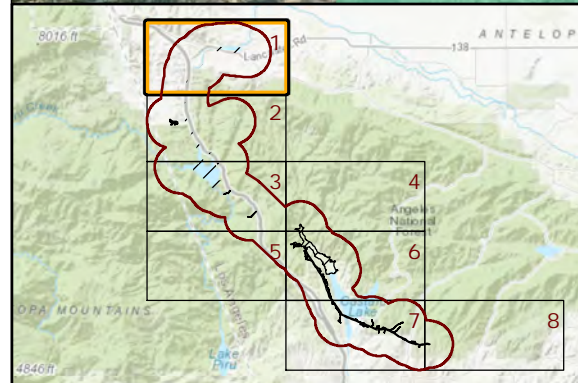
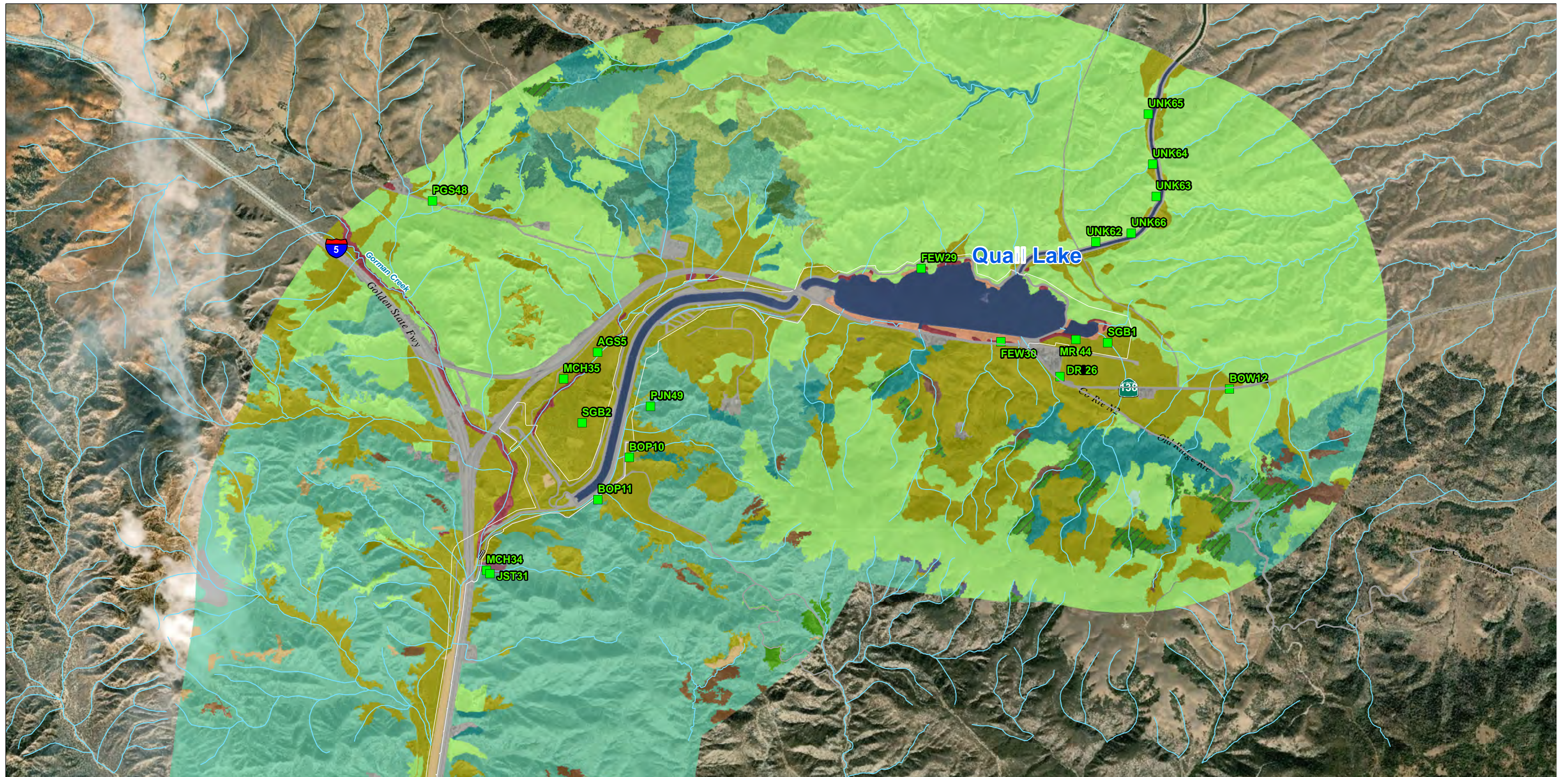


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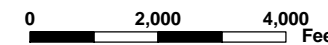
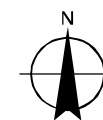
**Appendix J**  
***Habitat Study Area***

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**Legend**

- |  |                              |                        |                     |                   |                          |
|--|------------------------------|------------------------|---------------------|-------------------|--------------------------|
| Survey Location                        | <b>Habitat</b>               | Annual Grassland       | Coastal Scrub       | Montane Chaparral | Valley Foothill Riparian |
| Stream/River                           | Barren                       | Fresh Emergent Wetland | Joshua Tree         | Montane Hardwood  | Valley Oak Woodland      |
| Canal/Ditch                            | Blue Oak - Foothill Pine     | Juniper                | Perennial Grassland | Wet Meadow        |                          |
| Proposed Project Boundary (v.20190326) | Blue Oak Woodland            | Lacustrine             | Pinyon - Juniper    |                   |                          |
| Angeles Tunnel Removed                 | Chamise - Redshank Chaparral | Mixed Chaparral        | Sagebrush           |                   |                          |
| Study Boundary                         |                              |                        | Urban               |                   |                          |



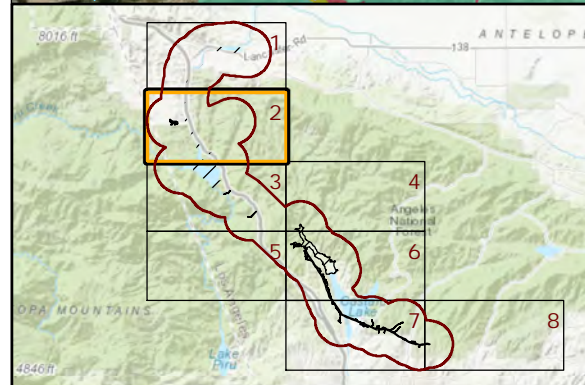
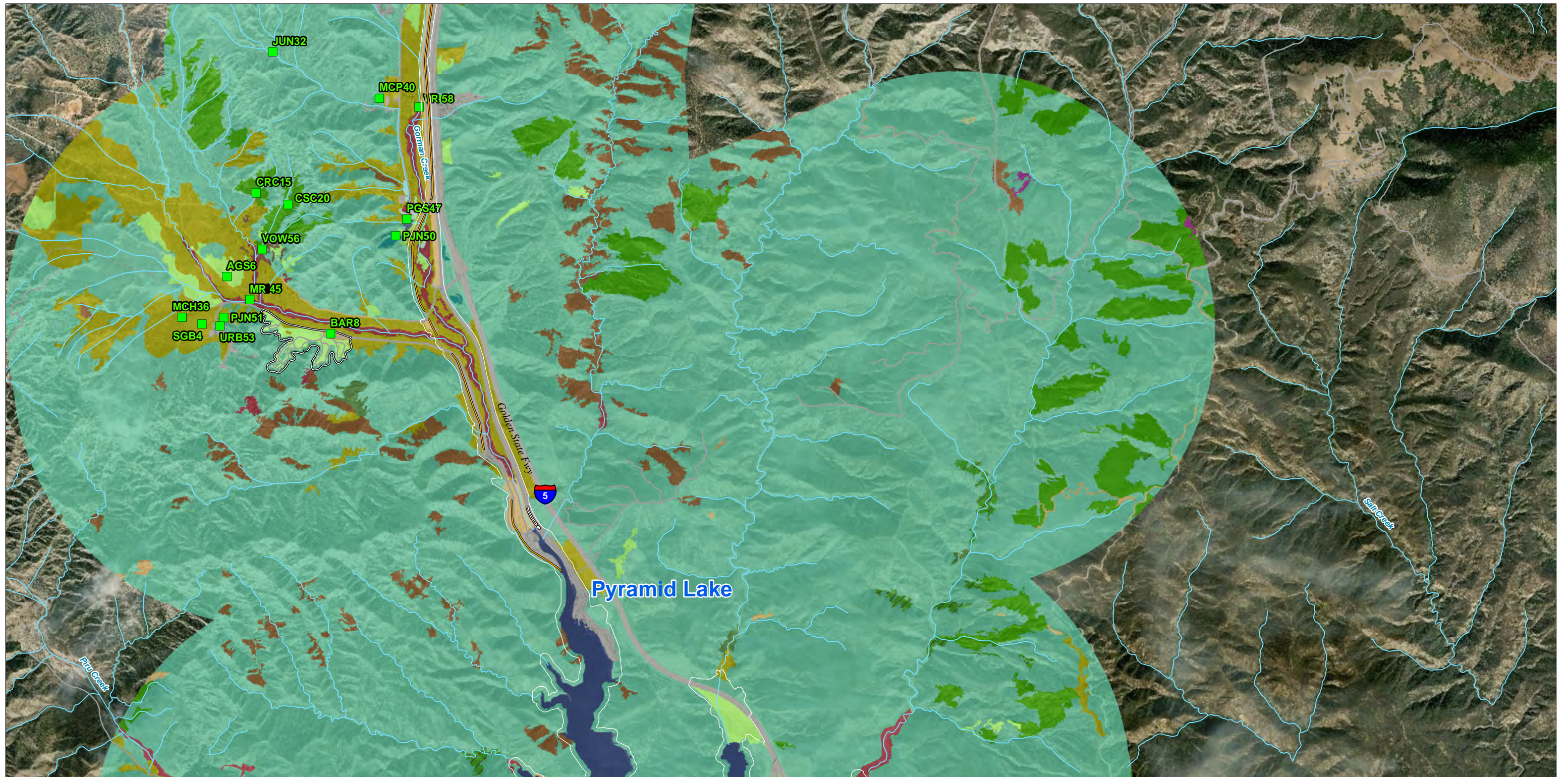
Prepared: 4/24/2019  
 Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map

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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 1**





**Legend**

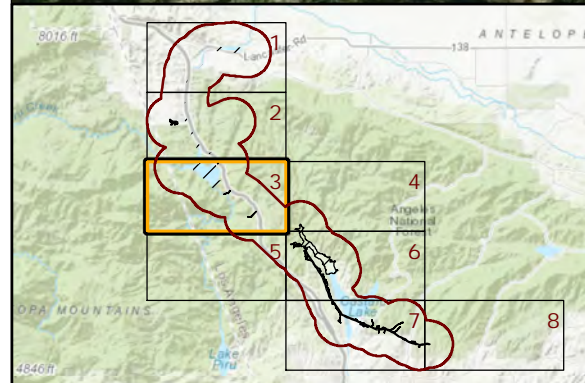
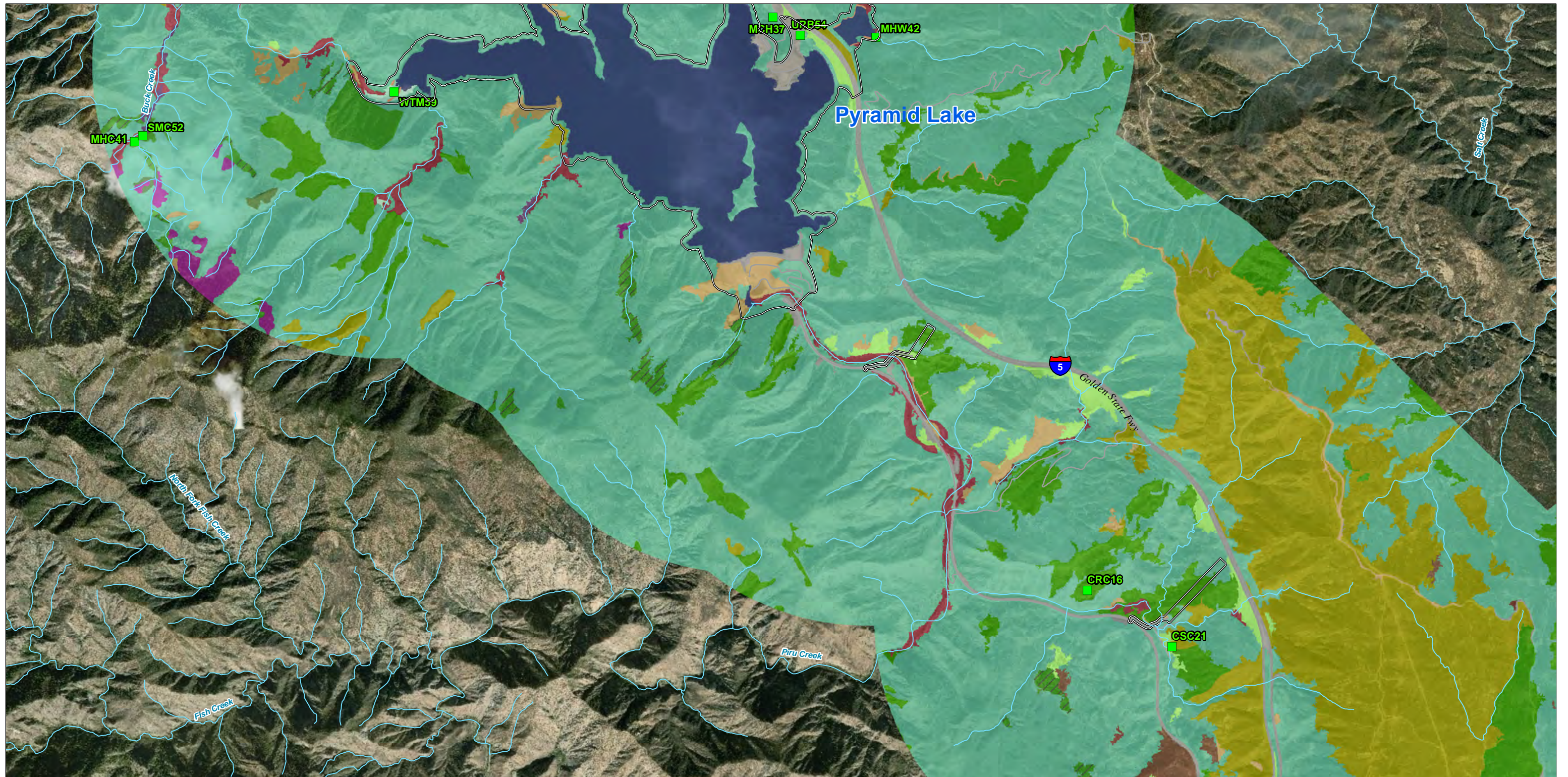
Survey Location	<b>Habitat</b>	Juniper	Perennial Grassland	Valley Oak Woodland
Stream/River	Annual Grassland	Lacustrine	Pinyon - Juniper	Wet Meadow
Canal/Ditch	Barren	Mixed Chaparral	Sagebrush	
Proposed Project Boundary (v.20190326)	Blue Oak - Foothill Pine	Montane Chaparral	Sierran Mixed Conifer	
Angeles Tunnel Removed	Chamise - Redshank Chaparral	Montane Hardwood	Urban	
Study Boundary	Coastal Scrub	Montane Hardwood - Conifer	Valley Foothill Riparian	

Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map

SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 2**

Prepared: 4/24/2019  
 Scale: 0 2,000 4,000 Feet



**Legend**

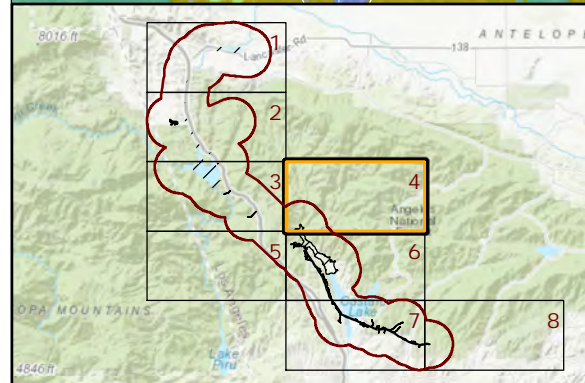
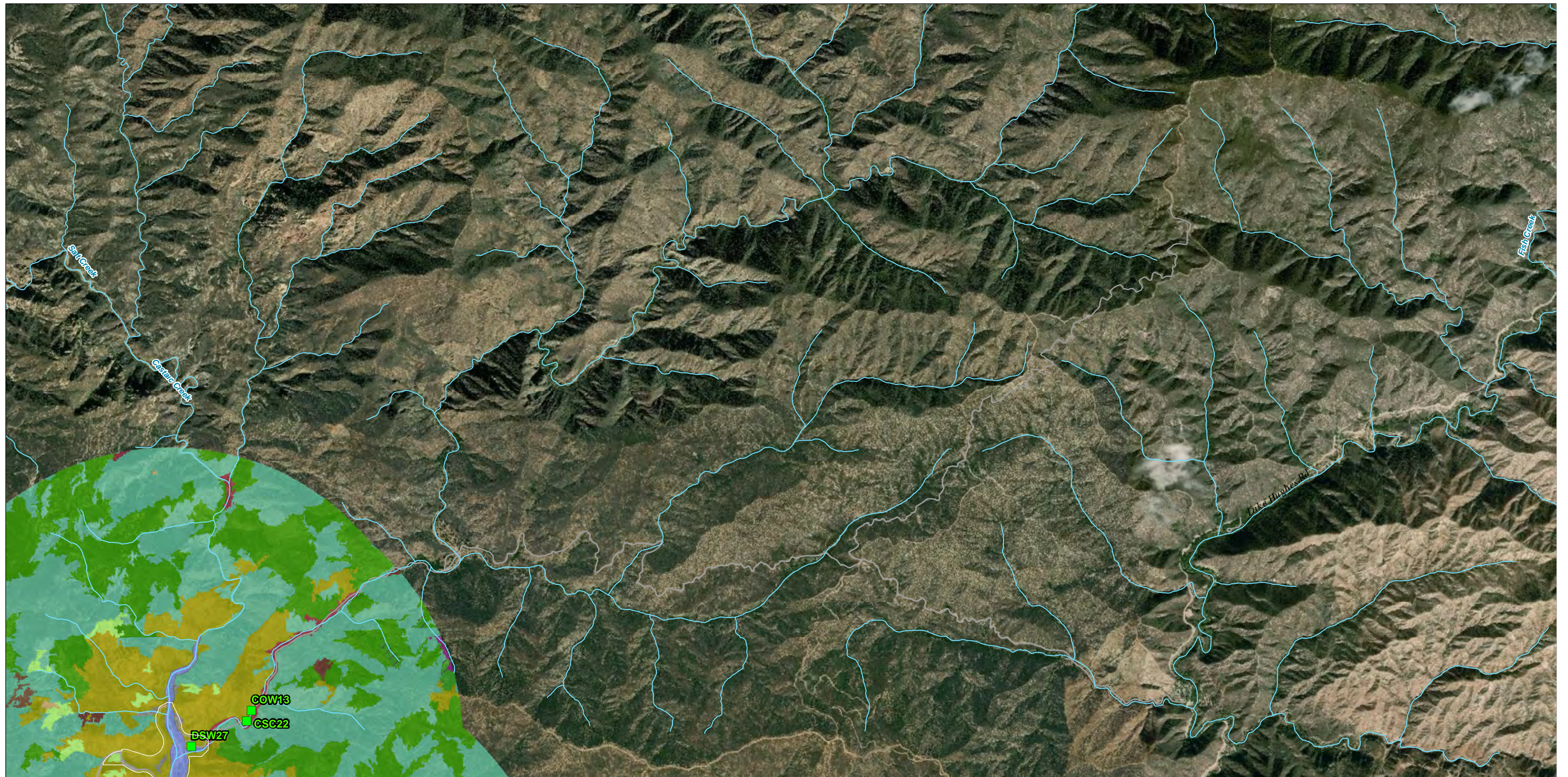
- Survey Location
- Stream/River
- Proposed Project Boundary (v.20190326)
- Angeles Tunnel Removed
- Study Boundary

Habitat	
<span style="color: lightgreen;">■</span> Annual Grassland	<span style="color: lightblue;">■</span> Lacustrine
<span style="color: tan;">■</span> Barren	<span style="color: teal;">■</span> Mixed Chaparral
<span style="color: green;">■</span> Chamise - Redshank Chaparral	<span style="color: darkgreen;">■</span> Montane Chaparral
<span style="color: brown;">■</span> Coastal Oak Woodland	<span style="color: darkgreen;">■</span> Montane Hardwood
<span style="color: olive;">■</span> Coastal Scrub	<span style="color: green;">■</span> Montane Hardwood - Conifer
<span style="color: orange;">■</span> Fresh Emergent Wetland	<span style="color: purple;">■</span> Montane Riparian
<span style="color: blue;">■</span> Wet Meadow	<span style="color: yellowgreen;">■</span> Sagebrush
<span style="color: purple;">■</span> Sierran Mixed Conifer	<span style="color: grey;">■</span> Urban
<span style="color: pink;">■</span> Valley Foothill Riparian	<span style="color: brown;">■</span> Valley Oak Woodland

Prepared: 4/24/2019  
 Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**CWHR Habitat Types and  
Survey Locations within the Study Area  
Map 3**



**Legend**

<span style="color: green;">■</span> Survey Location	<b>Habitat</b>	<span style="color: blue;">■</span> Desert Riparian	<span style="color: red;">■</span> Valley Foothill Riparian
<span style="color: blue;">—</span> Stream/River	<span style="color: lightgreen;">■</span> Annual Grassland	<span style="color: teal;">■</span> Mixed Chaparral	<span style="color: brown;">■</span> Valley Oak Woodland
<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Proposed Project Boundary (v.20190326)	<span style="color: tan;">■</span> Barren	<span style="color: green;">■</span> Montane Hardwood	
<span style="border: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span> Angeles Tunnel Removed	<span style="color: darkgreen;">■</span> Chamise - Redshank Chaparral	<span style="color: forestgreen;">■</span> Montane Hardwood - Conifer	
<span style="border: 2px solid black; display: inline-block; width: 10px; height: 10px;"></span> Study Boundary	<span style="color: maroon;">■</span> Coastal Oak Woodland	<span style="color: purple;">■</span> Sierran Mixed Conifer	
	<span style="color: olive;">■</span> Coastal Scrub	<span style="color: gray;">■</span> Urban	

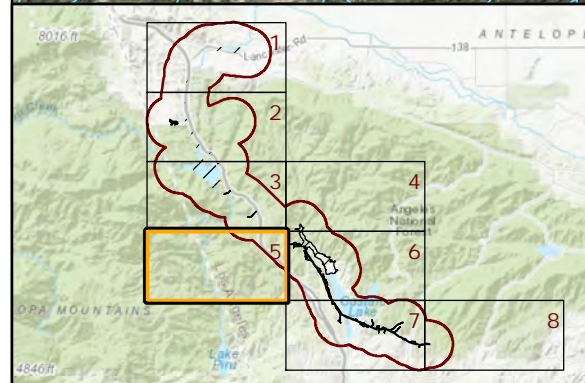
Prepared: 4/24/2019  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

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**CWHR Habitat Types and  
Survey Locations within the Study Area  
Map 4**

