Dr Approach LOS: B 13.4

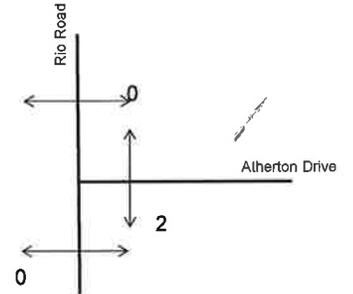
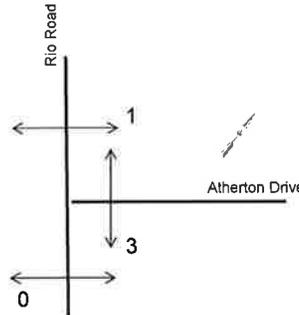
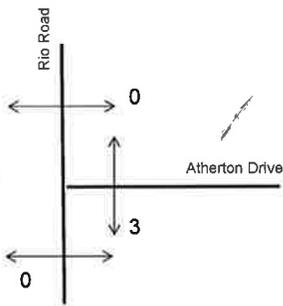


Intersection LOS: A 2.2
WB Atherton Dr Approach LOS: C 19.7

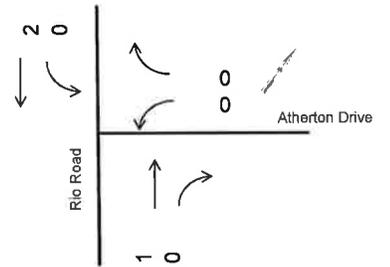
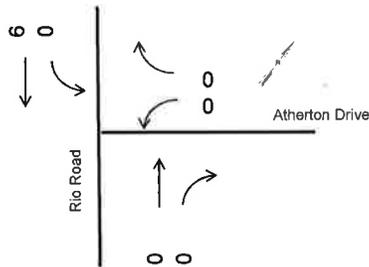
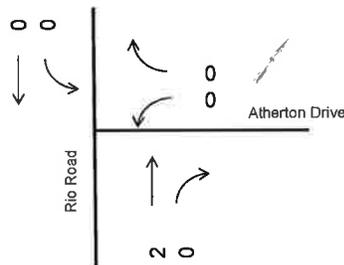


Intersection LOS: A 1.5
WB Atherton Dr Approach LOS: C 16.2

PEDESTRIANS



BICYCLES



- Notes:
1. LOS: Level of Service
2. A 1.9: Level of Service, Average Delay per Vehicles (seconds).