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**Legend**

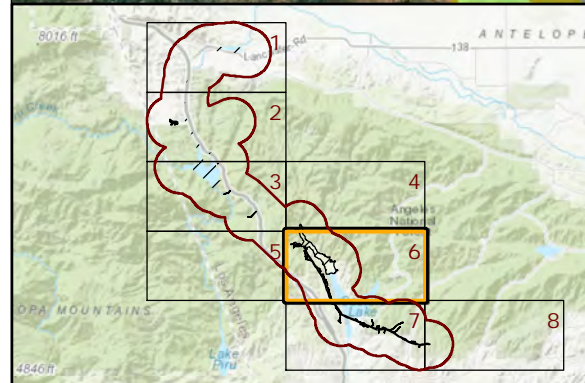
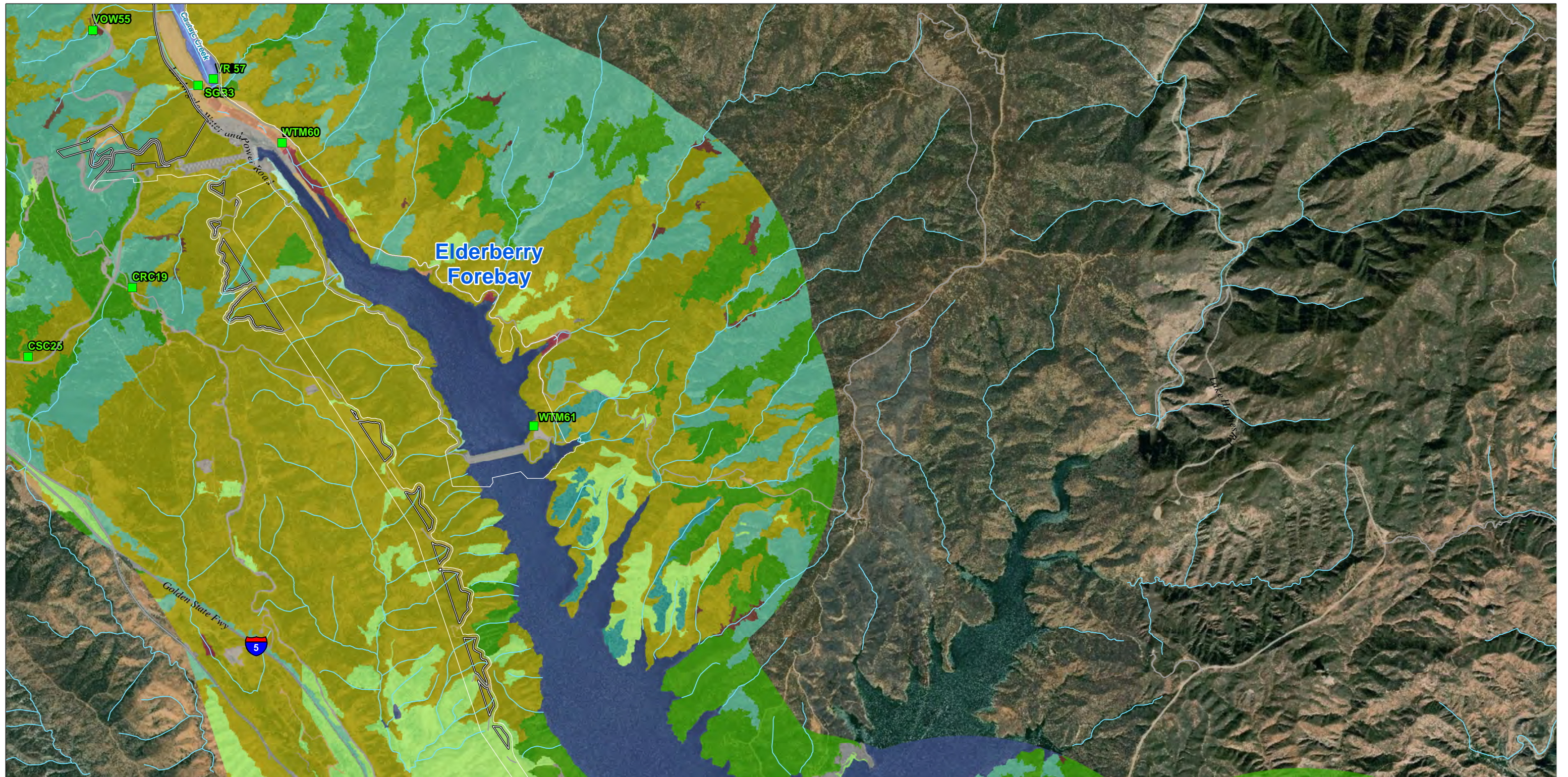
Survey Location	<b>Habitat</b>	Montane Hardwood
Stream/River	Annual Grassland	Urban
Proposed Project Boundary (v.20190326)	Barren	Valley Oak Woodland
Angeles Tunnel Removed	Chamise - Redshank Chaparral	
Study Boundary	Coastal Scrub	
	Mixed Chaparral	

0 2,000 4,000 Feet

Prepared: 4/24/2019  
 Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map  
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 5**



**Legend**



Survey Location	<b>Habitat</b>	Coastal Scrub	Urban
Stream/River	Annual Grassland	Desert Riparian	Valley Foothill Riparian
Proposed Project Boundary (v.20190326)	Barren	Fresh Emergent Wetland	Valley Oak Woodland
Angeles Tunnel Removed	Blue Oak - Foothill Pine	Lacustrine	Wet Meadow
Study Boundary	Chamise - Redshank Chaparral	Mixed Chaparral	
	Coastal Oak Woodland	Sagebrush	

0 2,000 4,000 Feet

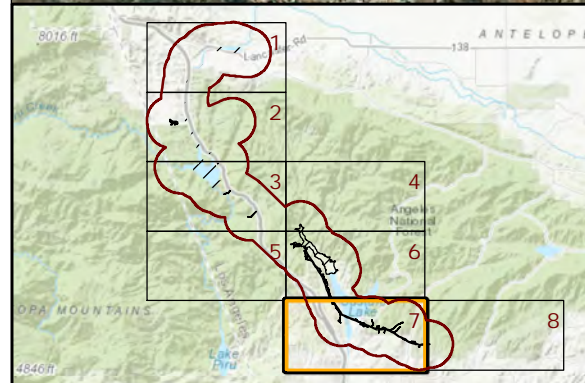
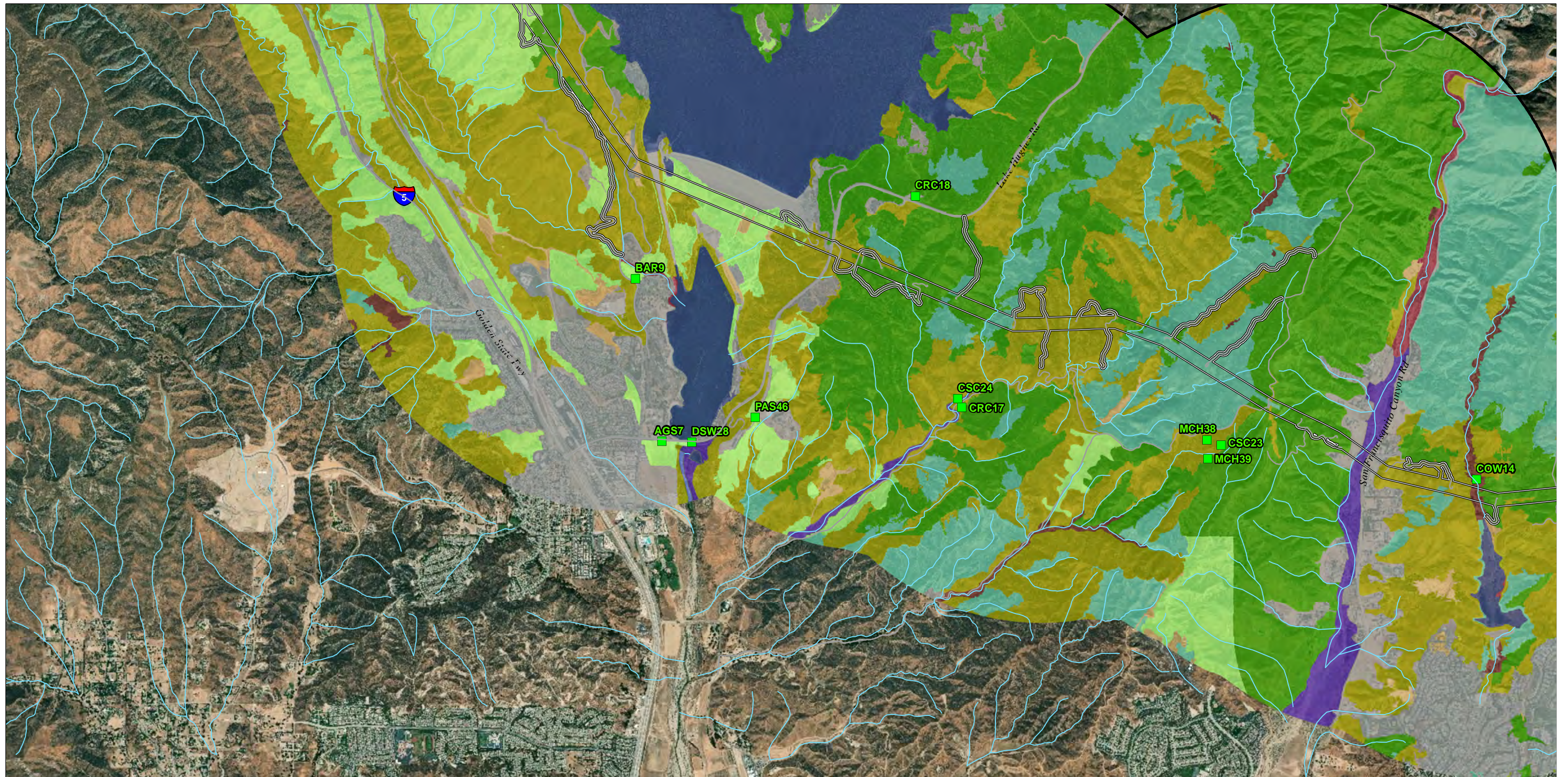
Prepared: 4/24/2019  
 Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map

SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 6**





**Legend**

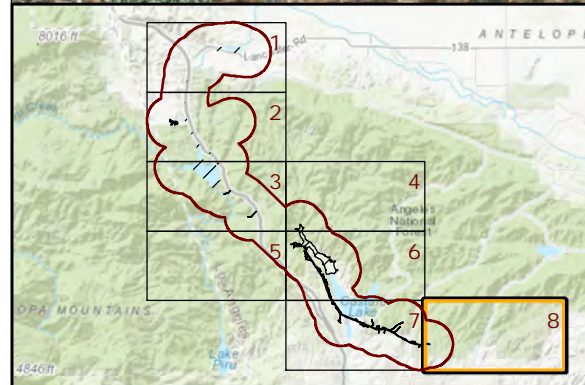
Survey Location	<b>Habitat</b>	Desert Riparian
Stream/River	Annual Grassland	Desert Wash
Proposed Project Boundary (v.20190326)	Barren	Lacustrine
Angeles Tunnel Removed	Chamise - Redshank Chaparral	Mixed Chaparral
Study Boundary	Coastal Oak Woodland	Urban
	Coastal Scrub	Valley Foothill Riparian

0 2,000 4,000 Feet

Prepared: 4/24/2019  
 Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map

SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 7**



**Legend**

Survey Location	<b>Habitat</b>	Urban
Stream/River	Annual Grassland	
Proposed Project Boundary (v.20190326)	Chamise - Redshank Chaparral	
Angeles Tunnel Removed	Coastal Oak Woodland	
Study Boundary	Coastal Scrub	
	Mixed Chaparral	

Projection: NAD 1983 StatePlane California V FIPS 0405 Feet  
 Data and/or Background: HDR (2018), Bing Map  
 Prepared: 4/24/2019

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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**CWHR Habitat Types and  
 Survey Locations within the Study Area  
 Map 8**

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**Appendix K**  
***Botanical Inventory***

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Appendix K - Botanical Inventory

USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
SANIC5	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry	Adoxaceae	Native	shrub	—	x	x		X		X	x	X	X	X	x
HEWH	<i>Hesperoyucca whipplei</i>	Chaparral yucca	Agavaceae	Native	shrub	—	x	x	x	x	x	x	x	x	x		x
YUCCA	<i>Yucca</i> sp.	yucca	Agavaceae	—	tree	—						x					
ALTR7	<i>Alisma triviale</i>	Northern water plantain	Alismataceae	Native	perennial herb (aquatic)	—		x									
ALOE	<i>Aloe</i> sp.	aloe	Aloaceae	—	perennial herb	—						x					
AMBL	<i>Amaranthus blitoides</i>	Prostrate pigweed	Amaranthaceae	Native	annual herb	—		x									
AMRE	<i>Amaranthus retroflexus</i>	Rough pigweed	Amaranthaceae	Non-native	annual herb	—		x									
RHAR4	<i>Rhus aromatica</i>	Fragrant sumac	Anacardiaceae	Native	shrub	—		x		x	x			x	x		
RHGL	<i>Rhus glabra</i>	Smooth sumac	Anacardiaceae	Non-native	tree	—						x					
RHIN2	<i>Rhus integrifolia</i>	Lemonade berry	Anacardiaceae	Native	shrub	—				x							x
RHOV	<i>Rhus ovata</i>	Sugar bush	Anacardiaceae	Native	shrub	—			x	x	x	x	x	x	X		
SCMO	<i>Schinus molle</i>	Peruvian pepper tree	Anacardiaceae	Non-native	tree	Cal-IPC (Limited)			x	x		x		x	x		
SCTE	<i>Schinus terebinthifolius</i>	Brazilian pepper tree	Anacardiaceae	Non-native	tree/shrub	CAL-IPC (Moderate)								x			
SELA10	<i>Searsia lancea</i>	African sumac	Anacardiaceae	Non-native	tree	—			x								
TODI	<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae	Native	vine/shrub	—				x		x	x	x	x		x
CYLE7	<i>Cyclosporum leptophyllum</i>	Marsh parsley	Apiaceae	Non-native	annual herb	—								x	x		
DAPU3	<i>Daucus pusillus</i>	American wild carrot	Apiaceae	Native	annual herb	—	x	x							x		x
FOVU	<i>Foeniculum vulgare</i>	Sweet fennel	Apiaceae	Non-native	perennial herb	Cal-IPC (Moderate)				x							
LONE	<i>Lomatium nevadense</i>	Nevada lomatium	Apiaceae	Native	perennial herb	—				x							
LOUT	<i>Lomatium utriculatum</i>	Hog fennel	Apiaceae	Native	perennial herb	—	x			x					x		
SACR2	<i>Sanicula crassicaulis</i>	Gamble weed	Apiaceae	Native	perennial herb	—									x		
APCA	<i>Apocynum cannabinum</i>	Indian hemp	Apocynaceae	Native	perennial herb	—								x			
ASCA3	<i>Asclepias californica</i>	California milkweed	Apocynaceae	Native	perennial herb	—	x										
ASFA	<i>Asclepias fascicularis</i>	Narrow leaf milkweed	Apocynaceae	Native	perennial herb	—	x			x			x	x	x		x
NEOL	<i>Nerium oleander</i>	Oleander	Apocynaceae	Non-native	tree	—			x			x		x			
ZAAE	<i>Zantedeschia aethiopica</i>	Callalily	Araceae	Non-native	perennial herb	Cal-IPC (Limited)						x					
TEPA3	<i>Tetrapanax papyrifer</i>	Rice-paper plant	Araliaceae	Non-native	shrub	—						x					
CHHU7	<i>Chamaerops humilis</i>	European fan palm	Arecaceae	Non-native	shrub	—						x					
PHDA4	<i>Phoenix dactylifera</i>	Date palm	Arecaceae	Non-native	tree	—			x								
WAFI	<i>Washingtonia filifera</i>	California fan palm	Arecaceae	Native	tree	—						x					
—	<i>Gasteria carinata</i>	Bredasdorp Gasteria	Asphodelaceae	Non-native	succulent	—						x					
ACMI3	<i>Acourtia microcephala</i>	Sacapellote	Asteraceae	Native	perennial herb	—								x	x		
AMAC2	<i>Ambrosia acanthicarpa</i>	Annual burrweed	Asteraceae	Native	annual herb	—	x	x		x			x	x	x		
AMAR2	<i>Ambrosia artemisiifolia</i>	Annual ragweed	Asteraceae	Non-native	annual herb	—						x		x			
AMPS	<i>Ambrosia psilostachya</i>	Ragweed	Asteraceae	Native	perennial herb	—	x	x		x				x	x		
AMSA7	<i>Ambrosia salsola</i>	Burrobrush	Asteraceae	Native	shrub	—		x						x			x
AMTR	<i>Ambrosia trifida</i>	Giant ragweed	Asteraceae	Non-native	annual herb	—			x			x					
ANMA	<i>Anaphalis margaritacea</i>	Pearly everlasting	Asteraceae	Native	perennial herb	—				x							
ARBI2	<i>Artemisia biennis</i>	Biennial sagewort	Asteraceae	Non-native	annual/perennial herb	—								x			
ARCA11	<i>Artemisia californica</i>	California sagebrush	Asteraceae	Native	shrub	—	x	x		x	x	x	x	x	x		x
ARDO3	<i>Artemisia douglasiana</i>	California mugwort	Asteraceae	Native	perennial herb	—		x		x		x	x	x	x		x
ARDR4	<i>Artemisia dracuncululus</i>	Wild tarragon	Asteraceae	Native	perennial herb	—	x	x		x					x		x
ARTR2	<i>Artemisia tridentata</i>	Common sagebrush	Asteraceae	Native	shrub	—	x								x		
ARTRT	<i>Artemisia tridentata</i> var. <i>tridentata</i>	Basin big sagebrush	Asteraceae	Native	shrub	—	x	x		x						x	
ARTRV2	<i>Artemisia tridentata</i> var. <i>vaseyana</i>	Mountain big sagebrush	Asteraceae	Native	shrub	—		x									

Appendix K - Botanical Inventory

USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
ARVU	<i>Artemisia vulgaris</i>	Common wormwood	Asteraceae	Non-native	perennial herb or shrub	—						x					
BAPI	<i>Baccharis pilularis</i>	Coyote brush	Asteraceae	Native	shrub	—	x	x		x		x	x	x	x	x	x
BASA4	<i>Baccharis salicifolia</i>	Mule fat	Asteraceae	Native	shrub	—	x	x	x	x		x	x	x	x		x
BASA2	<i>Baccharis sarothroides</i>	Desertbroom baccharis	Asteraceae	Native	shrub	—				x		x		x			
BRCA3	<i>Brickellia californica</i>	California brickellia	Asteraceae	Native	perennial herb	—				x		x		x	x		
CAPY2	<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae	Non-native	annual herb	Cal-IPC (Moderate); CDFCA-C								x	x		
CEME2	<i>Centaurea melitensis</i>	Tocalote	Asteraceae	Non-native	annual herb	Cal-IPC (Moderate); CDFCA-C	x	x		x				x	x		x
CESO3	<i>Centaurea solstitialis</i>	Yellow star thistle	Asteraceae	Non-native	annual herb	Cal-IPC (High); CDFCA-C	x	x		x		x		x			
CEPU14	<i>Centromadia pungens</i>	Common tarweed	Asteraceae	Native	annual herb	—		x									
CHGL	<i>Chaenactis glabriuscula</i>	Common yellow chaenactis	Asteraceae	Native	annual herb	—	x							x	x		
CHGLM	<i>Chaenactis glabriuscula</i> var. <i>megacephala</i>	Yellow pincushion	Asteraceae	Native	annual herb	—								x	x		
CHXA	<i>Chaenactis xantiana</i>	Fleshcolor pincushion	Asteraceae	Native	annual herb	—	x										
CHVI8	<i>Chrysothamnus viscidiflorus</i>	Stickyleaf rabbitbrush	Asteraceae	Native	shrub	—		x		x							
CIAR4	<i>Cirsium arvense</i>	Canada thistle	Asteraceae	Non-native	perennial herb	Cal-IPC (Moderate); CDFCA-B				x			x				
CIOC	<i>Cirsium occidentale</i>	Western thistle	Asteraceae	Native	perennial herb	—		x					x				x
CIOCO	<i>Cirsium occidentale</i> var. <i>occidentale</i>	Cobweb thistle	Asteraceae	Native	perennial herb	—	x	x		x			x	x			
CIOCC4	<i>Cirsium occidentale</i> var. <i>californicum</i>	Bigelow thistle	Asteraceae	Native	perennial herb	—								x			
CIVU	<i>Cirsium vulgare</i>	Bull thistle	Asteraceae	Non-native	perennial herb	Cal-IPC (Moderate); CDFCA-C	x	x		x		x		x			x
COFIC	<i>Corethrogyne filaginifolia</i> var. <i>californica</i>	California sandaster	Asteraceae	Native	perennial herb	—								x	x		
COFIF	<i>Corethrogyne filaginifolia</i> var. <i>filaginifolia</i>	Common sandaster	Asteraceae	Native	perennial herb	—	x	x	x	x		x	x	x	x		x
HEFA	<i>Deinandra fasciculata</i>	Clustered tarweed	Asteraceae	Native	annual herb	—								x	x		
ENAC	<i>Encelia actoni</i>	Acton encelia	Asteraceae	Native	shrub	—	x								x		x
ENCA	<i>Encelia californica</i>	Bush sunflower	Asteraceae	Native	shrub	—				x					x		
ENFA	<i>Encelia farinosa</i>	Brittlebush	Asteraceae	Native	shrub	—									x		
ERAR27	<i>Ericameria arborescens</i>	Golden fleece	Asteraceae	Native	shrub	—								x			
ERER11	<i>Ericameria ericoides</i>	California goldenbush	Asteraceae	Native	shrub	—								x			
ERLI6	<i>Ericameria linearifolia</i>	Interior goldbush	Asteraceae	Native	shrub	—	x	x	x	x				x	x		
ERNA10	<i>Ericameria nauseosa</i>	Rubber rabbitbrush	Asteraceae	Native	shrub	—	x	x	x	x				x		x	x
—	<i>Ericameria nauseosa</i> var. <i>bernardina</i>	San bernardino rubber rabbitbrush	Asteraceae	Native	shrub	—	x										
—	<i>Ericameria nauseosa</i> var. <i>oreophila</i>	Rubber rabbitbrush	Asteraceae	Native	shrub	—	x										
ERPI7	<i>Ericameria pinifolia</i>	Pine bush	Asteraceae	Native	shrub	—								x	x		
ERSU13	<i>Ericameria suffruticosa</i>	Alpine macronema	Asteraceae	Native	shrub	—									x		
ERBO4	<i>Erigeron bonariensis</i>	Flax-leaved horseweed	Asteraceae	Non-native	annual herb	—				x		x					
ERCA20	<i>Erigeron canadensis</i>	Canada horseweed	Asteraceae	Native	annual herb	—	x	x		x		x		x			
ERFO2	<i>Erigeron foliosus</i>	Leafy daisy	Asteraceae	Native	perennial herb	—	x							x	x		

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USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
ERFOF	<i>Erigeron foliosus</i> var. <i>foliosus</i>	Leafy fleabane	Asteraceae	Native	perennial herb or shrub	—	x										
ERCOC12	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	Golden yarrow	Asteraceae	Native	shrub	—	x	x		x	x		x	x	x		x
EUOC4	<i>Euthamia occidentalis</i>	Western goldenrod	Asteraceae	Native	perennial herb	—		x									
GALI4	<i>Gazania linearis</i>	Treasureflower	Asteraceae	Non-native	perennial herb	Cal-IPC (Moderate)								x			
GRSQ	<i>Grindelia squarrosa</i>	Curlycup gumweed	Asteraceae	Non-native	perennial herb	—						x					
GUCA	<i>Gutierrezia californica</i>	Snakeweed	Asteraceae	Native	perennial herb or shrub	—	x			x					x		
GUTIE	<i>Gutierrezia</i> sp.	—	Asteraceae	Native	—	—									x		
HASQ2	<i>Hazardia squarrosa</i>	Saw toothed goldenbush	Asteraceae	Native	shrub	—	x			x				x	x		
HEPU2	<i>Helenium puberulum</i>	Rosilla	Asteraceae	Native	perennial herb	—								x			
HEAN3	<i>Helianthus annuus</i>	Common sunflower	Asteraceae	Native	annual herb	—	x	x				x		x	x	x	x
HECA5	<i>Helianthus californicus</i>	California sunflower	Asteraceae	Native	perennial herb	—								x	x		
HEGR3	<i>Helianthus gracilentus</i>	Slender sunflower	Asteraceae	Native	perennial herb	—								x			
HENUN	<i>Helianthus nuttallii</i> ssp. <i>nuttallii</i>	Nuttall's sunflower	Asteraceae	Native	perennial herb	—				x							
HEGR7	<i>Heterotheca grandiflora</i>	Telegraph weed	Asteraceae	Native	annual/perennial herb	—	x							x	x		x
HESE	<i>Heterotheca sessiliflora</i>	Sessileflower false goldenaster	Asteraceae	Native	annual, perennial herb	—	x								x		
HOHE	<i>Holocarpha heermannii</i>	Heermann's tarweed	Asteraceae	Native	annual herb	—									x		
HYGL2	<i>Hypochaeris glabra</i>	Smooth cat's ear	Asteraceae	Non-native	annual herb	—	x	x									
ISME5	<i>Isocoma menziesi</i>	Menzies' goldenbush	Asteraceae	Native	shrub	—									x		
IVAX	<i>Iva axillaris</i>	Povertyweed	Asteraceae	Native	perennial herb	—	x	x						x	x		x
LASE	<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae	Non-native	annual herb	—	x	x		x		x		x	x		
LACO13	<i>Laennecia coulteri</i>	Coulter's horseweed	Asteraceae	Native	annual herb	—								x			
LACA7	<i>Lasthenia californica</i>	Common goldfields	Asteraceae	Native	annual herb	—	x					x		x	x		
LAGR10	<i>Lasthenia gracilis</i>	Needle goldfields	Asteraceae	Native	annual herb	—								x	x		
LAPL	<i>Layia platyglossa</i>	Coastal tidytips	Asteraceae	Native	annual herb	—									x		
LESQ	<i>Lepidospartum squamatum</i>	Scalebroom	Asteraceae	Native	shrub	—		x		x			x	x	x	x	
LEBI4	<i>Leptosyne bigelovii</i>	Bigelow coreopsis	Asteraceae	Native	annual herb	—									x		
LEGL18	<i>Lessingia glandulifera</i>	Valley vinegar weed	Asteraceae	Native	annual herb	—	x										
LOCA19	<i>Logfia filaginoides</i> (californica)	California cottonrose	Asteraceae	Native	annual herb	—								x			
MAEL	<i>Madia elegans</i>	Common madia	Asteraceae	Native	annual herb	—									x		
MASA2	<i>Malacothrix saxatilis</i>	Cliff aster	Asteraceae	Native	perennial herb	—				x			x	x	x		
MASAT	<i>Malacothrix saxatilis</i> var. <i>tenuifolia</i>	Cliff desert dandelion	Asteraceae	Native	perennial herb	—								x			
MADI6	<i>Matricaria discoidea</i>	Pineapple weed	Asteraceae	Native	annual herb	—	x			x					x		x
MIDO	<i>Microseris douglasii</i>	Douglas' silverpuffs	Asteraceae	Native	annual herb	—									x		
—	<i>Pseudognaphalium beneolens</i>	Cudweed	Asteraceae	Native	perennial herb	—								x			
PSCA13	<i>Pseudognaphalium californicum</i>	Ladies' tobacco	Asteraceae	Native	annual/perennial herb	—	x	x		x			x	x	x		x
PSCA11	<i>Pseudognaphalium canescens</i>	Wright's cudweed	Asteraceae	Native	perennial herb	—	x			x							
PSLU6	<i>Pseudognaphalium luteoalbum</i>	Jersey cudweed	Asteraceae	Non-native	annual herb	—						x		x			
—	<i>Pseudognaphalium thermale</i>	Small headed cudweed	Asteraceae	Native	perennial herb	—								x			
PSBR	<i>Psilocarphus brevissimus</i>	Woolly marbles	Asteraceae	Native	annual herb	—				x							
SECA	<i>Senecio californicus</i>	California butterweed	Asteraceae	Native	annual herb	—									x		
SEFL3	<i>Senecio flaccidus</i>	Shrubby ragwort	Asteraceae	Native	shrub	—								x			
SEVU	<i>Senecio vulgaris</i>	Common groundsel	Asteraceae	Non-native	annual herb	—				x		x		x	x		

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SIMA3	<i>Silybum marianum</i>	Milk thistle	Asteraceae	Non-native	annual/perennial herb	Cal-IPC (Limited)	x							x			
SOVE6	<i>Solidago velutina</i>	Threenerve goldenrod	Asteraceae	Native	perennial herb	—						x					
SOAR2	<i>Sonchus arvensis</i>	Perennial sow thistle	Asteraceae	Non-native	perennial herb	—		x									
SOAS	<i>Sonchus asper</i>	Spiny sowthistle	Asteraceae	Non-native	annual herb	—	x			x		x		x	x		
SOOL	<i>Sonchus oleraceus</i>	Common sow thistle	Asteraceae	Non-native	annual herb	—	x	x		x				x	x		x
STEX	<i>Stephanomeria exigua</i>	Small wirelettuce	Asteraceae	Native	annual herb	—			x								
STVI2	<i>Stephanomeria virgata</i>	Twiggy wreath plant	Asteraceae	Native	annual herb	—	x			x		x		x	x		
STVIP	<i>Stephanomeria virgata ssp. pleurocarpa</i>	Tall stephanomeria	Asteraceae	Native	annual herb	—	x										
SYLA6	<i>Symphotrichum lanceolatum</i>	White panicle aster	Asteraceae	Native	perennial herb	—								x			
TAOF	<i>Taraxacum officinale</i>	Red-seeded dandelion	Asteraceae	Non-native	perennial herb	—			x	x							
TRDU	<i>Tragopogon dubius</i>	Goat's beard	Asteraceae	Non-native	perennial herb	—				x				x	x		
MILI5	<i>Uropappus (microseris) lindleyi</i>	Silver puffs	Asteraceae	Native	annual herb	—	x							x	x		x
XAST	<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	Native	annual herb	—	x			x		x	x	x	x		x
BEPI	<i>Berberis pinnata</i>	Shiny leaf mahonia	Berberidaceae	Native	shrub	—				x		x		x			
ALRH2	<i>Alnus rhombifolia</i>	White alder	Betulaceae	Native	tree	—				x				x			
CHLI2	<i>Chilopsis linearis</i>	Desert willow	Bignoniaceae	Native	shrub	—						x					
AMIN3	<i>Amsinckia intermedia</i>	Common fiddleneck	Boraginaceae	Native	annual herb	—						x		x			
AMME	<i>Amsinckia menziesii</i>	Menzies' fiddleneck	Boraginaceae	Native	annual herb	—	x	x						x	x		x
AMTET	<i>Amsinckia tessellata var. tessellata</i>	Devil's lettuce	Boraginaceae	Native	annual herb	—	x	x		x				x			
CRIN8	<i>Cryptantha intermedia</i>	Common cryptantha	Boraginaceae	Native	annual herb	—	x			x				x	x		
CRMU2	<i>Cryptantha muricata</i>	Pointed cryptantha	Boraginaceae	Native	annual herb	—									x		
CRMUJ	<i>Cryptantha muricata var. jonesii</i>	Jones' cryptantha	Boraginaceae	Native	annual herb	—									x		
EMPEP	<i>Emmenanthe penduliflora var. penduliflora</i>	Whispering bells	Boraginaceae	Native	annual herb	—		x			x				x		x
ERCRC	<i>Eriodictyon crassifolium var. crassifolium</i>	Thick leaved yerba santa	Boraginaceae	Native	shrub	—	x	x		x	x	x	x	x	x	x	x
EUCHC	<i>Eucrypta chrysanthemifolia var. chrysanthemifolia</i>	Spotted hideseed	Boraginaceae	Native	annual herb	—				x		x		x	x		
HECU3	<i>Heliotropium curassavicum</i>	Chinese parsley	Boraginaceae	Native	perennial herb	—	x	x		x				x	x		x
NEMEM	<i>Nemophila menziesii var. menziesii</i>	Baby blue eyes	Boraginaceae	Native	annual herb	—	x										
NEPUF	<i>Nemophila pulchella var. fremontii</i>	Fremont's baby blue eyes	Boraginaceae	Native	annual herb	—									x		
PELIF2	<i>Pectocarya linearis ssp. ferocula</i>	Sagebrush combseed	Boraginaceae	Native	annual herb	—						x		x			
PEPE26	<i>Pectocarya penicillata</i>	Winged pectocarya	Boraginaceae	Native	annual herb	—	x	x		x				x	x	x	
PHCI	<i>Phacelia cicutaria</i>	Caterpillar phacelia	Boraginaceae	Native	annual herb	—								x	x		
PHCR	<i>Phacelia crenulata</i>	Notch leaved phacelia	Boraginaceae	Native	annual herb	—									x		
PHMI	<i>Phacelia minor</i>	California bluebell	Boraginaceae	Native	annual herb	—									x		
PHPA3	<i>Phacelia parryi</i>	Parry's phacelia	Boraginaceae	Native	annual herb	—		x						x	x		x
—	<i>Phacelia viscida var. viscida</i>	Sticky phacelia	Boraginaceae	Native	annual herb	—									x		
PHCIC	<i>Phacelia cicutaria var. cicutaria</i>	Caterpillar phacelia	Boraginaceae	Native	annual herb	—								x	x		
PHCR2	<i>Phacelia cryptantha</i>	Hiddenflower phacelia	Boraginaceae	Native	annual herb	—						x					
PHDI	<i>Phacelia distans</i>	Distant phacelia	Boraginaceae	Native	annual herb	—									x		
PHRA2	<i>Phacelia ramosissima</i>	Branching phacelia	Boraginaceae	Native	perennial herb	—								x			
PHIMP	<i>Phacelia imbricata var. patula</i>	Imbricate phacelia	Boraginaceae	Native	perennial herb	—	x										
PLCAC3	<i>Plagiobothrys canescens var. canescens</i>	Valley popcorn flower	Boraginaceae	Native	annual herb	—	x	x			x			x	x		x



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BRNI	<i>Brassica nigra</i>	Black mustard	Brassicaceae	Non-native	annual herb	Cal-IPC (Moderate)	x	x	x	x		x		x	x		x
BRT0	<i>Brassica tournefortii</i>	Saharan mustard	Brassicaceae	Non-native	annual herb	Cal-IPC (High)	x										
CABU2	<i>Capsella bursa-pastoris</i>	Sheperd's purse	Brassicaceae	Non-native	annual herb	—				x					x		
DEPI	<i>Descurainia pinnata</i>	Yellow tansy mustard	Brassicaceae	Native	annual herb	—	x	x							x		
DESO2	<i>Descurainia sophia</i>	Fix weed	Brassicaceae	Non-native	annual herb	Cal-IPC (Limited)	x										
ERCAC	<i>Erysimum capitatum</i> var. <i>capitatum</i>	Sanddune wallflower	Brassicaceae	Native	perennial herb	—				x							
HIIN3	<i>Hirschfeldia incana</i>	Mediterranean hoary mustard	Brassicaceae	Non-native	perennial herb	Cal-IPC (Moderate)	x	x	x	x		x		x	x	x	x
LEDR	<i>Lepidium (cardaria) draba (pubescens)</i>	Whitetop	Brassicaceae	Non-native	perennial herb	Cal-IPC (Moderate); C DFA-B				x		x		x			
LELA2	<i>Lepidium latifolium</i>	Broad leaved pepper grass	Brassicaceae	Non-native	perennial herb	Cal-IPC (High); C DFA-B		x									x
LENI	<i>Lepidium nitidum</i>	Shining pepperweed	Brassicaceae	Native	annual herb	—									x		
LEVI3	<i>Lepidium virginicum</i>	Virginia pepperweed	Brassicaceae	Native	annual herb	—								x	x		
NAOF	<i>Nasturtium officinale</i>	Watercress	Brassicaceae	Native	perennial herb (aquatic)	—		x									x
—	<i>Peritoma arborea</i> var. <i>arborea</i>	Bladderpod	Brassicaceae	Native	shrub	—	x	x	x	x		x		x	x	x	x
ROPA2	<i>Rorippa palustris</i>	Bog yellow cress	Brassicaceae	Native	annual/perennial herb	—	x										
SIAR4	<i>Sinapis arvensis</i>	Charlock mustard	Brassicaceae	Non-native	annual herb	Cal-IPC (Limited)						x		x			
SIAL2	<i>Sisymbrium altissimum</i>	Tumble mustard	Brassicaceae	Non-native	annual herb	—	x	x		x					x		
STPIP	<i>Stanleya pinnata</i> var. <i>pinnata</i>	Desert princesplume	Brassicaceae	Native	perennial herb or shrub	—							x		x		
THCU	<i>Thysanocarpus curvipes</i>	Sand fringe pod	Brassicaceae	Native	annual herb	—								x	x		
THLA3	<i>Thysanocarpus laciniatus</i>	Mountain fringe pod	Brassicaceae	Native	annual herb	—									x		
CEHI3	<i>Cereus hildmannianus</i>	Hedge cactus	Cactaceae	Non-native	shrub/tree	—						x					
OPBAB2	<i>Opuntia basilaris</i> var. <i>basilaris</i>	Beavertail cactus	Cactaceae	Native	shrub (stem succulent)	—									x		
OPBAB	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	Short joint beavertail	Cactaceae	Native	shrub (stem succulent)	CNPS 1B.2									x		
OPOC2	<i>Opuntia x occidentalis</i>	Western prickly pear	Cactaceae	Native	shrub (stem succulent)	—						x					
LOIN4	<i>Lonicera interrupta</i>	Chaparral honeysuckle	Caprifoliaceae	Native	vine/shrub	—	x			x							x
LOSU2	<i>Lonicera subspicata</i>	Southern honeysuckle	Caprifoliaceae	Native	shrub	—					x						
POTE	<i>Polycarpon tetraphyllum</i>	Four leaved all seed	Caryophyllaceae	Non-native	annual herb	—								x			
SIGA	<i>Silene gallica</i>	Common catchfly	Caryophyllaceae	Non-native	annual herb	—				x							
STME2	<i>Stellaria media</i>	Chickweed	Caryophyllaceae	Non-native	annual herb	—								x			
ATCAC	<i>Atriplex canescens</i> var. <i>canescens</i>	Fourwing saltbush	Chenopodiaceae	Native	shrub	—		x	x	x	x	x	x	x	x	x	x
ATLE	<i>Atriplex lentiformis</i>	Big saltbush	Chenopodiaceae	Native	shrub	—		x	x	x		x		x		x	x
ATLE2	<i>Atriplex leucophylla</i>	Sea scale	Chenopodiaceae	Native	shrub	—				x		x					
ATPO	<i>Atriplex polycarpa</i>	Cattle spinach	Chenopodiaceae	Native	shrub	—				x		x		x			
ATSE	<i>Atriplex semibaccata</i>	Australian saltbush	Chenopodiaceae	Non-native	perennial herb	Cal-IPC (Moderate)				x		x		x			

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BASC5	<i>Bassia (Kochia) scoparia</i>	Mexican fireweed	Chenopodiaceae	Non-native	annual herb	Cal-IPC (Limited)			x			x		x			
CHAL7	<i>Chenopodium album</i>	Lamb's quarters	Chenopodiaceae	Non-native	annual herb	—		x				x	x	x	x		
CHCA3	<i>Chenopodium californicum</i>	California goosefoot	Chenopodiaceae	Native	perennial herb	—									x		
CHMU2	<i>Chenopodium murale</i>	Nettle leaf goosefoot	Chenopodiaceae	Non-native	annual herb	—									x		
HAGL	<i>Halogeton glomeratus</i>	Halogeton	Chenopodiaceae	Non-native	annual herb	Cal-IPC (Moderate); CDFCA-A		x									
SAKA	<i>Salsola kali</i>	Russian thistle	Chenopodiaceae	Non-native	annual herb	—	x							x			
SATR12	<i>Salsola tragus</i>	Prickly russian thistle	Chenopodiaceae	Non-native	annual/perennial herb	Cal-IPC (Limited); CDFCA-C	x	x	x	x		x		x	x	x	x
CAMA24	<i>Calystegia macrostegia</i>	Island flase bindweed	Convolvulaceae	Native	perennial herb or vine	—								x			
CAMAP	<i>Calystegia malacophylla</i> ssp. <i>pedicellata</i>	Jepson's morning glory	Convolvulaceae	Native	perennial herb	—				x							
CAOC6	<i>Calystegia occidentalis</i>	Chaparral false bindweed	Convolvulaceae	Native	perennial herb	—						x		x	x		
CAOCO	<i>Calystegia occidentalis</i> ssp. <i>occidentalis</i>	Chaparral false bindweed	Convolvulaceae	Native	perennial herb	—								x			
CAPE18	<i>Calystegia peirsonii</i>	Peirson's morning glory	Convolvulaceae	Native	perennial herb (rhizomatous)	CNPS 4.2				x				x	x		
COAR4	<i>Convolvulus arvensis</i>	Field bindweed	Convolvulaceae	Non-native	perennial herb/vine	—						x					
CUCAC	<i>Cuscuta californica</i> var. <i>californica</i>	California dodder	Convolvulaceae	Native	annual herb or vine (parasitic)	—								x	x		
—	<i>Cuscuta occidentalis</i>	California dodder	Convolvulaceae	Native	annual herb or vine (parasitic)	—								x			
CRCO34	<i>Crassula connata</i>	Pigmy weed	Crassulaceae	Native	annual herb	—									x		
DUCYP2	<i>Dudleya cymosa</i> ssp. <i>pumila</i>	Canyon liveforever	Crassulaceae	Native	perennial herb	—				x							x
DULA	<i>Dudleya lanceolata</i>	Southern california dudleya	Crassulaceae	Native	perennial herb	—	x			x				x	x		
DUPU	<i>Dudleya pulverulenta</i>	Chalk dudleye	Crassulaceae	Native	perennial herb	—				x							
CUFO	<i>Cucurbita foetidissima</i>	Missouri gourd	Cucurbitaceae	Native	perennial herb or vine	—									x		
MAFA3	<i>Marah fabacea</i>	California man-root	Cucurbitaceae	Native	perennial herb or vine	—	x			x	x			x	x		
MAMA8	<i>Marah macrocarpa</i>	Chilicothe	Cucurbitaceae	Native	perennial herb or vine	—				x		x		x	x		
CADE27	<i>Calocedrus decurrens</i>	Incense cedar	Cupressaceae	Native	tree	—		x		x							
CUSE2	<i>Cupressus sempervirens</i>	Italian cypress	Cupressaceae	Non-native	tree	—				x		x					
JUCA7	<i>Juniperus californica</i>	California juniper	Cupressaceae	Native	shrub	—	x	x	x	x		x					x
JUCO6	<i>Juniperus communis</i>	Common juniper	Cupressaceae	Native	shrub/tree	—						x					
ELACA	<i>Eleocharis acicularis</i> var. <i>acicularis</i>	Needle spike rush	Cyperaceae	Native	perennial grasslike herb	—								x			
SCACO2	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	Tule	Cyperaceae	Native	perennial grasslike herb	—	x										
SCAM6	<i>Schoenoplectus americanus</i>	Chairmaker's bulrush	Cyperaceae	Native	perennial grasslike herb	—		x									
SCCA11	<i>Schoenoplectus californicus</i>	California bulrush	Cyperaceae	Native	perennial grasslike herb	—	x			x				x			
BOMAP4	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	Alkali bulrush	Cyperaceae	Native	perennial grasslike herb	—		x									

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CAPR5	<i>Carex praegracilis</i>	Clustered field sedge	Cyperaceae	Native	perennial grasslike herb	—				x							
CYER	<i>Cyperus eragrostis</i>	Tall cyperus	Cyperaceae	Native	perennial grasslike herb	—				x				x			
CYFL	<i>Cyperus flavescens</i>	Yellow flatsedge	Cyperaceae	Non-native	annual grasslike herb	—						x					
CYPER	<i>Cyperus sp.</i>	—	Cyperaceae	—	grasslike herb	—				x							
SCAC3	<i>Schoenoplectus acutus</i>	Hardstem bulrush	Cyperaceae	Native	perennial grasslike herb	—	x	x				x		x			x
DISA9	<i>Dipsacus sativus</i>	Indian teasel	Dipsacaceae	Non-native	biennial herb	CAL-IPC (Moderate)			x								
EPVI	<i>Ephedra viridis</i>	Green ephedra	Ephedraceae	Native	shrub	—	x	x		x							
EOAR	<i>Equisetum arvense</i>	Common horsetail	Equisetaceae	Native	fern	—				x							x
EOHYA2	<i>Equisetum hyemale ssp. affine</i>	Giant scouring rush	Equisetaceae	Native	fern	—								x			
EOLA	<i>Equisetum laevigatum</i>	Smooth scouring rush	Equisetaceae	Native	fern	—								x			
ARGL4	<i>Arctostaphylos glauca</i>	Big berry manzanita	Ericaceae	Native	tree/shrub	—	x	x		x	x			x	x		x
CRSE11	<i>Croton setiger</i>	Turkey-mullein	Euphorbiaceae	Native	annual herb	—	x	x						x	x		
EUMA7	<i>Euphorbia maculata</i>	Spotted spurge	Euphorbiaceae	Non-native	annual herb	—				x							
CHAL11	<i>Euphorbia (Chamaesyce) albomarginata</i>	Whitemargin sandmat	Euphorbiaceae	Native	perennial herb	—	x			x				x	x		
RICO3	<i>Ricinus communis</i>	Castor bean	Euphorbiaceae	Non-native	shrub	CAL-IPC (Limited)								x			
STLI3	<i>Stillingia linearifolia</i>	Queen's root	Euphorbiaceae	Native	perennial herb	—									x		
ACACI	<i>Acacia sp.</i>	Acacia	Fabaceae	Non-native	tree	—									x		
LOSC2	<i>Acmispon (Lotus) glaber (scoparius)</i>	Deerweed	Fabaceae	Native	perennial herb	—	x	x		x	x	x	x	x	x		x
LOSA	<i>Acmispon (Lotus) maritimus (salsuginosus)</i>	Coastal lotus	Fabaceae	Native	annual herb	—								x			
LOSAS	<i>Acmispon (Lotus) maritimus (salsuginosus) var. maritimus (salsuginosus)</i>	Coastal lotus	Fabaceae	Native	annual herb	—									x		
LOMI	<i>Acmispon (Lotus) parviflorus (micranthus)</i>	Hill lotus	Fabaceae	Native	annual herb	—		x									
LOST4	<i>Acmispon (Lotus) strigosus</i>	Strigose lotus	Fabaceae	Native	annual herb	—				x		x			x		x
LOWR2	<i>Acmispon (Lotus) wrangelianus</i>	Chilean trefoil	Fabaceae	Native	annual herb	—				x			x	x			
ASDO	<i>Astragalus douglasii</i>	Douglas's milkvetch	Fabaceae	Native	perennial herb	—		x									
ASGA	<i>Astragalus gambelianus</i>	Dwarf loco weed	Fabaceae	Native	annual herb	—									x		
ASLE8	<i>Astragalus lentiginosus</i>	Freckled milk vetch	Fabaceae	Native	annual/perennial herb	—									x		
ASTR6	<i>Astragalus trichopodus</i>	Santa barbara milk vetch	Fabaceae	Native	perennial herb	—			x	x		x		x	x		
ASTRP	<i>Astragalus trichopodus var. phoxus</i>	Santa barbara milk vetch	Fabaceae	Native	perennial herb	—				x					x		
CEOC3	<i>Cercis occidentalis</i>	Western redbud	Fabaceae	Native	tree/shrub	—				x							
CYSC4	<i>Cytisus scoparius</i>	Scotch broom	Fabaceae	Non-native	shrub	Cal-IPC (High); CDFA-C						x		x			
GLTR	<i>Gleditsia triacanthos</i>	Honeylocust	Fabaceae	Non-native	shrub/tree	—						x					
GLLE3	<i>Glycyrrhiza lepidota</i>	American licorice	Fabaceae	Native	perennial herb	—									x		
LOCO6	<i>Lotus corniculatus</i>	Bird's foot trefoil	Fabaceae	Non-native	perennial herb	—	x			x				x	x		
LUAL3	<i>Lupinus albicaulis</i>	Sickle keeled lupine	Fabaceae	Native	perennial herb	—								x			
LUAL4	<i>Lupinus albilfrons</i>	Silver bush lupine	Fabaceae	Native	shrub	—	x								x		x
LUBI	<i>Lupinus bicolor</i>	Bicolored lupine	Fabaceae	Native	annual/perennial herb	—				x				x	x		x
LUEXA	<i>Lupinus excubitus var. austromonanus</i>	Southern montane grape lupine	Fabaceae	Native	shrub	—	x										
LUEXH	<i>Lupinus excubitus var. hallii</i>	Hall's bush lupine	Fabaceae	Native	shrub	—									x		