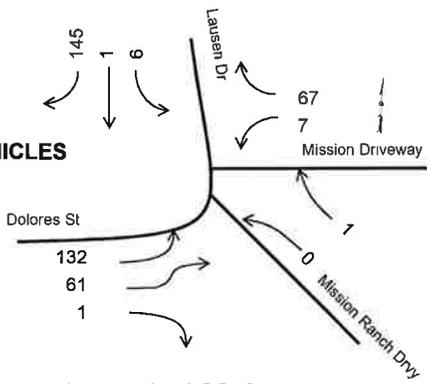
EXHIBIT 3A
EXISTING PEAK HOUR
TRAFFIC VOLUMES
RIO RD/ATHERTON DR

AM PEAK HOUR
7:45 AM - 8:45 AM

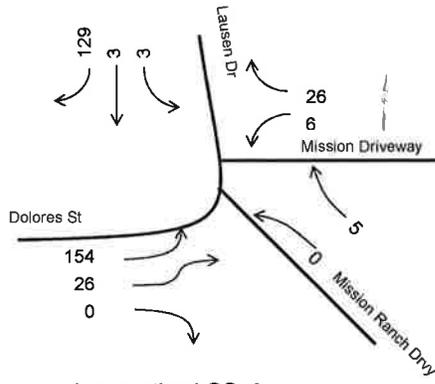
AFTERNOON PEAK HOUR
2:30 PM - 3:30 PM

PM PEAK HOUR
4:15 PM - 5:15 PM

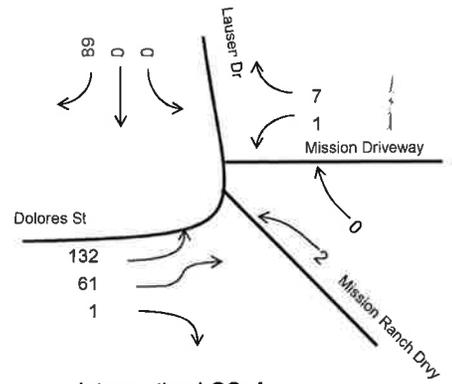
VEHICLES



Intersection LOS: A 1.9
WB Atherton Dr Approach LOS: A 9.8

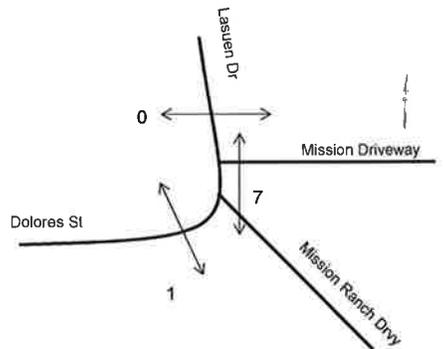
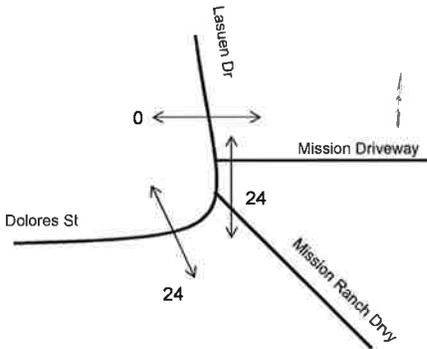
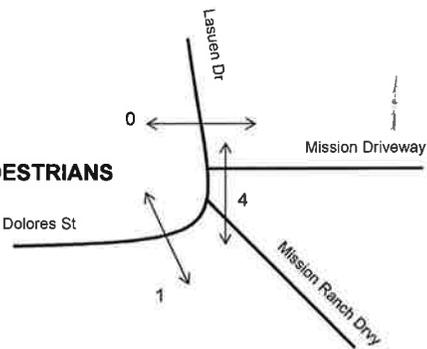


Intersection LOS: A 1.1
WB Atherton Dr Approach LOS: A 9.6

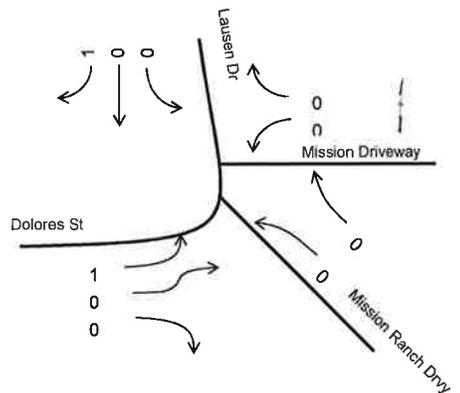
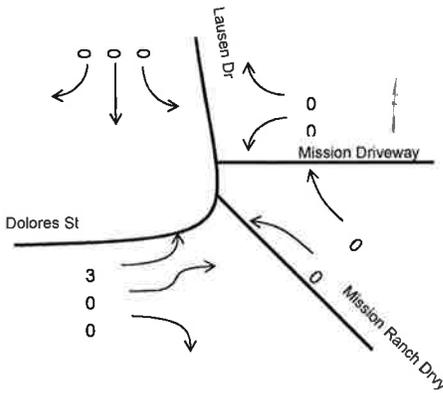
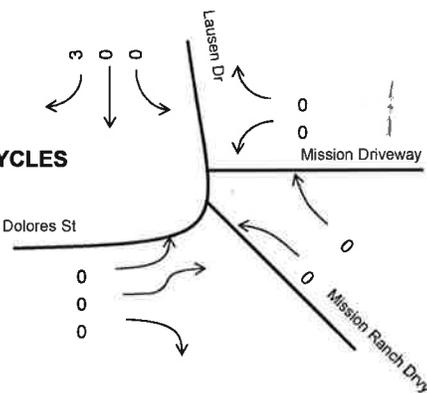


Intersection LOS: A 0.3
WB Atherton Dr Approach LOS: A 9.5

PEDESTRIANS



BICYCLES



Notes:
1. LOS: Level of Service
2. A 1.9: Level of Service, Average Delay per Vehicles (seconds).



INSTALL ALL-WEATHER PATH

EXHIBIT 4
LOCATION OF RECOMMENDED
ALL-WEATHER PATH



**EXHIBIT 5
CONCEPTUAL LAYOUT
OF LASUEN DRIVE IMPROVEMENTS**

APPENDIX A

LEVEL OF SERVICE (LOS) DESCRIPTION UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream;
- driver judgment in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS (Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

ATTACHMENT B

INTERSECTION LEVEL OF SERVICE WORKSHEETS

INTERSECTION LEVEL OF SERVICE WORKSHEET LEGEND

Int: Intersection

Int Delay: Average vehicle delay for the overall intersection (all approaches)

s/veh: Seconds per vehicle

Vol: Volume

veh/h: Vehicles per hour

RT: Right turn

Veh: Vehicles

Mvmt: Movement

Hdwy: Headway

Pot Cap: Potential Capacity

Mov Cap: Movement Capacity

HCM: Highway Capacity Manual

s: Seconds

LOS: Level of Service

V/C: Volume to Capacity

Q: Vehicle queue length

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	28	79	288	16	25	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	86	313	17	27	467

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	844	322	0	0	330	0
Stage 1	322	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	334	719	-	-	1229	-
Stage 1	735	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	324	719	-	-	1229	-
Mov Cap-2 Maneuver	324	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	545	1229	-
HCM Lane V/C Ratio	-	-	0.213	0.022	-
HCM Control Delay (s)	-	-	13.4	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	7	68	132	62	7	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	74	143	67	8	158