Appendix K - Botanical Inventory

USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
LUFOF	<i>Lupinus formosus</i> var. <i>formosus</i>	Summer lupine	Fabaceae	Native	perennial herb	—				x							
LUH13	<i>Lupinus hirsutissimus</i>	Stinging annual lupine	Fabaceae	Native	annual herb	—								x	x		
LUMID3	<i>Lupinus microcarpus</i> var. <i>densiflorus</i>	Whitewhorl lupine	Fabaceae	Native	annual herb	—						x					
LUMIM4	<i>Lupinus microcarpus</i> var. <i>microcarpus</i>	Chick lupine	Fabaceae	Native	annual herb	—	x								x		
LUNA3	<i>Lupinus nanus</i>	Sky lupine	Fabaceae	Native	annual herb	—								x	x		
LUSP2	<i>Lupinus sparsiflorus</i>	Coulter's lupine	Fabaceae	Native	annual herb	—								x	x		
LUSU3	<i>Lupinus succulentus</i>	Succulent lupine	Fabaceae	Native	annual herb	—									x		
MELU	<i>Medicago lupulina</i>	Black medick	Fabaceae	Non-native	annual/perennial herb	—				x				x			
MEPO3	<i>Medicago polymorpha</i>	California burclover	Fabaceae	Non-native	annual herb	Cal-IPC (Limited)	x	x		x		x		x	x		x
MEAL2	<i>Melilotus albus</i>	White sweetclover	Fabaceae	Non-native	annual or biennial herb	—	x	x		x		x	x	x	x		
MEIN2	<i>Melilotus indicus</i>	Annual yellow sweetclover	Fabaceae	Non-native	annual herb	—	x	x		x				x	x		x
MEOF	<i>Melilotus officinalis</i>	Yellow sweetclover	Fabaceae	Non-native	annual or biennial herb	—				x		x		x	x		
PAAC3	<i>Parkinsonia aculeata</i>	Jerusalem thorn	Fabaceae	Non-native	Tree	—						x					
PIMO5	<i>Pickeringia montana</i>	Montana chaparral pea	Fabaceae	Native	shrub	—				x							
ROPS	<i>Robinia pseudoacacia</i>	Black locust	Fabaceae	Non-native	tree	Cal-IPC (Limited)				x		x		x			
SPJU2	<i>Spartium junceum</i>	Spanish broom	Fabaceae	Non-native	shrub	Cal-IPC (High); CDFA-C				x		x		x			x
TRAL5	<i>Trifolium albopurpureum</i>	Rancheria clover	Fabaceae	Native	annual herb	—									x		
TRCA5	<i>Trifolium campestre</i>	Field clover	Fabaceae	Non-native	annual herb	—								x			
TRDU2	<i>Trifolium dubium</i>	Shamrock clover	Fabaceae	Non-native	annual herb	—								x			
TRHI4	<i>Trifolium hirtum</i>	Rose clover	Fabaceae	Non-native	annual herb	Cal-IPC (Limited)	x										
TRRE3	<i>Trifolium repens</i>	White clover	Fabaceae	Non-native	perennial herb	—		x		x							
TRWI3	<i>Trifolium willdenovii</i>	Tomcat clover	Fabaceae	Native	annual herb	—									x		
TRGR5	<i>Tropidocarpum gracile</i>	Slender keel fruit	Fabaceae	Native	annual herb	—				x							
VIVI	<i>Vicia villosa</i>	Hairy vetch	Fabaceae	Non-native	annual herb or vine	—						x			x		
QUAGA	<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak	Fagaceae	Native	tree	—		x		x		x		x	x		x
QUBE5	<i>Quercus berberidifolia</i>	Inland scrub oak	Fagaceae	Native	tree	—		x	x	x	x	x		x	x		x
QUJO3	<i>Quercus john-tuckeri</i>	Tucker's oak	Fagaceae	Native	tree	—	x			x					x		
QULO	<i>Quercus lobata</i>	Valley oak	Fagaceae	Native	tree	—				x				x			
ERBO	<i>Erodium botrys</i>	Big heron bill	Geraniaceae	Non-native	annual herb	—								x	x		
ERBR14	<i>Erodium brachycarpum</i>	Foothill filaree	Geraniaceae	Non-native	annual herb	—								x	x		
ERIC16	<i>Erodium cicutarium</i>	Red-stem filaree	Geraniaceae	Non-native	annual herb	Cal-IPC (Limited)	x	x	x	x		x	x	x	x		x
RIAU	<i>Ribes aureum</i>	Golden currant	Grossulariaceae	Native	shrub	—									x		
RICA	<i>Ribes californicum</i>	California gooseberry	Grossulariaceae	Native	shrub	—	x										
RICEC2	<i>Ribes cereum</i> var. <i>cereum</i>	Wax currant	Grossulariaceae	Native	shrub	—									x		
RIMA	<i>Ribes malvaceum</i>	Chaparral currant	Grossulariaceae	Native	shrub	—			x	x		x		x	x		
RIQU	<i>Ribes quercetorum</i>	Oak gooseberry	Grossulariaceae	Native	shrub	—	x										
RIVE	<i>Ribes velutinum</i>	Desert gooseberry	Grossulariaceae	Native	shrub	—	x										
LIST2	<i>Liquidambar styraciflua</i>	Sweetgum	Hamamelidaceae	Non-native	tree	—				x		x					

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USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
IRSI	<i>Iris sibirica</i>	Siberian iris	Iridaceae	Non-native	perennial herb (rhizomatous)	—						x					
JUCA	<i>Juglans californica</i> (var. <i>californica</i> )	Southern black walnut	Juglandaceae	Native	tree	CNPS 4.2							x		x		
JUAC2	<i>Juncus acutus</i>	Spiny rush	Juncaceae	Native	perennial grasslike herb (rhizomatous)	—								x			
JUBA	<i>Juncus balticus</i>	Wire rush	Juncaceae	Native	perennial grasslike herb	—	x	x				x			x		
JUEF	<i>Juncus effusus</i>	Common rush	Juncaceae	Native	perennial grasslike herb	—									x		
JUNCU	<i>Juncus</i> sp.	Rush	Juncaceae	—	perennial grasslike herb	—	x	x	x	x					x		x
JUXI	<i>Juncus xiphioides</i>	Iris leaved rush	Juncaceae	Native	perennial grasslike herb	—		x						x			
LAAM	<i>Lamium amplexicaule</i>	Henbit	Lamiaceae	Non-native	annual herb	—				x							
MAVU	<i>Marrubium vulgare</i>	White horehound	Lamiaceae	Non-native	perennial herb	Cal-IPC (Limited)		x	x	x		x		x	x		x
MEPU	<i>Mentha pulegium</i>	Pennyroyal	Lamiaceae	Non-native	perennial herb	CAL-IPC (Moderate)								x			
ROOF	<i>Rosmarinus officinalis</i>	Rosemary	Lamiaceae	Non-native	shrub	—				x		x					
SAAP2	<i>Salvia apiana</i>	White sage	Lamiaceae	Native	shrub	—	x	x		x			x	x	x		x
SACO6	<i>Salvia columbariae</i>	Chia sage	Lamiaceae	Native	annual herb	—	x			x			x	x	x		x
SALE3	<i>Salvia leucophylla</i>	Purple sage	Lamiaceae	Native	shrub	—		x	x	x		x	x	x	x		x
SAME3	<i>Salvia mellifera</i>	Black sage	Lamiaceae	Native	shrub	—	x	x		x	x	x	x	x	x	x	x
SCSI6	<i>Scutellaria siphocampyloides</i>	Curve flowered skullcap	Lamiaceae	Native	perennial herb	—								x			x
TRLA3	<i>Trichostema lanatum</i>	Woolly bluecurls	Lamiaceae	Native	shrub	—				x					x		
PEAM3	<i>Persea americana</i>	Avocado	Lauraceae	Non-native	tree	—						x					
UMCA	<i>Umbellularia californica</i>	California laurel	Lauraceae	Native	tree	—						x					
CACLG	<i>Calochortus clavatus</i> var. <i>gracilis</i>	Slender mariposa lily	Liliaceae	Native	perennial herb (bulb)	CNPS 1B.2				x					x		
CASP	<i>Calochortus splendens</i>	Splendid mariposa lily	Liliaceae	Native	perennial herb	—								x			
CAVE3	<i>Calochortus venustus</i>	Butterfly mariposa lily	Liliaceae	Native	perennial herb	—									x		
CHPA7	<i>Chlorogalum parviflorum</i>	Smallflower soap plant	Liliaceae	Native	perennial herb	—									x		
CHPOP4	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Wavyleaf soap plant	Liliaceae	Native	perennial herb	—								x	x		
MEAL6	<i>Mentzelia albicaulis</i>	White stemmed blazing star	Loasaceae	Native	annual herb	—	x										
MELA2	<i>Mentzelia laevicaulis</i>	Giant blazingstar	Loasaceae	Native	perennial herb	—				x					x		
LYCA4	<i>Lythrum californicum</i>	Common loosestrife	Lythraceae	Native	perennial herb	—								x			
LYHY3	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	Lythraceae	Non-native	annual/perennial herb	Cal-IPC (Moderate); CDFFA-B	x			x				x			
—	<i>Malacothamnus fasciculatus</i> var. <i>fasciculatus</i>	Chaparral bush mallow	Malvaceae	Native	shrub	—	x	x		x				x	x		
MAFR2	<i>Malacothamnus fremontii</i>	Fremont's bush mallow	Malvaceae	Native	shrub	—								x			
MANE	<i>Malva neglecta</i>	Common mallow	Malvaceae	Non-native	annual/perennial herb	—						x					
MANI2	<i>Malva nicaeensis</i>	Bull mallow	Malvaceae	Non-native	annual herb	—									x		
MAPA5	<i>Malva parviflora</i>	Cheeseweed mallow	Malvaceae	Non-native	annual herb	—	x								x		

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CLPAP	<i>Claytonia parviflora</i> ssp. <i>parviflora</i>	Narrow leaved miner's lettuce	Montiaceae	Native	annual herb	—	x			x					x		
CLPE	<i>Claytonia perfoliata</i>	Miner's lettuce	Montiaceae	Native	annual herb	—				x					x		
CLPEP	<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	Miner's lettuce	Montiaceae	Native	annual herb	—									x		
FICA	<i>Ficus carica</i>	Common fig	Moraceae	Non-native	tree	Cal-IPC (Moderate)		x						x			x
MOAL	<i>Morus alba</i>	White mulberry	Moraceae	Non-native	tree	—						x					
ANAR	<i>Lysimachia (Anagallis) arvensis</i>	Scarlet pimpernel	Myrsinaceae	Non-native	annual herb	—						x		x			
CALL12	<i>Callistemon</i> sp.	—	Myrtaceae	Non-native	—	—				x							
COCI4	<i>Eucalyptus (Corymbia) citriodora</i>	Lemonscented gum	Myrtaceae	Non-native	tree	—						x					
EUCA2	<i>Eucalyptus camaldulensis</i>	River redgum	Myrtaceae	Non-native	tree	Cal-IPC (Limited)						x					
COCA48	<i>Eucalyptus (Corymbia) calophylla</i>	Redgum	Myrtaceae	Non-native	tree	—				x							
MILAC4	<i>Mirabilis laevis</i> var. <i>crassifolia</i>	California four o'clock	Nyctaginaceae	Native	perennial herb	—				x		x		x	x		
NIGL	<i>Nicotiana glauca</i>	Tree tobacco	Solanaceae	Non-native	tree/shrub	Cal-IPC (Moderate)				x		x	x	x	x		x
NIQU	<i>Nicotiana quadrivalvis</i>	Indian tobacco	Solanaceae	Native	annual herb	—	x										
FRDI2	<i>Fraxinus dipetala</i>	California ash	Oleaceae	Native	tree/shrub	—		x		x				x			
FRLA	<i>Fraxinus latifolia</i>	Oregon ash	Oleaceae	Native	tree	—						x	x				
FRVE2	<i>Fraxinus velutina</i>	Arizona ash	Oleaceae	Native	tree	—		x		x							
OLEA	<i>Olea</i> sp.	Olive	Oleaceae	Non-native	—	—				x							
CACA32	<i>Camissonia (Camissoniopsis) californica (bistorta)</i>	California sun cup	Onagraceae	Native	annual herb	—									x		
CACAC8	<i>Camissonia campestris</i> ssp. <i>campestris</i>	field sun cup	Onagraceae	Native	annual herb	—	x										
CAST20	<i>Camissonia strigulosa</i>	Contorted primrose	Onagraceae	Native	annual herb	—									x		
CLARK	<i>Clarkia</i> sp.	Clarkia	Onagraceae	—	—	—								x	x		
CLUN	<i>Clarkia unguiculata</i>	Elegant clarkia	Onagraceae	Native	annual herb	—									x		
CLXA	<i>Clarkia xantiana</i>	Xantus' clarkia	Onagraceae	Native	annual herb	—								x			
EPCA3	<i>Epilobium canum</i>	Hummingbird trumpet	Onagraceae	Native	perennial herb	—				x			x	x	x		
EPCI	<i>Epilobium ciliatum</i>	Fringed willowherb	Onagraceae	Native	perennial herb	—									x		
CABOD2	<i>Eremothera (Camissonia) boothii</i> ssp. <i>desertorum</i>	Booth's desert primrose	Onagraceae	Native	annual herb	—				x							
CACA32	<i>Eulobus (Camissonia) californicus (californica)</i>	California primrose	Onagraceae	Native	annual herb	—								x	x		
OEDE2	<i>Oenothera deltoides</i>	Desert lantern	Onagraceae	Native	annual herb	—	x										
EPGI	<i>Epipactis gigantea</i>	Stream orchid	Orchidaceae	Native	perennial herb	—		x		x							x
CAEX14	<i>Castilleja exserta</i>	Owl's clover	Orobanchaceae	Native	annual herb	—									x		
CAEXE	<i>Castilleja exserta</i> ssp. <i>exserta</i>	Exserted Indian paintbrush	Orobanchaceae	Native	annual herb	—									x		
CAFO2	<i>Castilleja foliolosa</i>	Texas paintbrush	Orobanchaceae	Native	perennial herb	—				x	x	x		x	x		x
CALI4	<i>Castilleja linariifolia</i>	Desert paintbrush	Orobanchaceae	Native	perennial herb	—				x							
CAMI13	<i>Castilleja minor</i>	Little paintbrush	Orobanchaceae	Native	annual herb	—									x		
OXCA	<i>Oxalis californica</i>	California wood sorrel	Oxalidaceae	Native	perennial herb	—								x			
OXCO	<i>Oxalis corniculata</i>	Creeping woodsorrel	Oxalidaceae	Non-native	perennial herb	—						x		x			
ARMU	<i>Argemone munita</i>	Prickly poppy	Papaveraceae	Native	annual/perennial herb	—							x	x	x		
EHCH	<i>Ehrendorferia chrysantha</i>	Golden eardrops	Papaveraceae	Native	perennial herb	—				x							
ESCA	<i>Eschscholzia caespitosa</i>	Foothill poppy	Papaveraceae	Native	annual herb	—									x		
ESCA2	<i>Eschscholzia californica</i>	California poppy	Papaveraceae	Native	annual/perennial herb	—	x			x					x		
DIAU	<i>Diplacus (Mimulus) aurantiacus</i>	Bush monkey flower	Phrymaceae	Native	shrub	—							x	x	x		

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USDA Species Code	Scientific Name	Common Name	Family	California Nativity	Lifeform	Status	Quail Lake (OC)	Gorman Creek (GC)	Warne Powerplant (WP)	Pyramid Lake (PL)	Warne T-Line (WT)	Castaic Powerplant (CP)	Castaic Creek (CC)	Elderberry Forebay (EF)	Castaic T-Line (CT)	Peace Valley Pipeline (PVP)	PFC Obs
MIBR4	<i>Diplacus (Mimulus) brevipes</i>	Wide throated yellow monkeyflower	Phrymaceae	Native	annual herb	—									x		
MIGU	<i>Erythranthe (Mimulus) guttata (guttatus)</i>	Yellow monkey flower	Phrymaceae	Native	annual/perennial herb (rhizomatous)	—									x		
CEDE2	<i>Cedrus deodara</i>	Deodar cedar	Pinaceae	Non-native	tree	—				x		x					
PIBRE	<i>Pinus brutia</i> var. <i>eldarica</i>	Afghan Pine	Pinaceae	Non-native	tree	—			x	x							
PICA15	<i>Pinus canariensis</i>	Canary Island pine	Pinaceae	Non-native	tree	—		x		x							
PICO3	<i>Pinus coulteri</i>	Coulter pine	Pinaceae	Native	tree	—	x	x		x		x		x			
PIEL6	<i>Pinus eldarica</i>	Afghan Pine	Pinaceae	Non-native	tree	—						x					
PIHA7	<i>Pinus halepensis</i>	Aleppo pine	Pinaceae	Non-native	tree	—						x		x			
PIMO	<i>Pinus monophylla</i>	Single leaf pinyon	Pinaceae	Native	tree	—	x	x		x							
SACO13	<i>Antirrhinum (Sairocarpus) coulterianum (coulterianus)</i>	Coulter snapdragon	Plantaginaceae	Native	annual herb	—									x		
KECO	<i>Keckiella cordifolia</i>	Heart leaved keckiella	Plantaginaceae	Native	shrub	—				x							
KETE	<i>Keckiella ternata</i>	Blue stemmed keckiella	Plantaginaceae	Native	shrub	—					x						
KETES2	<i>Keckiella ternata</i> var. <i>septentrionalis</i>	Northern blue stemmed keckiella	Plantaginaceae	Native	shrub	—					x						
PECE2	<i>Penstemon centranthifolius</i>	Scarlet bugler	Plantaginaceae	Native	perennial herb	—	x	x		x	x				x		x
PEHE3	<i>Penstemon heterophyllus</i>	Bunchleaf penstemon	Plantaginaceae	Native	perennial herb	—				x							x
PLER3	<i>Plantago erecta</i>	Dotseed plantain	Plantaginaceae	Native	annual herb	—				x				x	x		
PLLA	<i>Plantago lanceolata</i>	Narrow leaved plantain	Plantaginaceae	Non-native	perennial herb	Cal-IPC (Limited)						x					
PLMA2	<i>Plantago major</i>	Common plantain	Plantaginaceae	Non-native	perennial herb	—				x				x	x		
PLRA	<i>Platanus racemosa</i>	Western sycamore	Platanaceae	Native	tree	—		x		x		x	x	x	x		x
AGST2	<i>Agrostis stolonifera</i>	Creeping bentgrass	Poaceae	Non-native	perennial grass	Cal-IPC (Limited)								x			
ALCA4	<i>Alopecurus carolinianus</i>	Carolina foxtail	Poaceae	Native	annual grass	—								x			
ARPU9	<i>Aristida purpurea</i>	Purple three awn	Poaceae	Native	perennial grass	—				x							
ARGI	<i>Arundinaria gigantea</i>	Giant cane	Poaceae	Non-native	tree	—						x					
ARDO4	<i>Arundo donax</i>	Giant reed	Poaceae	Non-native	perennial grass	Cal-IPC (High); CDFa-B		x	x	x		x			x		
AVBA	<i>Avena barbata</i>	Slim oat	Poaceae	Non-native	annual/perennial grass	Cal-IPC (Moderate)	x		x	x		x	x	x	x		
AVFA	<i>Avena fatua</i>	Wildoats	Poaceae	Non-native	annual grass	Cal-IPC (Moderate)	x		x	x	x	x		x	x		
BRAR3	<i>Bromus arenarius</i>	Australian brome	Poaceae	Non-native	annual grass	—								x			
BRDI3	<i>Bromus diandrus</i>	Ripgut brome	Poaceae	Non-native	annual grass	Cal-IPC (Moderate)	x	x	x	x		x	x	x	x		x
BRHO2	<i>Bromus hordeaceus</i>	Soft chess	Poaceae	Non-native	annual grass	—	x							x	x	x	x
BRMAM3	<i>Bromus madritensis</i> ssp. <i>madritensis</i>	Foxtail chess	Poaceae	Non-native	annual grass	—	x			x		x		x	x		x
BRMAR	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	Poaceae	Non-native	annual grass	Cal-IPC (High)	x	x	x	x	x			x	x		x
BRTE	<i>Bromus tectorum</i>	Cheat grass	Poaceae	Non-native	annual grass	Cal-IPC (High)	x	x	x	x	x	x		x	x	x	x
COJU2	<i>Cortaderia jubata</i>	Andean pampas grass	Poaceae	Non-native	perennial grass	Cal-IPC (High); CDFa-B		x									
COSE4	<i>Cortaderia selloana</i>	Pampas grass	Poaceae	Non-native	perennial grass	Cal-IPC (High); CDFa-B				x							x

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CYDA	<i>Cynodon dactylon</i>	Bermuda grass	Poaceae	Non-native	perennial grass	Cal-IPC (Moderate)	x	x	x	x		x		x	x		x
DEDA	<i>Deschampsia danthonioides</i>	Annual hairgrass	Poaceae	Native	annual grass	—								x			
DIIS	<i>Digitaria ischaemum</i>	Smooth crab grass	Poaceae	Non-native	annual grass	—		x		x							
DISA	<i>Digitaria sanguinalis</i>	Hairy crab grass	Poaceae	Non-native	annual grass	—		x		x		x					x
DISP	<i>Distichlis spicata</i>	Salt grass	Poaceae	Native	perennial grass	—	x	x		x				x		x	
ECCR	<i>Echinochloa crus-galli</i>	Barnyard grass	Poaceae	Non-native	annual grass	—						x					
LECI4	<i>Elymus (Leymus) cinereus</i>	Great Basin wild rye	Poaceae	Native	perennial grass	—	x	x		x		x	x	x	x		
ELCO4	<i>Elymus condensatus</i>	Giant wild rye	Poaceae	Native	perennial grass	—				x				x	x		
ELEL5	<i>Elymus elymoides</i>	Squirrel tail grass	Poaceae	Native	perennial grass	—	x			x							
ELGL	<i>Elymus glaucus</i>	Blue wild rye	Poaceae	Native	perennial grass	—	x	x		x				x	x		
THIN6	<i>Elymus (Thinopyrum) hispidus (intermedium)</i>	Intermediate wheatgrass	Poaceae	Non-native	perennial grass	—								x			
ELMU3	<i>Elymus multisetus</i>	Big squirreltail grass	Poaceae	Native	perennial grass	—	x										
—	<i>Elymus ponticus</i>	Tall wheat grass	Poaceae	Non-native	perennial grass	—				x			x				
ELRE4	<i>Elymus repens</i>	Quack grass	Poaceae	Non-native	perennial grass	—								x			
ELTR3	<i>Elymus triticoides</i>	Beardless wild rye	Poaceae	Native	perennial grass	—	x	x		x		x		x			
SCAR7	<i>Festuca (Schedonorus) arundinacea (arundinaceus)</i>	Reed fescue	Poaceae	Non-native	perennial grass	Cal-IPC (Moderate)		Los Alamos				x			x		
FECA	<i>Festuca californica</i>	California fescue	Poaceae	Native	perennial grass	—				x							
FEM12	<i>Festuca microstachys</i>	Small fescue	Poaceae	Native	annual grass	—	x										
VUMY	<i>Festuca (Vulpia) myuros</i>	Rattail sixweeks grass	Poaceae	Non-native	annual grass	Cal-IPC (Moderate)	x			x					x		
LOPE	<i>Festuca (Lolium) perennis (perenne)</i>	Italian rye grass	Poaceae	Non-native	annual/perennial grass	Cal-IPC (Moderate)								x			
SCPR4	<i>Festuca (Schedonorus) pratensis</i>	Meadow fescue	Poaceae	Non-native	perennial grass	—				x							
HOJU	<i>Hordeum jubatum</i>	Foxtail barley	Poaceae	Native	perennial grass	—	x	x		x				x			x
HOMUL	<i>Hordeum murinum ssp. leporinum</i>	Hare barley	Poaceae	Non-native	annual grass	—	x	x		x		x		x	x	x	x
HOVU	<i>Hordeum vulgare</i>	Common barley	Poaceae	Non-native	annual grass	—	x										
LAAU	<i>Lamarckia aurea</i>	Goldentop grass	Poaceae	Non-native	annual grass	—				x							
MEIM	<i>Melica imperfecta</i>	Coast range melic	Poaceae	Native	perennial grass	—				x					x		x
MURI2	<i>Muhlenbergia rigens</i>	Deergrass	Poaceae	Native	perennial grass	—				x			x				
NATE3	<i>Nassella (Stipa) tenuissima</i>	Mexican feathergrass	Poaceae	Non-native	perennial grass	—	x										
PAAC5	<i>Panicum acuminatum</i>	Western panicgrass	Poaceae	Native	perennial grass	—								x			
PADI3	<i>Paspalum dilatatum</i>	Dallis grass	Poaceae	Non-native	perennial grass	—								x			
PEPU2	<i>Pennisetum purpureum</i>	Elephant grass	Poaceae	Non-native	perennial grass	—			x								
PESE3	<i>Pennisetum setaceum</i>	Crimson fountaingrass	Poaceae	Non-native	perennial grass	Cal-IPC (Moderate)						x		x			
PHAQ	<i>Phalaris aquatica</i>	Bulbous canarygrass	Poaceae	Non-native	perennial grass	CAL-IPC (Moderate)									x		
PHAU7	<i>Phragmites australis</i>	Common reed	Poaceae	Native	perennial grass	—			x	x							x
POAN	<i>Poa annua</i>	Annual bluegrass	Poaceae	Non-native	annual grass	—			x					x	x		
POPA2	<i>Poa palustris</i>	Fowl blue grass	Poaceae	Non-native	perennial grass	—								x			
POPR	<i>Poa pratensis</i>	Kentucky blue grass	Poaceae	Non-native	perennial grass	Cal-IPC (Limited)		x		x		x			x		
POSE	<i>Poa secunda</i>	Pine bluegrass	Poaceae	Native	perennial grass	—	x			x					x		
POMO5	<i>Polypogon monspeliensis</i>	Annual beard grass	Poaceae	Non-native	annual grass	Cal-IPC (Limited)	x		x	x		x		x	x		x
SCAR	<i>Schismus arabicus</i>	Arabian schismus	Poaceae	Non-native	annual grass	Cal-IPC (Limited)	x	x		x					x		
SCBA	<i>Schismus barbatus</i>	Common mediterranean grass	Poaceae	Non-native	annual grass	Cal-IPC (Limited)	x			x				x	x	x	x
SEVI4	<i>Setaria viridis</i>	Green foxtail	Poaceae	Native	annual grass	—				x							



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SPAI	<i>Sporobolus airoides</i>	Alkali sacaton	Poaceae	Native	perennial grass	—						x					
NACE	<i>Stipa (Nassella) cernua</i>	Nodding needle grass	Poaceae	Native	perennial grass	—							x	x	x		
STCO4	<i>Stipa comata</i>	Needle-and-thread	Poaceae	Native	perennial grass	—									x		
PIMI3	<i>Stipa miliacea</i> var. <i>miliacea</i> ( <i>Piptatherum miliaceum</i> )	Smilo grass	Poaceae	Non-native	perennial grass	Cal-IPC (Limited)				x		x		x	x		x
NAPU4	<i>Stipa (Nassella) pulchra</i>	Purple needle grass	Poaceae	Native	perennial grass	—	x	x						x	x		x
ACSP12	<i>Stipa (Achnatherum) speciosa</i> ( <i>speciosum</i> )	Desert needle grass	Poaceae	Native	perennial grass	—	x		x	x				x			
NALE2	<i>Stipa (Nassella) lepida</i>	Foothill needle grass	Poaceae	Native	perennial grass	—	x							x	x		
ERDI2	<i>Eriastrum diffusum</i>	Miniature eriastrum	Polemoniaceae	Native	annual herb	—									x		
GIACA	<i>Gilia achilleifolia</i> ssp. <i>achilleifolia</i>	California gilia	Polemoniaceae	Native	annual herb	—								x	x		
LELI14	<i>Leptosiphon liniflorus</i>	Narrowflower flax flower	Polemoniaceae	Native	annual herb	—	x										
LEPA51	<i>Leptosiphon parviflorus</i>	Variable linanthus	Polemoniaceae	Native	annual herb	—									x		
PHAU3	<i>Phlox austromontana</i>	Southern mountain phlox	Polemoniaceae	Native	perennial herb	—									x		
CHXAX	<i>Chorizanthe xanti</i> var. <i>xanti</i>	Riverside spineflower	Polygonaceae	Native	annual herb	—	x						x		x		
ERAN3	<i>Eriogonum angulosum</i>	Angle stem buckwheat	Polygonaceae	Native	annual herb	—	x								x		
ERIC5	<i>Eriogonum cinereum</i>	Coastal buckwheat	Polygonaceae	Native	shrub	—	x										x
EREL6	<i>Eriogonum elongatum</i>	Longstem buckwheat	Polygonaceae	Native	perennial herb	—	x		x	x				x	x		
ERFAF2	<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	California buckwheat	Polygonaceae	Native	shrub	—	x	x	x	x	x	x	x	x	x		x
ERGR5	<i>Eriogonum gracile</i>	Slender buckwheat	Polygonaceae	Native	annual herb	—				x		x		x	x		
ERNU3	<i>Eriogonum nudum</i>	Naked buckwheat	Polygonaceae	Native	shrub	—				x					x		
ERRO6	<i>Eriogonum roseum</i>	Wand buckwheat	Polygonaceae	Native	annual herb	—	x										
ERVI5	<i>Eriogonum vimineum</i>	Wicker buckwheat	Polygonaceae	Native	annual herb	—	x	x		x							x
POHY2	<i>Persicaria (Polygonum) hydropiperoides</i>	Water pepper	Polygonaceae	Native	perennial herb	—								x			
POLA4	<i>Persicaria (Polygonum) lapathifolia</i> ( <i>lapathifolium</i> )	Common knotweed	Polygonaceae	Native	annual herb	—						x					
POPE3	<i>Persicaria (Polygonum) maculosa</i> ( <i>persicaria</i> )	Spotted ladythumb	Polygonaceae	Non-native	annual herb	—								x			
POAV	<i>Polygonum aviculare</i>	Prostrate knotweed	Polygonaceae	Non-native	annual/perennial herb	—								x	x		
POLYG4	<i>Polygonum</i> sp.	—	Polygonaceae	—	—	—				x							
RUCO2	<i>Rumex conglomeratus</i>	Clustered dock	Polygonaceae	Non-native	perennial herb	—								x			
RUCR	<i>Rumex crispus</i>	Curly dock	Polygonaceae	Non-native	perennial herb	Cal-IPC (Limited)	x	x		x				x			x
RUSA	<i>Rumex salicifolius</i>	Willow dock	Polygonaceae	Native	perennial herb	—	x							x			
RUST4	<i>Rumex stenophyllus</i>	Narrowleaf dock	Polygonaceae	Non-native	perennial herb	—				x				x			
—	<i>Calandrinia menziesii</i>	Red maids	Montiaceae	Native	annual herb	—								x	x		
—	<i>Primula clevelandii</i> var. <i>clevelandii</i>	Cleveland's shooting star	Primulaceae	Native	perennial herb	—								x	x		
PEAN2	<i>Pellaea andromedifolia</i>	Coffee fern	Pteridaceae	Native	fern	—								x	x		
PEMU	<i>Pellaea mucronata</i>	Bird's foot fern	Pteridaceae	Native	fern	—								x			
PETR7	<i>Pentagramma triangularis</i>	Gold back fern	Pteridaceae	Native	fern	—									x		
DEPAP5	<i>Delphinium parryi</i> ssp. <i>parryi</i>	Parry's larkspur	Ranunculaceae	Native	perennial herb	—									x		
DEPAP6	<i>Delphinium parryi</i> ( <i>parishii</i> ) ssp. <i>purpureum</i>	Mt. Pinos larkspur	Ranunculaceae	Native	perennial herb	CNPS 4.3											
DELPH	<i>Delphinium</i> sp.	—	Ranunculaceae	—	—	—	x								x		
RANUN	<i>Ranunculus</i> sp.	—	Ranunculaceae	—	—	—									x		
CECRP	<i>Ceanothus crassifolius</i> var. <i>planus</i>	Hoary leaved ceanothus	Rhamnaceae	Native	shrub	—		x		x		x		x	x		
CECU	<i>Ceanothus cuneatus</i>	Buck brush	Rhamnaceae	Native	shrub	—				x	x				x		
FRCAC5	<i>Fragula californica</i> ssp. <i>californica</i>	California coffeeberry	Rhamnaceae	Native	shrub	—	x										

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ADFA	<i>Adenostoma fasciculatum</i>	Chamise	Rosaceae	Native	shrub	—	x	x		x	x	x	x	x	x		x
CEBE3	<i>Cercocarpus betuloides</i>	Birch leaf mountain mahogany	Rosaceae	Native	tree/shrub	—	x			x	x				x		x
HEAR5	<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae	Native	shrub	—	x	x	x	x		x		x	x		
PRCE2	<i>Prunus cerasifera</i>	Cherry plum	Rosaceae	Non-native	tree	Cal-IPC (Limited)						x					
PRDU	<i>Prunus dulcis</i>	Domestic almond	Rosaceae	Non-native	tree	—								x			
PRIL	<i>Prunus ilicifolia</i>	Holly leaf cherry	Rosaceae	Native	tree/shrub	—	x			x		x		x	x		x
PRUNU	<i>Prunus</i> sp. (cultivar)	—	Rosaceae	—	—	—	x			x							
PYAN	<i>Pyracantha angustifolia</i>	Narrowleaf firethorn	Rosaceae	Non-native	shrub	Cal-IPC (Limited)				x		x		x			
PYCA80	<i>Pyrus calleryana</i>	Callery pear	Rosaceae	Non-native	tree	—				x							
ROCA2	<i>Rosa californica</i>	California wildrose	Rosaceae	Native	shrub	—		x		x							x
RUAR9	<i>Rubus discolor (armeniacus)</i>	Himalayan blackberry	Rosaceae	Non-native	shrub	Cal-IPC (High)		x									x
GAANA	<i>Galium andrewsii ssp. andrewsii</i>	Andrew's bedstraw	Rubiaceae	Native	perennial herb	—				x		x			x		
GAAN2	<i>Galium angustifolium</i>	Narrow leaved bedstraw	Rubiaceae	Native	perennial herb	—								x	x		
GAANA2	<i>Galium angustifolium ssp. angustifolium</i>	Narrow leaved bedstraw	Rubiaceae	Native	perennial herb	—								x			
GAANN	<i>Galium angustifolium ssp. nudicaule</i>	Naked stem bedstraw	Rubiaceae	Native	perennial herb	—									x		
GAPA5	<i>Galium parisiense</i>	Wall bedstraw	Rubiaceae	Non-native	annual herb	—								x			
GATR2	<i>Galium trifidum</i>	Three petaled bedstraw	Rubiaceae	Native	perennial herb	—								x			
POFRF3	<i>Populus fremontii ssp. fremontii</i>	Fremont cottonwood	Salicaceae	Native	tree	—	x	x	x	x		x	x	x	x	x	x
SAEX	<i>Salix exigua</i>	Narrowleaf willow	Salicaceae	Native	tree/shrub	—	x	x	x	x		x	x	x	x		x
SAGO	<i>Salix gooddingii</i>	Goodding's black willow	Salicaceae	Native	tree	—	x	x	x	x				x			x
SALA3	<i>Salix laevigata</i>	Polished willow	Salicaceae	Native	tree	—	x	x		x		x	x	x			
SALA5	<i>Salix lasiandra</i>	Pacific willow	Salicaceae	Native	tree	—			x	x					x		
SALA6	<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae	Native	tree/shrub	—	x	x		x		x		x	x		x
ACMA3	<i>Acer macrophyllum</i>	Bigleaf maple	Sapindaceae	Native	tree	—		x		x							
ANCA10	<i>Anemopsis californica</i>	yerba mansa	Saururaceae	Native	perennial herb	—	x	x	x	x							x
VEBL	<i>Verbascum blattaria</i>	Moth mullein	Scrophulariaceae	Non-native	perennial herb	—									x		
VETH	<i>Verbascum thapsus</i>	Woolly mullein	Scrophulariaceae	Non-native	perennial herb	Cal-IPC (Limited)				x		x					
SCCA2	<i>Scrophularia californica</i>	California bee plant	Scrophulariaceae	Native	perennial herb	—	x	x									
CAEXE	<i>Castilleja exserta ssp. exserta</i>	Exserted Indian paintbrush	Orobanchaceae	Native	annual herb	—								x	x		
VEAN2	<i>Veronica anagallis-aquatica</i>	Water speedwell	Plantaginaceae	Non-native	perennial herb	—		x						x	x		
VEPEX2	<i>Veronica peregrina ssp. xalapensis</i>	Neckweed	Plantaginaceae	Native	annual herb	—				x							
SEBI	<i>Selaginella bigelovii</i>	Bigelow's moss fern	Selaginellaceae	Native	fern (mosslike)	—									x		
AIAL	<i>Ailanthus altissima</i>	Tree of heaven	Simaroubaceae	Non-native	tree	Cal-IPC (Moderate); CDFR-C		x				x					x
DAST	<i>Datura stramonium</i>	Jimsonweed	Solanaceae	Native	annual herb	—	x			x				x	x		x
DAWR2	<i>Datura wrightii</i>	Sacred thorn apple	Solanaceae	Native	perennial herb	—	x	x		x		x	x	x	x	x	x
LYES	<i>Lycopersicon esculentum</i>	Tomato	Solanaceae	Non-native	annual/perennial herb	—								x			
SODO	<i>Solanum douglasii</i>	Douglas' nightshade	Solanaceae	Native	perennial herb	—									x		
SOEL	<i>Solanum elaeagnifolium</i>	Horse nettle	Solanaceae	Non-native	perennial herb	—				x		x		x	x		
SONI	<i>Solanum nigrum</i>	Black nightshade	Solanaceae	Non-native	annual herb	—								x	x		

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SOPA	<i>Solanum parishii</i>	Parish's nightshade	Solanaceae	Native	shrub	—								x			
SOXA	<i>Solanum xanti</i>	Chaparral nightshade	Solanaceae	Native	perennial herb/shrub	—	x			x				x	x		x
TARA	<i>Tamarix ramosissima</i>	Saltcedar	Tamaricaceae	Non-native	tree/shrub	Cal-IPC (High); CDFA-B	x	x	x	x		x	x	x	x		x
BLCRC	<i>Bloomeria crocea</i> var. <i>crocea</i>	Common goldenstar	Themidaceae	Native	perennial herb	—	x							x	x		
DICA14	<i>Dichelostemma capitatum</i>	Blue dicks	Themidaceae	Native	perennial herb	—	x			x		x		x	x		x
DICO19	<i>Dichelostemma congestum</i>	Ookow	Themidaceae	Native	perennial herb	—									x		
TYGL	<i>Typha</i> × <i>glauca</i>	—	Typhaceae	Native	perennial herb (aquatic)	—				x							
TYAN	<i>Typha angustifolia</i>	Narrow leaf cattail	Typhaceae	Non-native	perennial herb (aquatic)	—		x	x	x		x					
TYDO	<i>Typha domingensis</i>	Southern Cattail	Typhaceae	Native	perennial herb	—				x				x			
TYLA	<i>Typha latifolia</i>	Broadleaf cattail	Typhaceae	Native	perennial herb (aquatic)	—	x	x	x	x				x			x

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ULAM	<i>Ulmus americana</i>	American elm	Ulmaceae	Non-native	tree	—	x										x
ULPU	<i>Ulmus pumila</i>	Siberian elm	Ulmaceae	Non-native	tree	—			x	x							
URDI	<i>Urtica dioica</i>	Stinging nettle	Urticaceae	Native	perennial herb	—	x	x		x							x
VELAL2	<i>Verbena lasiostachys</i> var. <i>lasiostachys</i>	Western vervain	Verbenaceae	Native	perennial herb	—						x					
PHJU	<i>Phoradendron juniperinum</i>	Juniper mistletoe	Viscaceae	Native	shrub (parasitic)	—				x							
PHMAM2	<i>Phoradendron leucarpum</i> ( <i>macrophyllum</i> ) ssp. <i>macrophyllum</i>	Big leaf mistletoe	Viscaceae	Native	shrub (parasitic)	—	x	x		x							
TRTE	<i>Tribulus terrestris</i>	Puncture vine	Zygophyllaceae	Non-native	annual herb	Cal-IPC (Limited); CDFCA-C		x									
<b>Status Ranks and Definitions</b>																	
<b>Cal-IPC Ratings</b>																	
Limited	These species are invasive but their ecological impacts are minor on a Statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.		Moderate	These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.			High	These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.									
<b>CDFCA Ratings</b>																	
A	An organism of known economic importance subject to state (or commissioner when acting as a state agent) enforced action involving: eradication, quarantine regulation, containment, rejection, or other holding action.		B	An organism of known economic importance subject to: eradication, containment, control or other holding action at the discretion of the individual county agricultural commissioner. OR An organism of known economic importance subject to state endorsed holding action and eradication only when found in a nursery.			C	An organism subject to no state enforced action outside of nurseries except to retard spread. At the discretion of the county agricultural commissioner. OR An organism subject to no state enforced action except to provide for pest cleanliness in nurseries.									
<b>CNPS Plant Ranks</b>																	
1B	Plants rare, threatened, or endangered in California and elsewhere																
4	Watch List: Plants of limited distribution																
<b>CNPS Threat Ranks</b>																	
0.2	Moderately threatened in California (20-80 percent occurrences threatened / moderate degree and immediacy of threat)																
0.3	Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat)																
<b>Location Notes</b>																	
Pyramid Lake includes Pyramid Dam and Piru Creek species																	
Gorman Creek includes Los Alamos Campground; overflow from EF species to CC species																	

## **Appendix L**

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### ***Incidental Wildlife Observations***

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## Quail Lake

Species	Observation Type
Cinnamon Teal ( <i>Spatula cyanoptera</i> )	Visual
Mallard ( <i>Anas platyrhynchos</i> )	Visual
Lesser Scaup ( <i>Aythya affinis</i> )	Visual
Bufflehead ( <i>Bucephala albeola</i> )	Visual
Common Merganser ( <i>Mergus merganser</i> )	Visual
California Quail ( <i>Callipepla californica</i> )	Visual
Pied-billed Grebe ( <i>Podilymbus podiceps</i> )	Visual
Sora ( <i>Porzana carolina</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Killdeer ( <i>Charadrius vociferus</i> )	Visual
Wilson's Snipe ( <i>Gallinago delicata</i> )	Visual
Double-crested Cormorant ( <i>Phalacrocorax auritus</i> )	Visual
Great Egret ( <i>Ardea alba</i> )	Visual
Black-crowned Night-Heron ( <i>Nycticorax nycticorax</i> )	Visual
Turkey Vulture ( <i>Cathartes aura</i> )	Visual
Northern Harrier ( <i>Circus hudsonius</i> )	Visual
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Visual
Downy Woodpecker ( <i>Dryobates pubescens</i> )	Visual
Northern Flicker ( <i>Colaptes auratus</i> )	Visual
Black Phoebe ( <i>Sayornis nigricans</i> )	Visual
Western Kingbird ( <i>Tyrannus verticalis</i> )	Visual
Common Raven ( <i>Corvus corax</i> )	Visual
California Thrasher ( <i>Toxostoma redivivum</i> )	Visual
Chipping Sparrow ( <i>Spizella passerina</i> )	Visual
Lark Sparrow ( <i>Chondestes grammacus</i> )	Visual
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Visual
Song Sparrow ( <i>Melospiza melodia</i> )	Visual
Spotted Towhee ( <i>Pipilo maculatus</i> )	Visual
Western Meadowlark ( <i>Sturnella neglecta</i> )	Visual
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Visual
Brewer's Blackbird ( <i>Euphagus cyanocephalus</i> )	Visual
Great-tailed Grackle ( <i>Quiscalus mexicanus</i> )	Visual
Common Yellowthroat ( <i>Geothlypis trichas</i> )	Visual
Yellow-rumped Warbler ( <i>Setophaga coronata</i> )	Visual
Desert cottontail ( <i>Sylvilagus audubonii</i> )	Visual
Coyote ( <i>Canis latrans</i> )	Sign
Grey fox ( <i>Urocyon cinereoargenteus</i> )	Sign
Dusky-footed woodrat ( <i>Neotoma fuscipes</i> )	Sign
California ground squirrel ( <i>Otospermophilus beecheyi</i> )	Visual
Western fence lizard ( <i>Sceloporus occidentalis</i> )	Visual
Desert spiny lizard ( <i>Sceloporus magister</i> )	Visual

## Lower Quail Canal

Species	Observation Type
Lesser Scaup ( <i>Aythya affinis</i> )	Visual
Bufflehead ( <i>Bucephala albeola</i> )	Visual
Ruddy Duck ( <i>Oxyura jamaicensis</i> )	Visual
California Quail ( <i>Callipepla californica</i> )	Visual
Pied-billed Grebe ( <i>Podilymbus podiceps</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Killdeer ( <i>Charadrius vociferus</i> )	Visual
Double-crested Cormorant ( <i>Phalacrocorax auritus</i> )	Visual
Turkey Vulture ( <i>Cathartes aura</i> )	Visual
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Visual
American Kestrel ( <i>Falco sparverius</i> )	Visual
Black Phoebe ( <i>Sayornis nigricans</i> )	Visual
Western Kingbird ( <i>Tyrannus verticalis</i> )	Visual
Common Raven ( <i>Corvus corax</i> )	Visual
Northern Rough-winged Swallow ( <i>Stelgidopteryx serripennis</i> )	Visual
Tree Swallow ( <i>Tachycineta bicolor</i> )	Visual
Violet-green Swallow ( <i>Tachycineta thalassina</i> )	Visual
Barn Swallow ( <i>Hirundo rustica</i> )	Visual
Cliff Swallow ( <i>Petrochelidon pyrrhonota</i> )	Visual
Rock Wren ( <i>Salpinctes obsoletus</i> )	Visual
Bewick's Wren ( <i>Thryomanes bewickii</i> )	Visual
Blue-gray Gnatcatcher ( <i>Polioptila caerulea</i> )	Visual
Northern Mockingbird ( <i>Mimus polyglottos</i> )	Visual
House Finch ( <i>Haemorhous mexicanus</i> )	Visual
Lesser Goldfinch ( <i>Spinus psaltria</i> )	Visual
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Visual
California Towhee ( <i>Melospiza crissalis</i> )	Visual
Western Meadowlark ( <i>Sturnella neglecta</i> )	Visual
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Visual



## Peace Valley Pipeline

Species	Observation Type
California Scrub Jay ( <i>Aphelocoma californica</i> )	Visual

## Gorman Bypass

Species	Observation Type
California Quail ( <i>Callipepla californica</i> )	Visual
Greater Roadrunner ( <i>Geococcyx californianus</i> )	Visual
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Visual
Barn Owl ( <i>Tyto alba</i> )	Sign
Black Phoebe ( <i>Sayornis nigricans</i> )	Visual
Common Raven ( <i>Corvus corax</i> )	Visual
Mountain Chickadee ( <i>Poecile gambeli</i> )	Visual
Western Bluebird ( <i>Sialia mexicana</i> )	Visual
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Visual
Brewer's Blackbird ( <i>Euphagus cyanocephalus</i> )	Visual
California ground squirrel ( <i>Otospermophilus beecheyi</i> )	Visual
Side-blotched lizard ( <i>Uta stansburiana</i> )	Visual
Western fence lizard ( <i>Sceloporus occidentalis</i> )	Visual
Pacific tree frog ( <i>Pseudacris regilla</i> )	Audio

## Warne Powerplant

Species	Observation Type
Blue-winged Teal ( <i>Spatula discors</i> )	Visual
Cinnamon Teal ( <i>Spatula cyanoptera</i> )	Visual
Hooded Merganser ( <i>Lophodytes cucullatus</i> )	Visual
Ruddy Duck ( <i>Oxyura jamaicensis</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Double-crested Cormorant ( <i>Phalacrocorax auritus</i> )	Visual
California Scrub-Jay ( <i>Aphelocoma californica</i> )	Visual
Common Raven ( <i>Corvus corax</i> )	Visual
California Thrasher ( <i>Toxostoma redivivum</i> )	Visual
Mule deer ( <i>Odocoileus hemionus</i> )	Sign
Desert cottontail ( <i>Sylvilagus audubonii</i> )	Visual
Coast horned lizard ( <i>Phrynosoma coronatum</i> )	Visual
Side-blotched lizard ( <i>Uta stansburiana</i> )	Visual
Western fence lizard ( <i>Sceloporus occidentalis</i> )	Visual

## Pyramid Lake

Species	Observation Type
Mallard ( <i>Anas platyrhynchos</i> )	Visual
Greater Scaup ( <i>Aythya marila</i> )	Visual
Bufflehead ( <i>Bucephala albeola</i> )	Visual
Hooded Merganser ( <i>Lophodytes cucullatus</i> )	Visual
Sora ( <i>Porzana carolina</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Double-crested Cormorant ( <i>Phalacrocorax auritus</i> )	Visual
Great Blue Heron ( <i>Ardea herodias</i> )	Visual
Great Egret ( <i>Ardea alba</i> )	Visual
Turkey Vulture ( <i>Cathartes aura</i> )	Visual
Osprey ( <i>Pandion haliaetus</i> )	Visual
Belted Kingfisher ( <i>Megaceryle alcyon</i> )	Visual
Steller's Jay ( <i>Cyanocitta stelleri</i> )	Visual
Common Raven ( <i>Corvus corax</i> )	Visual
White-breasted Nuthatch ( <i>Sitta carolinensis</i> )	Visual
California Thrasher ( <i>Toxostoma redivivum</i> )	Visual
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Visual
Great-tailed Grackle ( <i>Quiscalus mexicanus</i> )	Visual
Common Yellowthroat ( <i>Geothlypis trichas</i> )	Visual
Yellow-rumped Warbler ( <i>Setophaga coronata</i> )	Visual
California ground squirrel ( <i>Otospermophilus beecheyi</i> )	Visual
Mule deer ( <i>Odocoileus hemionus</i> )	Sign
North American raccoon ( <i>Procyon lotor</i> )	Visual
Western fence lizard ( <i>Sceloporus occidentalis</i> )	Visual
Coast horned lizard ( <i>Phrynosoma coronatum</i> )	Visual
Western rattlesnake ( <i>Crotalus oreganus</i> )	Audio
Gopher snake ( <i>Pituophis catenifer</i> )	Visual

## Castaic Powerplant

Species	Observation Type
Hooded Merganser ( <i>Lophodytes cucullatus</i> )	Visual
Anna's Hummingbird ( <i>Calypte anna</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Killdeer ( <i>Charadrius vociferus</i> )	Visual
Great Egret ( <i>Ardea alba</i> )	Visual
Cattle Egret ( <i>Bubulcus ibis</i> )	Visual
Horned Lark ( <i>Eremophila alpestris</i> )	Visual
Blue-gray Gnatcatcher ( <i>Polioptila caerulea</i> )	Visual

## Elderberry Forebay

Species	Observation Type
Mallard ( <i>Anas platyrhynchos</i> )	Visual
Ruddy Duck ( <i>Oxyura jamaicensis</i> )	Visual
California Quail ( <i>Callipepla californica</i> )	Visual
Lesser Nighthawk ( <i>Chordeiles acutipennis</i> )	Visual
American Coot ( <i>Fulica americana</i> )	Visual
Great Blue Heron ( <i>Ardea herodias</i> )	Visual
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Visual
Bewick's Wren ( <i>Thryomanes bewickii</i> )	Visual
Lark Sparrow ( <i>Chondestes grammacus</i> )	Visual
California Towhee ( <i>Melospiza crissalis</i> )	Visual
Red-winged Blackbird ( <i>Agelaius phoeniceus</i> )	Visual
Mule deer ( <i>Odocoileus hemionus</i> )	Sign
Western fence lizard ( <i>Sceloporus occidentalis</i> )	Visual
Side-blotched lizard ( <i>Uta stansburiana</i> )	Visual
Western rattlesnake ( <i>Crotalus oreganus</i> )	Audio

## Castaic Transmission Line

Species	Observation Type
California condor ( <i>Gymnogyps californianus</i> )	Visual
California Quail ( <i>Callipepla californica</i> )	Visual
Mourning Dove ( <i>Zenaida macroura</i> )	Visual
Great Blue Heron ( <i>Ardea herodias</i> )	Visual
Turkey Vulture ( <i>Cathartes aura</i> )	Visual
Cooper's Hawk ( <i>Accipiter cooperii</i> )	Visual
Red-tailed Hawk ( <i>Buteo jamaicensis</i> )	Visual
American Kestrel ( <i>Falco sparverius</i> )	Visual
Western Kingbird ( <i>Tyrannus verticalis</i> )	Visual
Bushtit ( <i>Psaltriparus minimus</i> )	Visual
Bewick's Wren ( <i>Thryomanes bewickii</i> )	Visual
Blue-gray Gnatcatcher ( <i>Polioptila caerulea</i> )	Visual
Wrentit ( <i>Chamaea fasciata</i> )	Visual
Northern Mockingbird ( <i>Mimus polyglottos</i> )	Visual
Phainopepla ( <i>Phainopepla nitens</i> )	Visual
Lark Sparrow ( <i>Chondestes grammacus</i> )	Visual
White-crowned Sparrow ( <i>Zonotrichia leucophrys</i> )	Visual
Song Sparrow ( <i>Melospiza melodia</i> )	Visual
California Towhee ( <i>Melospiza crissalis</i> )	Visual
Spotted Towhee ( <i>Pipilo maculatus</i> )	Visual

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## **Appendix M**

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### ***Movement Photo Log***

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SPECIAL-STATUS TERRESTRIAL SPECIES - CWHR MOVEMENT STUDY PHOTO LOG




Photo Number	Photo Description	Photo
1	Below Lower Quail Lake Canal	
2	Lower Quail Lake Canal	
3	Transmission Lines Over Lower Quail Lake Canal	










Photo Number	Photo Description	Photo
4	Culvert Under Quail Lake Canal - 4 FT Clearance	
5	Transmission Lines Over Lower Quail Lake Canal	
6	Culvert Under Quail Lake Canal	

Photo Number	Photo Description	Photo
7	Fencing Around South End of Quail Lake Canal	
8	Fence Around Top of Penstocks - Elderberry Forebay	
9	Fence South of Penstocks - Elderberry Forebay	

NOTE: PHOTOS 10-13 WERE REMOVED FROM PHOTOLOG DUE TO PERMISSIONS

Photo Number	Photo Description	Photo
14	Drainage Ditch Under Penstocks - Elderberry Forebay	 A photograph showing a drainage ditch located under penstocks. The ditch is filled with water, and the surrounding area is overgrown with tall grasses and weeds. The penstocks are visible as large, dark, curved structures above the ditch.
15	Drainage Ditch Under Penstocks - Elderberry Forebay	 A photograph showing a drainage ditch under penstocks. The ditch is filled with water, and the surrounding area is overgrown with tall grasses and weeds. The penstocks are visible as large, dark, curved structures above the ditch.
16	Drainage Ditch Under Penstocks - Elderberry Forebay	 A photograph showing a drainage ditch under penstocks. The ditch is filled with water, and the surrounding area is overgrown with tall grasses and weeds. The penstocks are visible as large, dark, curved structures above the ditch.

**Appendix N**

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***CWHR Species Summary Table***

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Appendix N - CWHR Species Summary Table

Scientific Name	Common Name	USFWS	CDFW	BLM	USFS	Habitat Characteristics	Potential	Rationale	Citation
<b>Invertebrates</b>									
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	FE	-	-	-	Vernal pools, often large and turbid pools (USFWS 2005).	N	Suitable habitat not present. No vernal pools known to occur in study area. Nearest known population in Ventura County approximately 10 miles west of study area (CDFW 2018a).	United States Fish and Wildlife Service (USFWS). 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. United States Fish and Wildlife Service. Portland, OR. California Department of Fish and Wildlife (CDFW). 2018a. California Department of Fish and Wildlife California Natural Diversity Database
<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. No vernal pools known to occur in study area. See Section 5.4.3 for more information.	United States Fish and Wildlife Service (USFWS). 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. United States Fish and Wildlife Service. Portland, OR.
<i>Danaus plexippus pop. 1</i>	monarch (California overwintering population)	-	-	-	FSS	Typically overwinter in groves of eucalyptus ( <i>Eucalyptus</i> spp.), Monterey pine ( <i>Pinus radiata</i> ), or Monterey cypress ( <i>Hesperocyparis macrocarpa</i> ) along the California coast (IELP 2012).	N	Sensitive species in Los Padres NF; however, only known to overwinter in coastal areas (LP Forest Watch 2013)	International Environmental Law Project (IELP). 2012. Report on Monarch Legal Status. Available online: < <a href="http://www.xerces.org/wp-content/uploads/2008/09/legal-status-of-california-monarchs.pdf">http://www.xerces.org/wp-content/uploads/2008/09/legal-status-of-california-monarchs.pdf</a> >. Accessed November 19, 2018. Last updated 2012. International Environmental Law Project. Portland, OR. Los Padres Forest Watch (LP Forest Watch). 2013. Yellow-Blotched Salamander. Available online: <a href="https://lpfw.org/our-region/wildlife/yellow-blotched-salamander/Species%20Accounts">https://lpfw.org/our-region/wildlife/yellow-blotched-salamander/Species Accounts</a> . Accessed November 12, 2018. Last updated 2013. Los Padres ForestWatch. Santa Barbara, CA.
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE	-	-	-	Known to be associated with chaparral, cismontane woodlands, sage scrub, and various grasslands. Larval host plants include California plantain ( <i>Plantago erecta</i> ), woolly plantain ( <i>Plantago patagonica</i> ), southern Chinese houses ( <i>Collinsia bicolor</i> ), purple owls clover ( <i>Castilleja exserta</i> ), Coulter's snapdragon ( <i>Antirrhinum coulterianum</i> ), and dark-tipped bird's beak ( <i>Cordylanthus rigidus</i> ). The current range for Quino includes multiple areas in southern Riverside County, south into Mexico. (USFWS 2003).	N	Study area outside species range (USFWS 2009).	USFWS. 2003. Quino Checkerspot Butterfly ( <i>Euphydryas editha quino</i> ) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office. Carlsbad, CA.
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains blue butterfly	-	-	-	FSS	Considered extinct. Historically lived in wet meadows of the San Gabriel mountains of southern California (Suckling et al 2004).	N	Species considered extinct. Study area outside species range.	Suckling, K., et. al. 2004. Extinction and the Endangered Species Act. Available online: < <a href="https://www.biologicaldiversity.org/publications/papers/ExtinctAndESA.pdf">https://www.biologicaldiversity.org/publications/papers/ExtinctAndESA.pdf</a> >. Accessed November 19, 2018. Last updated May 1, 2004. Center for Biological Diversity. Tucson, AZ.
<i>Plebulina emigdonis</i>	San Emigdio blue butterfly	-	-	-	FSS	San Emigdio blue butterfly is a neotrove that is known to reside in the host plant fourwing saltbush ( <i>Atriplex canescens</i> ). The species typically prefers riparian areas, as well as dry river courses and intermittent stream sides and surrounds flat lands with adults emerging from April to September (NatureServe 2018).	Y	Suitable habitat present. Species hostplant, fourwing saltbush, commonly found in study area.	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018.
<b>Amphibians</b>									
<i>Anaxyrus californicus</i>	arroyo toad	FE	SSC	-	-	Breeding habitat = slow moving streams with shallow pools, nearby sandbars and adjacent stream terraces. Often breed in shallow, sandy pools bordered by sand/gravel flood terraces. Inhabit upland habitats when not breeding, such as sycamore-cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral and grassland (USFWS 2009).	Y	Suitable habitat present. Known to occur in study area. See Section 5.4.3 for more information.	USFWS. 2009. Arroyo Toad ( <i>Bufo californicus</i> (=microscaphus)) 5-Year Review: Summary and Evaluation. USFWS; Ventura, CA.
<i>Batrachoseps gabrieli</i>	San Gabriel Mountains slender salamander	-	-	-	FSS	Known from select localities in the San Gabriel Mountains and the Mt. Baldy area of Los Angeles County and the western end of the San Bernardino Mountains in San Bernardino County, with an elevation range of 1,200 - 5,085 feet amsl. Occurs on talus slopes surrounded by a variety of conifer and montane hardwood species (CDFW 2018b).	N	Study area outside species range (Nafis 2018).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition), CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a> Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Batrachoseps incognitus</i>	San Simeon slender salamander	-	-	-	FSS	Inhabits open and closed forests of yellow pine, laurel, sycamore, and oak woodland. Found only in the Santa Lucia Mountains in northwestern San Luis Obispo County and extreme southwestern Monterey County, where the mountains meet the ocean. From sea level to near 3,280 feet amsl (Nafis 2018).	N	Study area outside species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Batrachoseps minor</i>	lesser slender salamander	-	SSC	-	FSS	Palustrine habitats include riparian zones while terrestrial habitats include hardwood forests. Species is known to prefer deeply shaded slopes with abundant leaf litter in wooded canyons. Individuals known to burrow in soil or fallen debris (NatureServe 2018).	N	Study area outside species range (Nafis 2018).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018. Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Batrachoseps stebbinsi</i>	Tehachapi slender salamander	-	ST	BLMS	-	Inhabits north-facing moist canyons and ravines in oak and mixed woodlands in arid to semi-arid locations. Found under rocks, logs, bark, and other debris in moist areas, especially in areas with a lot of leaf-litter, often near talus slopes. Found in scattered populations in the Caliente Creek drainage at the juncture of the Sierra Nevada and the Tehachapi Mountains, and in isolated canyons on the northern slopes of the Tehachapi Mountains from Tejon Canyon to Fort Tejon. Occurs at elevations of 2,000 - 4,600 feet amsl (Nafis 2018).	N	Study area outside accepted range for this species. No known occurrences south of Tejon Ranch, this species occurs on the northern slopes of Tehachapi Range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Ensatina eschscholtzii croceater</i>	yellow-blotched salamander	-	-	BLMS	FSS	Palustrine habitats include riparian zones while terrestrial habitats include hardwood forests. Species is known to prefer shaded slopes with abundant leaf litter, rock, logs, debris to take cover in/under. Individuals known in abundance in areas with large volumns of woody debris (NatureServe 2018).	N	Suitable habitat present. Study area adjacent to species range (Nafis 2018). However, proposed Project boundary is well below species elevation range.	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018. Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Rana boylei</i>	foothill yellow-legged frog	-	SCT, SSC	BLMS	FSS	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. From sea level to 6,700 feet amsl. Occurs in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles County, in most of northern California west of the Cascade crest, and along the western flank of the Sierra south to Kern County (Nafis 2018).	Y	Suitable habitat present and historical CNDDDB occurrences in study area; however, surveys were negative for this species. See Section 5.3 for more information.	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Rana draytonii</i>	California red-legged frog	FT	SSC	-	-	Ponds/streams in humid forests, woodlands, grasslands, coastal scrub, and streambanks with plant cover in lowlands or foothills. Breeding habitat includes 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 feet amsl (Nafis 2018).	Y	Suitable habitat present, may occur in study area. See Section 5.4.3 for more information.	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Rana muscosa</i>	southern mountain yellow-legged frog	FE	SE	-	-	Lakes, ponds, meadow streams, isolated pools, sunny riverbanks in the southern Sierra Nevada Mountains. Rocky streams in narrow canyons and in the chaparral belt in the mountains of southern California. From 984 feet to above 12,000 feet amsl (Nafis 2018). All known extant populations of the listed entity occur within the San Bernardino and Angeles National Forests (USFWS 2012).	N	All known extant populations of the listed entity occur within the San Bernardino and Angeles National Forests (USFWS 2012). However, study area is outside species range (Nafis 2018, USFWS 2012).	USFWS. 2012. Mountain Yellow-Legged Frog ( <i>Rnanamuscosa</i> ), Southern California Distinct Population Segment 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office. Carlsbad, CA.
<i>Spea hammondi</i>	western spadefoot	-	SSC	BLMS	-	Open areas with sandy/gravelly soils. Variable habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding (Nafis 2018).	Y	Suitable habitat present. May occur in study area. See Section 5.3 for more information.	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Taricha torosa</i>	coast range newt	-	SSC	-	-	Found in wet forests, oak forests, chaparral and rolling grasslands. In southern California, drier chaparral, oak woodland and grassland are used. Found along the coast and coast range mountains from Mendocino county south to San Diego county (Nafis 2018).	N	Study area outside accepted range for this species. Does occur in southern portions of Los Angeles County; however, not known from northern half of the county where the study area is located (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<b>Reptiles</b>									
<i>Anniella pulchra</i>	Northern California legless lizard	-	SSC	-	FSS	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodland, desert scrub, sandy washes, and stream terraces from sea level to around 5,900 feet amsl (Nafis 2018).	Y	Suitable habitat present. Range map for legless lizards shows northern Los Angeles as an area where <i>Anniella</i> are present, but the species has not yet been determined (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>

Appendix N - CWHR Species Summary Table

Scientific Name	Common Name	USFWS	CDFW	BLM	USFS	Habitat Characteristics	Potential	Rationale	Citation
<i>Anniella stebbinsi</i>	Southern California legless lizard	-	SSC	-	-	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodland, desert scrub, sandy washes, and stream terraces from sea level to around 5,900 feet amsl (Nafis 2018).	Y	Suitable habitat present. Range map for legless lizards shows northern Los Angeles as an area where <i>Anniella</i> are present, but the species has not yet been determined (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Arizona elegans occidentalis</i>	California glossy snake	-	SSC	-	-	Mainly a nocturnal species, individuals spend time during the day in burrows and rock outcrops. Requires loose soil for egg laying near vegetation bases and/or mammal burrows. Known to prefer areas with scattered brush and rock outcrops (CDFW 2018b).	Y	Suitable habitat present. Three CNDDB occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	-	SSC	-	-	This subspecies is found in coastal Southern California, mostly west of the Peninsular Ranges and south of the Transverse Ranges, and north into Ventura County. Ranges south into Baja California. Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas. (Nafis 2018).	Y	Suitable habitat present. Two CNDDB occurrence in the study area (CDFW 2018a).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Charina umbratica</i>	southern rubber boa	-	ST	-	-	Inhabits oak-conifer and mixed-conifer forests in montane southern California (Nafis 2018).	Y	Suitable habitat present. Study area adjacent to species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Crotalus ruber</i>	red-diamond rattlesnake	-	SSC	-	-	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland and cultivated areas. Prefers rocky areas with dense vegetation (Nafis 2018).	N	Species range only overlaps with small portion of southwest Los Angeles County. Study area well outside of range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	-	-	-	FSS	Palustrine habitat includes riparian and temporary pools. Also known to be found near creeks and streams. Terrestrial habitats include croplands, hardwood forests, grasslands, and chaparral. Species known to prefer moist habitats and can found under various cover objects including bark, rock, and logs (NatureServe 2018).	Y	Suitable habitat present. Study area overlaps with species range (Nafis 2018).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org/">http://explorer.natureserve.org/</a> >. Accessed November 8, 2018. Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Emys marmorata</i>	western pond turtle	-	SSC	BLMS	FSS	Found in a wide variety of habitats throughout California, but associated with permanent ponds, lakes, streams, irrigation ditches, and permanent pools along intermittent streams. Occurs throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. (CDFW 2018b).	Y	Suitable habitat present, may occur in study area. See Section 5.4.3 for more information.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Gambelia sila</i>	blunt-nosed leopard lizard	FE	SE, FP	-	-	Semiarid grasslands, alkali flats, and washes. Flat areas with open space for running, avoids densely vegetated areas. Uses mammal dens and burrows for cover and shelter. The number of available burrows will determine the size of this lizard's population in an area (Nafis 2018).	N	Study area outside known species range. Not known to occur in Los Angeles County (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Gopherus agassizii</i>	desert tortoise	FT	ST	-	-	Known in the Mojave Desert north and west of the Colorado River in California, Nevada, Arizona, and Utah. The majority of their life is spent underground. The species prefers sandy flats, rocky foothills, washes, canyons, and alluvial fans where suitable soil for den construction is found (USFWS 2018).	N	Study area outside known species range. Does not occur west of Antelope Valley (Nafis 2018).	United States Fish and Wildlife Service (USFWS). 2018. Mojave Desert Tortoise ( <i>Gopherus agassizii</i> ). Available online: < <a href="https://www.fws.gov/nevada/desert_tortoise/dt_life.html">https://www.fws.gov/nevada/desert_tortoise/dt_life.html</a> >. Accessed November 21, 2018. Last updated July 5, 2018. Nevada Fish and Wildlife Office. Reno, NV.
<i>Lampropeltis zonata parvirubra</i>	California mountain kingsnake (San Bernardino population)	-	-	BLMS	FSS	Found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub between 804 and 9,022 feet amsl in elevation (Nafis 2018).	Y	Suitable habitat present. Study area overlaps with species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Lichanura orcutti</i>	coastal rosy boa (northern three-lined boa)	-	-	-	FSS	Inhabits arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas. Appears to be common in riparian areas, but does not require permanent water (Nafis 2018).	Y	Suitable habitat present. Study area overlaps with species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Masticophis flagellum ruddocki</i>	San Joaquin coachwhip	-	SSC	-	-	Occurs in open, dry, treeless areas, including grassland and saltbush scrub. Takes refuge in rodent burrows, under shaded vegetation, and under surface objects (Nafis 2018).	N	Study area outside known species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Phrynosoma blainvillii</i>	coast horned lizard	-	SSC	BLMS	-	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 feet amsl in the Sierra Nevada foothills, and up to 6,000 feet amsl in the mountains of southern California (CDFW 2018b).	Y	Suitable habitat present. There are ten known occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a> California Department of Fish and Wildlife (CDFW). 2018a. California Department of Fish and Wildlife California Natural Diversity Database
<i>Salvadora hexalepis virgulata</i>	coast patch-nosed snake	-	SSC	-	-	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains at elevations from below sea level to around 7,000 feet amsl (Nafis 2018).	Y	Suitable habitat present. Study area overlaps with species range (Nafis 2018).	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a>
<i>Thamnophis hammondi</i>	two-striped gartersnake	-	SSC	BLMS	FSS	Found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland and coniferous forest (Nafis 2018). Highly aquatic. Associated with permanent and semi-permanent water bordered by dense vegetation in a variety of habitats from sea level to 8,000 feet amsl (LP ForestWatch 2013).	Y	Suitable habitat present, may occur in study area. See Section 5.3 for more information.	Nafis, Gary. 2018. California Herps: A Guide to Reptiles and Amphibians of California. <a href="http://www.californiaherps.com/">http://www.californiaherps.com/</a> Los Padres ForestWatch (LP ForestWatch). 2013. Two-striped garter snake. Available online: < <a href="https://lpfw.org/our-region/wildlife/two-striped-garter-snake/">https://lpfw.org/our-region/wildlife/two-striped-garter-snake/</a> >. Accessed November 12, 2018. Last updated 2013. Los Padres ForestWatch. Santa Barbara, CA.
<b>Birds</b>									
<i>Accipiter gentilis</i>	northern goshawk	-	SSC	BLMS	FSS	Mature and old-growth forests including Pacific Ponderosa pine, Jeffrey pine, Lodgepole pine, mixed conifer, Douglas-fir, mixed Redwood-Douglas-fir hardwood, and quaking aspen. Occurs in North Coast Ranges through Sierra Nevada, Klamath, Cascade, and Warner Mts., in Mt. Pinos and San Jacinto, San Bernardino, and White Mts. (Shuford and Gardali 2008).	Y	Suitable habitat present. Study area adjacent to species range (CDFW 2018a).	Shuford, W. D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn California Department of Fish and Wildlife (CDFW). 2018a. California Department of Fish and Wildlife California Natural Diversity Database
<i>Agelaius tricolor</i>	tricolored blackbird	-	SCE, SSC	BLMS	-	Preferred nesting habitat includes cattails, bulrushes, Himalayan berry, and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 10 or more m wide but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails. (Hamilton 2004).	Y	Suitable habitat present. CNDDB occurrences in the study area in addition to several sightings around Quail Lake (CDFW 2018a; DWR, per comm., May 15, 2018).	Hamilton, W. J. 2004. Tricolored Blackbird ( <i>Agelaius tricolor</i> ). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight.   CDFW. 2017. California Wildlife Habitat California Department of Fish and Wildlife (CDFW). 2018a. California Department of Fish and Wildlife California Natural Diversity Database
<i>Ammodramus savannarum</i>	grasshopper sparrow	-	SSC	-	-	Frequents dense, dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Uses scattered shrubs for singing perches (CDFW 2018b).	Y	Suitable habitat present. CNDDB occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Aquila chrysaetos</i>	golden eagle	BGEPA	FP	BLMS	-	Habitat includes rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. Uncommon resident and migrant throughout California, except the center of the Central Valley. (CDFW 2018b).	Y	Suitable habitat present. CNDDB occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Asio flammeus</i>	short-eared owl	-	SSC	-	-	Found in open, treeless areas with elevated sites for perches, and dense vegetation for roosting and nesting. Associated with perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands. Breeds in coastal areas in Del Norte and Humboldt Counties, San Francisco Bay Delta, northeastern Modoc plateau, east Sierras from Lake Tahoe to Inyo County and San Joaquin Valley. Winters in the Central Valley, western Sierra Nevada foothills and along the coastline (CDFW 2018b).	Y	Study area does not overlap with breeding range (CDFW 2018b); however, suitable wintering habitat is present.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Asio otus</i>	long-eared owl	-	SSC	-	-	Riparian habitat required; also uses live oak thickets and other dense stands of trees. Found in dense conifer stands at high elevations (CDFW 2018b).	Y	Suitable habitat present and study area falls within breeding range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>

Appendix N - CWHR Species Summary Table

Scientific Name	Common Name	USFWS	CDFW	BLM	USFS	Habitat Characteristics	Potential	Rationale	Citation
<i>Athene cucularia</i>	burrowing owl	-	SSC	BLMS	-	Nesting habitat includes open areas with 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).	Y	Suitable habitat present. CNDDDB occurrences in the study area (CDFW 2018a).	Bates, C. 2006. Burrowing Owl ( <i>Athene cucularia</i> ). In The Draft Desert Bird Conservation Plan: a strategy for reversing the decline of desert-associated birds in California. California Partners in Flight. <a href="http://www.prbo.org/calpf/htmldocs/desert.html">http://www.prbo.org/calpf/htmldocs/desert.html</a>
<i>Aythya americana</i>	redhead	-	SSC	-	-	Usually nest in freshwater emergent wetlands where dense stands of cattails ( <i>Typha</i> spp.) and tules ( <i>Schoenoplectus</i> spp.) are interspersed with areas of deep, open water. Also observed nesting in somewhat alkaline marshes and potholes (Shuford and Gardali 2008).	Y	Suitable habitat present. Study area overlaps with species range (Shuford and Gardali 2008).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Buteo swainsoni</i>	Swainson's hawk	-	ST	BLMS	-	Nests in stands with few trees in riparian areas, juniper-sage flats, and oak savannah. Forages in adjacent grasslands, agricultural fields and pastures. Breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Very limited breeding reported from Lanfair Valley, Owens Valley, Fish Lake Valley, and Antelope Valley (CDFW 2018b).	Y	This species restricted to valleys and deserts. Occurs in Central Valley to the north of the study area and the Antelope Valley to the east; however, unlikely to occur in mountainous areas (CDFW 2018a). Potential to nest near Quail Lake, and potential for foraging elsewhere.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren	-	SSC	-	-	Frequents desert succulent shrub, Joshua tree and desert wash habitats. Found in arid parts of westward-draining slopes of southern California. Nests in cholla or other large, branching cactus, in yucca, or in stiff-twigged, thorny shrub or small tree (Shuford and Gardali 2008).	N	Study area outside of species range (CDFW 2018b).	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT	SSC	-	-	Coastal populations nest on dune-backed beaches, sand spits, beaches at creeks and river mouths, and salt pans at lagoons and estuaries (USFWS 2007). Inland populations nest along barren to sparsely vegetated flats and along shores of alkaline and saline lakes, reservoirs, ponds, braided river channels, agricultural wastewater ponds, and salt evaporation ponds (Shuford and Gardali 2008). Inland nesting areas occur at the Salton Sea, Mono Lake, and at isolated sites on the shores of alkali lakes in northeastern California, in the Central Valley, and southeastern deserts (CDFW 2018b).	N	Study area outside of species range (CDFW 2018b).	USFWS. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover ( <i>Charadrius alexandrinus nivosus</i> ). In 2 volumes. USFWS; Sacramento, CA. xiv + 751 pages.   Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Spe
<i>Charadrius montanus</i>	mountain plover	-	SSC	BLMS	-	Frequents open plains with low, herbaceous or scattered shrub vegetation below 3,200 feet amsl (CDFW 2018b).	Y	Suitable wintering habitat present.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Circus hudsonius</i>	northern harrier	-	SSC	-	-	Nest on the ground in patches of dense, tall 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. DWR observations in study area (DWR, pers. comm., May 15, 2018).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FT	SE	BLMS	FSS	Requires large, dense tracts of riparian woodland with well-developed understories. Occurs in deciduous trees or shrubs. Prefers willow, but will also nest in orchards adjacent to streams in Sacramento Valley. Restricted to moist habitats along slow-moving waterways during breeding season (CDFW 2018b).	Y	Outside known species range. See Section 5.4.3 for more information.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Contopus cooperi</i>	olive-sided flycatcher	-	SSC	-	-	Preferred habitat is forest and woodland, with adjacent meadows, lakes or open terrain for foraging. Occurs throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<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. Breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto Mts., and in coastal bluffs and mountains from San Mateo County south to San Luis Obispo County (Shuford and Gardali 2008).	N	Suitable habitat not present.	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Dendragapus fuliginosus howardi</i>	Mount Pinos sooty grouse	-	SSC	-	-	All records in southern portion of species range appear to be from <i>Abies/Pinus</i> (fir/pine) forest; however, Likely utilize surrounding shrublands as well (Shuford and Gardali 2008).	N	Study area outside current known species range. Thought to be extirpated from southern edge of range near study area (Shuford and Gardali 2008).	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
<i>Elanus leucurus</i>	white-tailed kite	-	FP	BLMS	-	Occurs in herbaceous and open stages of valley lowland habitats, usually near agricultural land. Forages in undisturbed, open grasslands, meadows, farmlands and emergent wetlands (CDFW 2018b). Typically nest in the upper third of trees that may be 10–160 ft. (33-525 m.) tall. These can be open-country trees growing in isolation, or at the edge of or within a forest (Cornell 2018).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	Cornell Lab of Ornithology (Cornell). 2018. White-Tailed Kite. Available online: < <a href="https://www.allaboutbirds.org/guide/White-tailed_Kite/id/">https://www.allaboutbirds.org/guide/White-tailed_Kite/id/</a> >. Accessed November 21, 2018. Last updated 2017. Cornell Lab of Ornithology, Ithica, NY.
<i>Falco peregrinus anatum</i>	American peregrine falcon	FD	SD, FP	-	-	Breeds near wetlands lakes, rivers, or other waters on cliffs, banks, dunes or mounds, most yin woodland, forest and coastal habitats. Nest is a scrape on a depression or ledge in an open site. May use man-made structures, snags, or trees for nesting (CDFW 2018b).	Y	Study area does not overlap with breeding range (CDFW 2018b); however, suitable wintering habitat is present.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Gavia immer</i>	common loon	-	SSC	-	-	Commonly found in estuarine and subtidal marine habitats along entire coast. Also less commonly found on large, deep lakes in valleys and foothills throughout the state. May rarely breed in large mountain lakes (CDFW 2018b).	Y	Suitable habitat present. Portions of study area overlap with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Gymnogyps californianus</i>	California condor	FE	SE, FP	-	-	Chaparral, coniferous forest and oak savannah in southern and central California. Nest in cliff cavities, large rock outcrops, or large trees. Roost on large lifts or trees near feeding areas (USFWS 1996).	Y	Known to occur in the study area. See Section 5.4.3 for more information.	USFWS. 1996. Recovery Plan for the California Condor. USFWS; Portland, OR.
<i>Haliaeetus leucocephalus</i>	bald eagle	BGEPA, FD	SE, FP	BLMS	FSS	Nests in large, old-growth, or dominant live tree with open branchwork, especially ponderosa pine. Requires large bodies of water or rivers with abundant fish, and adjacent snags. Permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. About half of the wintering population is in the Klamath Basin (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Icteria virens</i>	yellow-breasted chat	-	SSC	-	-	Nest in early-successional riparian habitats with a well-developed shrub layer and an open canopy. Restricted to narrow border of streams, creeks, sloughs and rivers. Often nest in dense thicket plants such as blackberry and willow (Shuford and Gardali 2008).	Y	Suitable habitat present. Study area overlaps with summer species range (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Ixobrychus exilis</i>	least bittern	-	SSC	-	-	Common summer resident at Salton Sea and Colorado River in dense emergent wetlands near freshwater and in desert riparian (saltcedar scrub). Likely nests only in emergent wetlands. Rare in deserts and coastal lowlands (CDFW 2018b).	N	Study area outside known species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<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).	Y	Suitable habitat present. CNDDDB occurrences in the study area (CDFW 2018a).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Pelecanus erythrorhynchos</i>	American white pelican	-	SSC	-	-	In California, nests only in large lakes in Klamath Basin. Roosts along water edges, beaches, sandbars, or old driftwood (Shuford and Gardali 2008).	Y	Suitable roosting habitat present.	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
<i>Pelecanus occidentalis californicus</i>	California brown pelican	FD	SD, FP	BLMS	FSS	Warm coastal marine and estuarine environments. Rare inland. Breeds primarily on islands (Cornell 2018).	N	Outside species range. Typically is restricted to coast.	Cornell Lab of Ornithology (Cornell). 2018. Whit-Tailed Kite. Available online: < <a href="https://www.allaboutbirds.org/guide/White-tailed_Kite/id/">https://www.allaboutbirds.org/guide/White-tailed_Kite/id/</a> >. Accessed November 21, 2018. Last updated 2017. Cornell Lab of Ornithology, Ithica, NY.
<i>Piranga rubra</i>	summer tanager	-	SSC	-	-	Breed primarily in mature riparian woodland with extensive cottonwood canopy, some records of orchard nesting. Need tall, shady trees (Shuford and Gardali 2008).	N	Study area outside known species range (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Poliophtia californica californica</i>	coastal California gnatcatcher	FT	SSC	-	-	Scrub dominated plant communities, strongly associated with coastal scrub, sage scrub, and coastal succulent scrub communities. Distribution ranges from southern Ventura County down through Los Angeles, Orange, Riverside, San Bernardino and San Diego counties (USFWS 2010).	Y	Suitable habitat present. See Section 5.4.3 for more information.	USFWS. 2010. Coastal California Gnatcatcher ( <i>Poliophtia californica californica</i> ) 5-year Review: Summary and Evaluation. USFWS; Carlsbad, CA.

Appendix N - CWHR Species Summary Table

Scientific Name	Common Name	USFWS	CDFW	BLM	USFS	Habitat Characteristics	Potential	Rationale	Citation
<i>Poocetes gramineus affinis</i>	Oregon vesper sparrow	-	SSC	-	-	Obligate grassland species. Open ground with little vegetation or short grass and low annuals, including stubble fields, meadows and road edges (Shuford and Gardali 2008).	Y	Study area does not overlap with breeding range; however, study area is adjacent to wintering range and this species may occur (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Pranga rubra</i>	summer tanager	-	SSC	-	-	Breed primarily in mature riparian woodland with extensive cottonwood canopy, some records of orchard nesting. Need tall, shady trees (Shuford and Gardali 2008).	N	Study area outside known species range (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Progne subis</i>	purple martin	-	SSC	-	-	Inhabits open forests, woodlands, and riparian areas in breeding season. Found in a variety of open habitats during migration, including grassland, wet meadow, and fresh emergent wetland, usually near water. In southern California, now only a rare and local breeder on the coast and in interior mountain ranges, with few breeding localities. Absent from higher desert regions except as a rare migrant. In northern California, an uncommon to rare local breeder on the coast and inland to Modoc and Lassen counties (CDFW 2018b).	Y	Study area on edge of known species range (CDFW 2018b). Suitable habitat present.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Pyrocephalus rubinus</i>	vermillion flycatcher	-	SSC	-	-	A yearlong resident along the Colorado River, especially in vicinity of Blythe, Riverside Co. Nesters inhabit cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields, irrigation ditches, pastures and other open, mesic areas in isolated patches throughout central southern California (CDFW 2018b).	N	Study area outside known species range (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<i>Riparia riparia</i>	bank swallow	-	ST	BLMS	-	Riparian areas with sandy, vertical bluffs or riverbanks. Also nest in earthen banks and bluffs, as well as sand and gravel pits (Shuford and Gardali 2008).	Y	Study area outside CDFW species range map (CDFW 2018b); however there are several occurrences in the region, including along the Santa Clara River to the south. (CDFW 2018a). Gorman Creek and other waterways in the study area have very steep, deep vertical banks that provide suitable habitat for this species.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Rynchops niger</i>	black skimmer	-	SSC	-	-	Requires calm, shallow water for foraging, and sand bars, beaches, or dikes for roosting and nesting (Shuford and Gardali 2008).	N	Study area outside known species range (CDFW 2018b).	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
<i>Setophaga petechia</i>	yellow warbler	-	SSC	-	-	Breeding occurs from the coast range in Del Norte county, east to the Modoc plateau, south along the coast range to Santa Barbara and Ventura counties, and along the western slope of the Sierra Nevada south to Kern County (CDFW 2018b).	Y	Suitable habitat present. Observed during 2018 studies.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Strix occidentalis occidentalis</i>	California spotted owl	-	SSC	BLMS	FSS	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. Breeding range extends west of the Cascade Range through the North Coast Ranges, the Sierra Nevada, and in more localized areas of the Transverse and Peninsular Ranges. May move downslope in winter along the eastern and western slopes of the Sierra Nevada, and in other areas. (Shuford and Gardali 2008).	Y	Suitable habitat present. Activity centers and observations in and adjacent to the study area (CDFW 2018b).	Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
<i>Toxostoma lecontei</i>	Le Conte's thrasher	-	SSC	-	-	Occurs primarily in open desert wash, desert scrub, alkali desert scrub and desert succulent shrub habitats (CDFW 2018b).	Y	On the edge of species range. Joshua tree habitat present.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<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).	Y	Suitable habitat present. See Section 5.4.3 for more information.	USFWS. 1998. Least Bell's Vireo 5-Year Review. USFWS; Carlsbad, CA.
<i>Vireo vicinior</i>	gray vireo	-	SSC	BLMS	FSS	Breed in mature, arid chaparral, or open pinyon-juniper woodland mixed with chaparral, desert scrub, or sagebrush (Winter and Hargrove 2004).	Y	Suitable habitat present. Portions of study area overlap with species range (CDFW 2018b).	Winter, K and L. Hargrove. 2004. Gray Vireo ( <i>Vireo vicinior</i> ). In The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	-	SSC	-	-	Nest in marshes with tall, emergent vegetation (e.g., tules and cattails) adjacent to deepwater (Shuford and Gardali 2008).	Y	Suitable habitat present. Study area adjacent to summer species range (CDFW 2018b).	Shuford, W.D. and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation in California. Studies of Western Birds 1. Western Field Orn
<b>Mammals</b>									
<b>Bats</b>									
<i>Antrozous pallidus</i>	pallid bat	-	SSC	BLMS	FSS	Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings (CDFW 2018b).	Y	Suitable habitat present. CNDDB occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	-	SSC	BLMS	FSS	Cave-dwelling, also roosts in old mine-workings, occasionally found in buildings. Population concentrations in areas with cavity-forming rock and in old mining districts (Bolster 1998).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	Bolster, B.C., editor. 1998. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wild
<i>Euderma maculatum</i>	spotted bat	-	SSC	BLMS	-	The known species range covers British Columbia south through eastern Oregon and Washington to Montana and south through Wyoming, Colorado and New Mexico to the east and eastern California and Nevada to the west (Gervais 2016). Individuals are nocturnal and known to utilize crevices and caves for roosting. Additionally, they are known to use conifer and aspen stands for night roosting. Meadows, riparian areas, shrub-steppe, and open stands of forest are typical foraging habitat (Gervais 2016).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	Gervais, Jennifer. 2016. <i>Conservation Assessment for the Spotted Bat (Euderma maculatum) in Oregon and Washington</i> . Oregon Wildlife Institute. Corvallis, OR.
<i>Eumops perotis californicus</i>	western mastiff bat	-	SSC	BLMS	-	Open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban areas. Roosts in crevices on vertical cliff faces, high buildings, trees, and tunnels (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Lasiurus blossevillii</i>	western red bat	-	SSC	-	-	Roosting habitat includes forests and woodlands, often in edge habitats adjacent to streams, fields, or urban areas (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Lasiurus xanthinus</i>	western yellow bat	-	SSC	-	-	Associated with palm trees in valley foothill riparian, desert riparian, desert wash and palm oasis habitats below 2,000 ft (CDFW 2018b).	N	Palm tree oases not present in study area.	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Macrotus californicus</i>	California leaf-nosed bat	-	SSC	BLMS	-	The species is nocturnal and individuals are known to forage close to the ground in a hovering fashion. The species feeds on flying insects taken from vegetation or off the ground. Individuals inhabit lowland desert scrub and are known to roost in caves and abandoned mine tunnels during the day, while night roosts include buildings, rock, porches, mines, and caves (NatureServe 2018). Night roosts are typically separate from those used during winter (NatureServe 2018). Long migrations are not typical, but small seasonal roost changes are known to occur (NatureServe 2018).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018.
<i>Myotis ciliolabrum</i>	small-footed myotis	-	-	BLMS	-	The species is common in arid regions of California. Known ranges include Contra Costa County south, the west side of the Sierra Nevada, various areas of the Great Basin, and areas of Modoc, Kern, and San Bernardino Counties (CDFW 2018a). Individuals are nocturnal and typically inhabit arid upland locations, preferring open stands of forest and brush near water sources. Individuals are known to shelter and roost in small groups of 50 plus in mines, natural crevices, buildings, caves and bridges (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Myotis evotis</i>	long-eared myotis	-	-	BLMS	-	The species is uncommon throughout its known range, although it is known to be widespread throughout California (CDFW 2018a). Unlike similar species, the long-eared myotis avoids arid regions and is known to occur along the California coast, parts of the Great Basin, as well as the Sierra Nevada and Tehachapi mountain ranges. The long-eared myotis forages fairly close to the ground on insects, with a special attraction to beetles, in open stands of trees, shrubs, and over water sources (CDFW 2017). The species is known to roost singly or in very small groupings within infrastructure, behind tree bark or snags, and in caves. Feeding habits include foraging in open areas along habitat edges and over water (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Myotis thysanodes</i>	fringed myotis	-	-	BLMS	FSS	Widespread in California, occurring in all but the Central Valley and Colorado and Mojave deserts. It occurs in a wide variety of habitats; records range in elevation from sea level to 2850 m (9350 ft) in New Mexico (Barbour and Davis 1969). Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 4000-7000 ft (1300-2200m). (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	Barbour, R. W., and W. H. Davis. 1969. Bats of America. Univ. of Kentucky Press, Lexington. 286pp.   Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sac
<i>Myotis yumanensis</i>	Yuma myotis	-	-	BLMS	-	Yuma myotis is known to be widespread and extremely common in California, occurring from sea level to 11,000 ft in elevation. Preferred habitats include open woodlands and forests with adequate access to water. The species is known to feed heavily over water on small insects using echolocation. Individuals are known to roost in various infrastructures, mines, caves, and other natural crevices. Maternity roosts typically consist of several thousand females and young in similar roost locations with preferred temperatures no greater than 40°C (CDFW 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>

Appendix N - CWHR Species Summary Table

Scientific Name	Common Name	USFWS	CDFW	BLM	USFS	Habitat Characteristics	Potential	Rationale	Citation
<b>Other Mammals</b>									
<i>Ammospermophilus nelsoni</i>	Nelson's antelope squirrel	-	ST	BLMS	-	Species known to occur in desert, grassland, and other herbaceous habitats. Species typically burrows in soil. Habitat consists of dry terrain with marginal slopes, on alluvial to loamy soils (NatureServe 2018).	N	Study area outside known species range (CDFW 2018b).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018.
<i>Bassaricus astutus</i>	ringtail	-	FP	-	-	Species known to inhabit arid oak woodlands, chaparral, deserts, and rocky canyons (LPFW 2013).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	<a href="https://lpfw.org/our-region/wildlife/ring-tailed-cat/">https://lpfw.org/our-region/wildlife/ring-tailed-cat/</a>
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	-	SSC	-	-	Variety of habitats including chaparral, grassland and coastal sage scrub (CDFW 2018b).	N	The only occurrences north of Los Angeles are in Ventura. Species not known from study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	-	SSC	-	-	Sandy herbaceous areas in coastal scrub, chaparral, sagebrush, deserts scrub and washes, and annual grassland (CDFW 2018b).	N	Study area outside known species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	-	SSC	-	-	Species prefers sandy, somewhat herbaceous areas with some rock and gravel present. In San Diego County, individuals occur in arid coastal areas (CDFW 2018b).	N	In Los Angeles County, species is restricted to desert areas south of Palmdale (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Dipodomys nitratoides nitratoides</i>	Tipton kangaroo rat	FE	SE	-	-	Species known on the west side of the San Joaquin Valley. Prefers sandy loam soils with finer particulates with minimal annual grasses and forbs (CDFW 2018b).	N	Outside known species range. Does not occur south of Central Valley (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FE	ST	-	-	Often found in transition areas between grassland and coastal sage scrub habitat where perennial vegetation is sparse, including disturbed areas. Deep, friable soil is needed for burrowing. Plants commonly associated with suitable habitat are chamise, buckwheat, brome grass and filaree (CDFW 2018b).	N	Outside known species range. Not known to occur in Los Angeles County (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	-	SSC	-	-	Herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats (CDFW 2018b).	Y	Suitable habitat present. CNDDDB occurrences in the study area (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	-	SSC	-	-	Common to abundant in Joshua tree, piñon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Also found in a variety of other habitats. Moderate to dense canopies preferred. Desert woodrats are particularly abundant in rock outcrops and rocky cliffs and slopes. Most abundant in rocky areas with Joshua trees. Elevational range from sea level to 8,500 feet amsl (CDFW 2018b).	N	Outside known species range. Does not occur north of Santa Monica and San Gabriel mountains (CDFW 2018a).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Neotoma macrotis luciana</i>	Monterey dusky-footed woodrat	-	SSC	-	-	Occurs in coastal California from Monterey Bay to Morro Bay. Associated with riparian, forest/woodland, and shrubland/chaparral habitats (NatureServe 2018).	N	Outside known species range. Restricted to central California coast (CDFW 2018a).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	-	SSC	-	-	Common in California in arid desert habitats of the Mojave Desert and southern Central Valley including alkalie desert scrub and desert scrub. Lower population densities in succulent shrub, wash and riparian areas (CDFW 2017).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Ovis canadensis nelsoni</i>	San Gabriel Mountains bighorn sheep	FE	FT, FP	-	-	Inhabit areas with steep mountain slopes and cliffs so they can evade predators. Cliffs are often near open grazing areas where the sheep can graze with good visibility and flee to the safety of the cliffs or "escape habitat" when threatened (LP ForestWatch 2013).	N	Outside known species range. Occurs in Mojave Desert, east of the Sierra Nevada, and the San Gabriel Mountains (CDFW 2018a). Some transplanted individuals likely still surviving in Sespe Wilderness to the east of the study area (LP Forestwatch 2013).	Los Padres ForestWatch (LP ForestWatch). 2013. Species Accounts. Accessed November 12, 2018. Last updated 2013. Los Padres ForestWatch. Santa Barbara, CA.
<i>Perognathus alticolus inexpectatus</i>	Tehachapi pocket mouse	-	SSC	-	FSS	The known range spans from Tehachapi Pass, west to Mount Pinos, and south to Quail Lake, varying from 3,380 to 6,000 feet in elevation. The species is rare and not widespread. The preferred habitat for the species near Mount Pinos includes grassy flats and yellow pine forests. Additionally, it is known to occur in various rangelands and chaparral (Bolster 1998).	Y	CNDDDB occurrences in study area (CDFW 2018a).	Bolster, B.C., editor. 1998. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wild
<i>Perognathus inornatus inornatus</i>	San Joaquin pocket mouse	-	-	BLMS	-	The San Joaquin pocket mouse prefers dry, grassy, open fields in annual grasslands, desert-scrub, and savannas. On the east side of the San Joaquin valley, individuals are known to occur in low density up to 1500 ft in elevation (NatureServe 2018). The species is known to burrow and feeds on various grass seeds, forbs, and other vegetative varieties (NatureServe 2018).	Y	Occurrence in adjacent to study area Hungry Valley (CDFW 2018a).	NatureServe. 2018. NatureServe Explorer – Online Database. Available online: < <a href="http://explorer.natureserve.org">http://explorer.natureserve.org</a> >. Accessed November 8, 2018.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	-	SSC	-	-	Low elevation grasslands, alluvial sage scrub, and coastal sage scrub (Bolster 1998).	N	Outside known species range. Does not occur north of San Gabriel Mountains (CDFW 2018a).	Bolster, B.C., editor. 1998. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wild
<i>Tamias speciosus callipeplus</i>	Mount Pinos lodgepole chipmunk	-	-	-	FSS	Lodgepole chipmunk prefers lodgepole, mixed conifer, and Jeffrey pine forests with open canopy ranging in elevation from 6,000 to 10,350 ft in elevation (CDFW 2018a). The species feeds on various grasses and forbs, berries, fungus, and some invertebrates (CDFW 2018a). The lodgepole chipmunk is known to nest in small cavities within vegetation, as well as burrows underground (CDFW 2018a).	N	Outside known species range. Found only on the upper slopes and summits of Mount Pinos, Cerro Noreste, and Frazier Mountain in the Los Padres National Forest near the Kern/Ventura county line (CDFW 2018b; LP Forestwatch 2013).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<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 2018b).	Y	Suitable habitat present. Study area overlaps with species range (CDFW 2018b).	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>
<i>Vulpes macrotis mulica</i>	San Joaquin kit fox	FE	ST	-	-	Occur in desert-like habitats characterized by sparse or absent shrub cover, sparse ground cover, and short vegetative structure. Areas having open, level, sandy ground (USFWS 2010b).	N	Outside known species range. See Section 5.4.3 for more information.	USFWS. 2010. San Joaquin Kit Fox 5-Year Review. USFWS; Sacramento, CA.
<i>Xerospermophilus mohavensis</i>	Mohave ground squirrel	-	ST	BLMS	-	Optimal habitats are open desert scrub, alkali desert scrub, and Joshua tree. Prefers sandy to gravelly soils, avoids rocky areas. Elev: 1,657-5,003 feet amsl (CDFW 2018b).	N	Outside known species range (CDFW 2018b)	CDFW. 2018b. California Wildlife Habitat Relationships System Life History Accounts and Range Maps (online edition). CDFW Biogeographic Data Branch; Sacramento, CA. <a href="http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx">http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx</a>

Note: All occurrence info from CNDDDB

Species Status Key:	
Federal (USFWS-USFS)	State (CDFW)
BGEPA Bald and Golden Eagle Protection Act	SE Endangered
FE Endangered	ST Threatened
FT Threatened	SCE Candidate Endangered
FCE Candidate Endangered	SCT Candidate Threatened
FCT Candidate Threatened	SCD Candidate for delisting
FCD Candidate for delisting	FP Fully Protected
FSS Forest Service Sensitive	SSC Species of Special Concern

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## **Appendix O**

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### ***ESA Consultation History***

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## COMMONLY USED TERMS, ACRONYMS & ABBREVIATIONS

Action Agency	The agency authorizing, funding, or carrying out an action
Action Area	The area within the proposed Project boundary and Piru Creek below Pyramid Dam downstream to the normal maximum surface water elevation of Lake Piru
Application for New License	Application for a New License Major Project – Existing Dam for the South SWP Hydropower, Federal Energy Regulatory Commission Project Number 2426-227
BMT	Black Mountain
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
COB	Cobblestone Mountain
DLA	Draft License Application
DPS	Distinct Population Segment
ESA	Endangered Species Act
FE	federal endangered
FERC	Federal Energy Regulatory Commission
FP	California fully protected
FSS	U.S. Department of Agriculture, Forest Service, Sensitive Species
FT	federal threatened
GRV	Green Valley
ISR	Initial Study Report
LEB	Lebec
Licensees	California Department of Water Resources and Los Angeles Department of Water and Power
LIM	Liebre Mountain
MTC	Mint Canyon
MWD	Metropolitan Water District of Southern California
NEW	Newhall

NMFS	National Marine Fisheries Service under the U.S. Department of Commerce, National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPS	National Park Service
PAD	Pre-Application Document
PIR	Piru
PM&E measures	Protection, Mitigation, and Enhancement measures, which are operation and management activities to: (1) protect resources against impacts from continued operations and maintenance of the Project; (2) mitigate any impacts from continued operations and maintenance of the Project (if the resource cannot be fully protected); and (3) enhance resources affected by continued Project operations and maintenance
Project	South SWP Hydropower, Federal Energy Regulatory Commission Project Number 2426
Proposed Action	The issuance of a new license to the Licensees for the South SWP Hydropower with the changes proposed by the Licensees in their Application for New License
PSP	Proposed Study Plan
Relicensing Participants	Federal and State agencies, local governments, Native American tribes, non-governmental organizations, businesses, and unaffiliated members of the public that have participated in the South SWP Hydropower relicensing
SD1	Scoping Document 1
SE	California State endangered
SPD	Study Plan Determination
ST	California State threatened
SSC	California State species of special concern
SWRCB	State Water Resources Control Board
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Department of the Interior, Fish and Wildlife Service
USGS	U.S. Geological Survey
USR	Updated Study Report

UWCD	United Water Conservation District
VAV	Val Verde
WSM	Warm Springs Mountain
WTP	Whitaker Peak

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## INTRODUCTION

The California Department of Water Resources and Los Angeles Department of Water and Power, collectively the Licensees, have prepared this Endangered Species Act (ESA) Consultation History as an appendix to Section 5.4.3 of Exhibit E of their Application for a New License Major Project – Existing Dam (Application for New License) from the Federal Energy Regulatory Commission (FERC) for the South SWP Hydropower, FERC Project Number 2426 (Project). As discussed below, this ESA Consultation History has been prepared to document consultation activity for FERC to use in completing consultation with the U.S. Department of the Interior, Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) under the U.S. Department of Commerce National Oceanic and Atmospheric Administration relating to ESA-listed species that are known or have the potential to be affected by the Project.

Under Section 7 of the ESA, a federal agency is required to ensure that actions it authorizes, funds, or carries out do not jeopardize the continued existence of any species listed under the ESA, or destroy or adversely modify designated critical habitat for any listed species. Section 7 also requires consultation by the federal “Action Agency” (the federal agency authorizing, funding, or carrying out the action) with the appropriate regulatory agency: either USFWS or NMFS, based on the specific jurisdictional authority for listed species.

For the purposes of these ESA consultations:

- FERC is the Action Agency.
- The Proposed Action is the issuance of a new license to the Licensees for the South SWP Hydropower with the changes proposed by the Licensees in their Application for New License.
- The Action Area is the area within the proposed Project boundary and Piru Creek below Pyramid Dam downstream to the normal maximum water surface elevation of Lake Piru. Under the ESA, the Action Area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 Code of Federal Regulations [CFR] Section 402.02). The downstream extent of the Action Area is defined as the point where effects to river flow and habitat availability associated with the Proposed Action are no longer measurable. The Action Area is distinct from the geographic scope for cumulative effects on aquatic species, which encompasses a larger area in the Piru Creek Basin from Pyramid Lake to the confluence of Piru Creek with the Santa Clara River, and from Pyramid Lake to Elderberry Forebay within the Castaic Creek drainage.

Both terrestrial and freshwater ESA-listed species are within the Action Area. This appendix is specific to consultations involving both USFWS and NMFS.

Generally, Sections 2.0 and 5.4.3 of Exhibit E of the Licensees’ Application for New License provide the basis of information for consultation between FERC and USFWS, and FERC and NMFS. This appendix provides additional information on the ESA consultation history regarding the Proposed Action; ESA-listed species potentially affected by the Proposed Action; and a list of meetings the Licensees conducted during which ESA terrestrial- and freshwater-related topics were discussed.

**ESA Consultation History for the Proposed Action**

Beginning in mid-2015, approximately 12 months prior to filing its Notice of Intent (NOI) and Pre-Application Document (PAD), the Licensees began to meet with Relicensing Participants to familiarize them with the Project and its operations. During these meetings, the Licensees also discussed with Relicensing Participants the relicensing process; identified issues significant to the Relicensing Participants; and collaboratively developed study proposals, including for species listed as threatened and endangered under the ESA.

The Licensees identified 16 species within the Action Area that are listed as federal endangered (FE) or federal threatened (FT), and have the potential to be affected by the Proposed Action. These listed species include one invertebrate, two fish, two amphibians, five birds, and six plants. No candidate or proposed species were identified. Each of these species, including information regarding status, habitat associations, and known occurrences within or near the Action Area, is listed in Table 1.

**Table 1. ESA-Listed Species Potentially Affected by the Proposed Action**

Common Name <sup>1</sup> ( <i>Scientific Name</i> )	Status <sup>2</sup>	Habitat Associations	Known Historical or Recent Occurrences in Project Vicinity USGS Quadrangles <sup>3</sup>
Vernal Pool Fairy Shrimp ( <i>Branchinecta lynchi</i> )	FT	Branchiopod endemic to vernal pools and other seasonally flooded landscape depressions; species distribution includes disjunct occurrences in the Coast Range.	MTC quadrangle; no records or designated critical habitat within Action Area.
Unarmored Threespine Stickleback ( <i>Gasterosteus aculeatus williamsoni</i> )	FE SE FP	Small fish found mostly in perennial, isolated headwaters of the Santa Clara, Los Angeles, San Gabriel, and Santa Ana Rivers.	GRV, PIR, NEW, and WSM quadrangles; no records or designated critical habitat within Action Area.
Steelhead, Southern California DPS ( <i>Oncorhynchus mykiss</i> )	FE	Anadromous form which spawns mostly in upper stream reaches and tributaries. The southern California DPS inhabits coastal drainages between the Santa Maria River in San Luis Obispo County, California, and the United States-Mexico border.	Not reported by CNDDB, but considered by NMFS to have occurred historically in the Piru Creek drainage, including the Action Area; no designated critical habitat within Action Area.

**Table 1. ESA-Listed Species Potentially Affected by the Proposed Action  
(continued)**

Common Name <sup>1</sup> ( <i>Scientific Name</i> )	Status <sup>2</sup>	Habitat Associations	Known Historical or Recent Occurrences in Project Vicinity USGS Quadrangles <sup>3</sup>
Arroyo Toad ( <i>Anaxyrus [Bufo] californicus</i> )	FE SSC	Breeds in low-gradient perennial and seasonal streams; terrestrial habitat is within associated riparian and adjacent upland areas.	BMT, COB, NEW, and WTP quadrangles; known populations and designated critical habitat in Piru Creek and Castaic Creek.
California Red-Legged Frog ( <i>Rana draytonii</i> )	FT SSC	Largely aquatic, except during dispersal, summer aestivation, and foraging in riparian areas; breeds in still or slow-moving water, but not in large lakes or reservoirs.	WSM quadrangle (San Francisquito Creek) and within Action Area in COB quadrangle (Piru Creek), within designated critical habitat.
California Condor ( <i>Gymnogyps californianus</i> )	FE SE FP	Soaring bird that seeks carrion in open habitats and nests mostly in cavities on escarpments and in hollows of old growth conifers.	BMT, COB, LIM, PIR, and WTP quadrangles, with records and designated critical habitat within Action Area.
Coastal California Gnatcatcher ( <i>Polioptila californica californica</i> )	FT SSC	Non-migratory songbird associated with coastal sage scrub and chaparral in coastal California to Baja California, Mexico, mostly below 2,000 feet elevation.	LEB, MTC, and NEW quadrangles; no records or designated critical habitat within Action Area.
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	FE SE FSS	Migratory songbird breeding in dense riparian thickets along streams and wetlands.	Not reported by CNDDB, but designated critical habitat within Action Area.
Least Bell's Vireo ( <i>Vireo bellii pusillus</i> )	FE SE	Migratory songbird breeding in dense riparian habitat and adjacent chaparral in river valleys from interior northern California to Baja California, Mexico.	VAV, NEW, PIR, and WSM quadrangles; no records or designated critical habitat within Action Area.
Western Yellow-Billed Cuckoo, western DPS ( <i>Coccyzus americanus</i> )	FT SE FSS	Migratory songbird associated with large, structurally complex blocks of riparian habitat, usually on large streams.	VAV quadrangle in 1979; no records or designated critical habitat within Action Area.
Slender-horned Spineflower ( <i>Dodecahema leptoceras</i> )	FE SE	Annual herb found on floodplain terraces and sandy benches with alluvial fan scrub vegetation at about 660 to 2,300 feet elevation.	NEW and MTC quadrangles; no records or designated critical habitat within Action Area.

**Table 1. ESA-Listed Species Potentially Affected by the Proposed Action  
(continued)**

Common Name <sup>1</sup> ( <i>Scientific Name</i> )	Status <sup>2</sup>	Habitat Associations	Known Historical or Recent Occurrences in Project Vicinity USGS Quadrangles <sup>3</sup>
Marsh Sandwort ( <i>Arenaria paludicola</i> )	FE SE	Annual herb associated with freshwater marshes and swamps; currently known to occur at only two sites in San Luis Obispo County, California.	None.
Nevin's Barberry ( <i>Berberis nevini</i> )	FE SE	Perennial native to chaparral and in washes with scattered occurrences in Riverside, Los Angeles, and San Bernardino Counties at 1,400 to 2,000 feet; known occurrences include transplants outside of natural range.	NEW quadrangle (possibly extirpated) and WSM quadrangle (from transplants); no records or designated critical habitat within Action Area.
Gambel's Watercress ( <i>Nasturtium [Rorippa] gambelii</i> )	FE ST	Perennial herb in freshwater marshes and near streams in southern California and a site in Mexico; currently known to occur at a site in Santa Barbara County and introduced at another site in San Luis Obispo County, but may be under-reported.	None.
Spreading Navarretia ( <i>Navarretia fossalis</i> )	FT	Annual herb from vernal pools and poorly drained, seasonally flooded, alkali playas; species distribution includes a few sites in Los Angeles County.	MTC quadrangle; no records or designated critical habitat within Action Area.
California Orcutt Grass ( <i>Orcuttia californica</i> )	FE SE	Annual grass endemic to deep vernal pools with clay soils in Ventura, Los Angeles, Riverside, and San Diego Counties.	MTC quadrangle; no records or designated critical habitat within Action Area.
Summary	16 species potentially affected, and 4 with designated critical habitat in Action Area		

Notes:

<sup>1</sup>No federal candidates or proposed species were identified.

<sup>2</sup>Status:

FE = federal endangered  
 FP = California fully protected  
 FSS = U.S. Department of Agriculture, Forest Service, Sensitive Species  
 FT = federal threatened  
 SE = California State endangered  
 ST = California State threatened  
 SSC = California State species of special concern  
<sup>3</sup>U.S. Geological Survey Quadrangles:  
 BMT = Black Mountain  
 COB = Cobblestone Mountain  
 GRV = Green Valley  
 LEB = Lebec  
 LIM = Liebre Mountain

MTC = Mint Canyon  
 NEW = Newhall  
 PIR = Piru  
 VAV = Val Verde  
 WSM = Warm Springs Mountain  
 WTP = Whitaker Peak  
 Key:  
 CNDDDB = California Natural Diversity Database  
 DPS = Distinct Population Segment  
 NMFS = National Marine Fisheries Service  
 USGS = U.S. Geological Survey



On September 30, 2016, FERC initiated informal consultation with USFWS and NMFS, as required under Section 7 of the ESA and the interagency cooperation regulations in 50 CFR Part 402. USFWS and NMFS were specifically notified of and invited to each Relicensing Participant meeting, and USFWS and NMFS have participated in some of the meetings during which ESA terrestrial- and freshwater-related topics were discussed.

The following provides a summary of activities associated with informal consultation with NMFS and USFWS regarding ESA-listed species.

- July 8, 2015 – The Licensees contacted USFWS and NMFS to notify the Relicensing Participants of the upcoming relicensing process and to request information in the form of a Pre-PAD Questionnaire. The Licensees received 21 responses to the Pre-PAD Questionnaire, including a response from NMFS on October 5, 2015. No response was received from the USFWS.
- September 2, 2015 – The Licensees held an Agency Outreach Meeting and Project site visit to introduce Relicensing Participants to the relicensing process and provide an overview of the facilities being relicensed; initiate discussions as part of information gathering for the PAD; and identify and bring any issues to the forefront. All Relicensing Participants were invited. The meeting participants were: California Department of Fish and Wildlife (CDFW); U.S. Department of the Interior, Bureau of Land Management; State Water Resources Control Board (SWRCB); NMFS; and U.S. Department of Agriculture, Forest Service (USFS).
- August 1, 2016 – The Licensees filed with FERC and distributed to USFWS and NMFS the NOI and PAD. The PAD described existing, relevant, and reasonably available information regarding ESA-listed species, and other potentially affected resources. The PAD also described the studies the Licensees proposed to conduct to supplement existing, relevant, and reasonably available information regarding the Project and potentially affected resources.
- September 30, 2016 – FERC initiated informal consultation with USFWS and NMFS as required under Section 7 of the ESA and the interagency cooperation regulations in 50 CFR Part 402, Subparts A and B.
- September 30, 2016 – FERC designated the Licensees as FERC's non-federal representatives for purposes of informal consultation under Section 7 of the ESA.
- September 30, 2016 – FERC issued Scoping Document 1 (SD1) for the relicensing.
- October 25, 2016 – FERC hosted a Project site visit. The participants included: FERC, Metropolitan Water District of Southern California (MWD), USFWS, SWRCB, NMFS, USFS, and County of Los Angeles Department of Parks and Recreation.

- October 26, 2016 – FERC held morning and evening joint meetings with Relicensing Participants to discuss the relicensing. All Relicensing Participants were invited. The meeting participants included: FERC, MWD, United Water Conservation District (UWCD), SWRCB, NMFS, California Trout, Inc., USFS, and County of Los Angeles Department of Parks and Recreation.
- November 28, 2016 – NMFS filed with FERC comments on the Licensees' NOI and PAD, and FERC's SD1.
- November 29, 2016 – USFWS filed with FERC comments on the Licensees' NOI and PAD, and FERC's SD1.
- January 13, 2017 – FERC issued Scoping Document 2 for the relicensing.
- January 13, 2017 – The Licensees filed with FERC and distributed to USFWS, NMFS, and Relicensing Participants a Proposed Study Plan (PSP) that included studies related to ESA-listed species.
- February 8, 2017 – The Licensees held a public meeting with Relicensing Participants, including USFWS and NMFS, and other interested parties, to discuss the Licensees' PSP. On March 1-3, 2017 and March 7-8, 2017, the Licensees held follow-up focused study plan meetings with USFWS, NMFS, and other Relicensing Participants.
- April 13, 2017 – NMFS filed comments with FERC on the Licensees' PSP.
- April 13, 2017 – USFWS filed comments with FERC on the Licensees' PSP.
- May 15, 2017 – The Licensees filed with FERC and distributed to USFWS, NMFS, and Relicensing Participants a Revised Study Plan that included studies related to ESA-listed species.
- June 14, 2017 – FERC issued a Study Plan Determination (SPD).
- June 27, 2017 – NMFS filed comments with FERC on FERC's SPD.
- May 15, 2018 – The Licensees filed with FERC and distributed to USFWS, NMFS, and Relicensing Participants an Initial Study Report (ISR).
- May 23, 2018 – The Licensees held an ISR meeting. The meeting participants were: FERC, USFS, NMFS, CDFW, County of Los Angeles Department of Parks and Recreation, MWD, UWCD, National Park Service (NPS), SWRCB, and USFWS.

- June 7, 2018 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants and organizations an ISR meeting summary.
- June 21, 2018 – NMFS filed with FERC comments on the Licensees’ ISR and ISR meeting summary.
- August 8, 2018 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants a reply to comments on the Licensees’ ISR and ISR meeting summary.
- September 7, 2018 – FERC issued a Determination on Requests for Study Modifications and New Studies.
- February 14, 2019 – The Licensees held a Protection, Mitigation, and Enhancement (PM&E) measures Kickoff Meeting to discuss study status and PM&E collaboration relative to the draft Application for New License. All Relicensing Participants were invited. The meeting participants included: USFS, SWRCB, CDFW, and USFWS.
- May 15, 2019 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants an Updated Study Report (USR).
- May 29, 2019 – The Licensees held a USR meeting to discuss the results and status of the relicensing studies as described in the USR; discuss proposals, if any, to modify FERC-approved studies; or add new studies. The meeting participants were: FERC, USFS, NMFS, CDFW, UWCD, NPS, SWRCB, and USFWS.
- June 13, 2019 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants a USR meeting summary.
- July 22, 2019 – USFWS transmitted electronic comments (e-mail) to the Licensees on the Licensees’ USR and USR meeting summary.
- August 12, 2019 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants a response to comments on the USR and USR meeting summary.
- August 30, 2019 – The Licensees filed with FERC and distributed to USFWS, NMFS, and other Relicensing Participants its Draft License Application (DLA).
- November 26, 2019 – NMFS filed with FERC comments on the Licensees’ DLA. No comments were received from the USFWS on the DLA.

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## **Appendix P**

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### ***ESA-Listed Species***

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**ESA-Listed Species**

Common Name/ Scientific Name	Status	Habitat Associations	Known Occurrences in Project Vicinity Quadrangles	Occurrence in Project Area	USFWS Recovery Plans and 5-Year Reviews
Vernal Pool Fairy Shrimp ( <i>Branchinecta lynchi</i> )	FT	Branchiopod endemic to seasonally flooded landscape depressions, including vernal pools, swales, alkaline pools, and sandstone or basaltic rock pools, mostly in the Central Valley of California, but with disjunct occurrences in the Coast Ranges and Riverside County. See Section 5.4.3 for additional information.	Mint Canyon	Unknown	Recovery Plan (USFWS 2005) 5-Year Review (USFWS 2007)
Riverside Fairy Shrimp ( <i>Streptocephalus woottoni</i> )	FE	Branchiopod endemic to vernal pools (mostly where multiple pools occur) and seasonally flooded alkali playas. Known occurrences in inland areas of Riverside, Orange, and San Diego Counties in California and coastal areas of San Diego County and northwestern Baja California, Mexico. One or two other occurrences in coastal Los Angeles County are described in the 5-year review as extirpated.	None	No – Project is outside of species range	Recovery Plan (USFWS 1998d) 5-Year Review (USFWS 2008c)
Santa Ana Sucker ( <i>Catostomus santaanae</i> )	FT (excludes Santa Clara River and tributaries)	Fish endemic to the Los Angeles, San Gabriel, Santa Ana, and Santa Clara River systems. In the lower Santa Clara River system hybridizes with Owens sucker ( <i>C. fumeiventris</i> ). Found mostly in permanent streams less than 25 feet wide and with coarse substrates.  Populations of Santa Ana sucker in the Santa Clara River and its tributaries, including Piru Creek and Castaic Creek, which were previously regarded as introduced are not included in the final rule listing the species as threatened (65 FR 19686).	Val Verde, Piru, Newhall, and Cobblestone Mountain	Occurs in Piru Creek below Pyramid Lake and in Castaic Creek, but is not listed as FT in these streams	Recovery Plan (USFWS 2017b) 5-Year Review (USFWS 2011d)
Unarmored Threespine Stickleback ( <i>Gasterosteus aculeatus williamsonii</i> )	FE, SE, SFP	Small fish found mostly native to perennial headwaters of the Santa Clara, Los Angeles, San Gabriel, and Santa Ana Rivers. Isolation at most times from mainstem streams is important to exclude armored forms of threespine stickleback and larger, predatory fish. See Section 5.4.3 for additional information.	Green Valley, Piru, Newhall, and Mint Canyon, Warm Springs Mountain	No – May occur in upper San Francisquito Creek where the taxon has been recently reintroduced, but not in the Project area.	Recovery Plan (USFWS 1985) 5-Year Review (USFWS 2009e)
Southern California Steelhead Distinct Population Segment (DPS) ( <i>Oncorhynchus mykiss</i> )	FE	“Steelhead” is the name commonly applied to the anadromous form of <i>O. mykiss</i> . Relatively small numbers of returning steelhead have been recorded each year at the Vern Freeman Diversion Dam on the Santa Clara River. Steelhead spawning habitat is mostly associated with upper stream reaches and tributaries where cool, clean, well-oxygenated water occurs.  Redds are located in areas with small- to medium-sized gravel substrates free of excessive silt. Juveniles may remain in freshwater, mature, and eventually spawn in freshwater or out-migrate after one or more years. The Southern California DPS inhabits coastal drainages from the Santa Maria River in San Luis Obispo County, California, down to the United States-Mexico border.	Not reported by CNDDB. Considered by NMFS to have occurred historically in the Piru Creek drainage	Santa Felicia Dam blocks all upstream steelhead migration into Piru Creek above Lake Piru.	Recovery Plan (NMFS 2012) 5-Year Review (NMFS 2010)

**ESA-Listed Species (continued)**

Common Name/ Scientific Name	Status	Habitat Associations	Known Occurrences in Project Vicinity Quadrangles	Occurrence in Project Area	USFWS Recovery Plans and 5-Year Reviews
Arroyo Toad ( <i>Anaxyrus [Bufo] californicus</i> )	FE, SSC	Amphibian that breeds in low-gradient perennial and seasonal streams; forages and aestivates in associated riparian habitat; and may venture into adjacent uplands. The most robust populations occur where fluvial processes maintain sand/gravel substrates, and periodic flooding scours encroaching vegetation and restores shallow pools. Found from Monterey County, California to Baja California, Mexico in coastal streams and some inland draining streams. See Section 5.4.3 for additional information.	Black Mountain, Cobblestone Mountain, Newhall, Whitaker Peak	Yes – occurs in Piru Creek below Pyramid Lake and in Castaic Creek	Recovery Plan (USFWS 1999a) 5-Year Review (USFWS 2009a)
California Red-legged Frog ( <i>Rana draytonii</i> )	FT, SSC	Amphibian that is largely aquatic except during dispersal, summer aestivation, and foraging in riparian areas. Breeds in still or slow-moving water with emergent and overhanging vegetation, including emergent wetlands, ponds, small lakes, and low-gradient stream reaches with permanent pools. Few known extant populations in southern California. See Section 5.4.3 for additional information.	Cobblestone