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	350	177	0	0	211	0
Stage 1	177	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	647	866	-	-	1360	-
Stage 1	854	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	643	866	-	-	1360	-
Mov Cap-2 Maneuver	643	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	839	1360	-
HCM Lane V/C Ratio	-	-	0.097	0.006	-
HCM Control Delay (s)	-	-	9.8	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection

Int Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	33	83	433	32	45	556
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	90	471	35	49	604

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1190	488	0	0	505	0
Stage 1	488	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	207	580	-	-	1060	-
Stage 1	617	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	580	-	-	1060	-
Mov Cap-2 Maneuver	193	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	457	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	19.7		0		0.6
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	369	1060	-
HCM Lane V/C Ratio	-	-	0.342	0.046	-
HCM Control Delay (s)	-	-	19.7	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.1	-

Intersection

Int Delay, s/veh 1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	6	31	154	26	6	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	34	167	28	7	140

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	335	182	0	0	196	0
Stage 1	182	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	660	861	-	-	1377	-
Stage 1	849	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	656	861	-	-	1377	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	WB	NB	SB
HCM Control Delay, s	9.6		0	0.3
HCM LOS	A			

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	819	1377	-
HCM Lane V/C Ratio	-	-	0.049	0.005	-
HCM Control Delay (s)	-	-	9.6	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection

Int Delay, s/veh 1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	26	50	415	43	27	447
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	54	451	47	29	486

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1019	474	0	0	498	0
Stage 1	474	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	263	590	-	-	1066	-
Stage 1	626	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	253	590	-	-	1066	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	16.2		0		0.5
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	405	1066	-
HCM Lane V/C Ratio	-	-	0.204	0.028	-
HCM Control Delay (s)	-	-	16.2	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	7	132	62	0	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	8	143	67	0	97

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	274	177	0	0	211	0
Stage 1	177	-	-	-	-	-
Stage 2	97	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	716	866	-	-	1360	-
Stage 1	854	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	716	866	-	-	1360	-
Mov Cap-2 Maneuver	716	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	815	1360	-
HCM Lane V/C Ratio	-	-	0.013	-	-
HCM Control Delay (s)	-	-	9.5	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

APPENDIX C

CYCLE TRACK EXAMPLE DESIGN



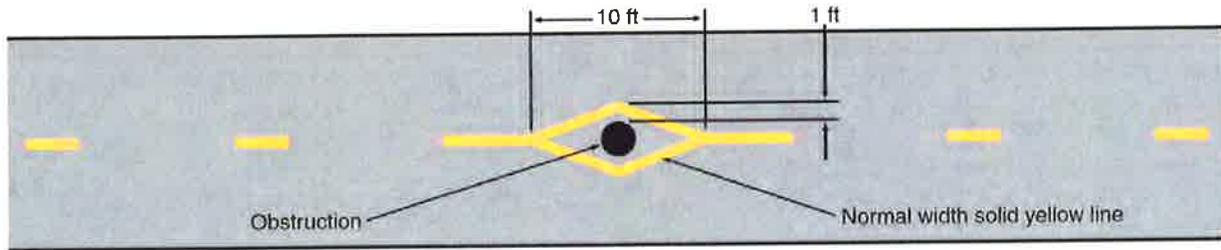
Cycle track (n): “A bicycle path along a road, physically separated from motor traffic, and distinct from the sidewalk.”

- Not a shared use path – not used by pedestrians
- Other terms: sidepath, bike path, raised lane, separated lane
- One-way and two-way versions exist

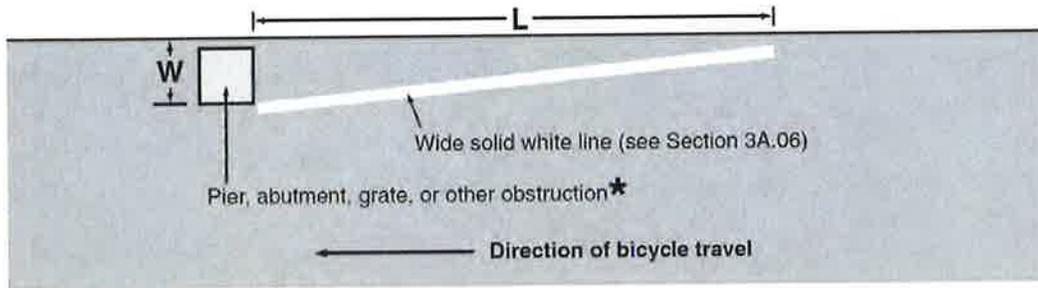
APPENDIX D

SHARED LANE MARKING

Figure 9C-8. Examples of Obstruction Pavement Markings



A - Obstruction within the path



B - Obstruction at edge of path or roadway

$L = WS$, where W is the offset in feet and S is bicycle approach speed in mph

★ Provide an additional foot of offset for a raised obstruction and use the formula $L = (W+1) S$ for the taper length

Figure 9C-9. Shared Lane Marking

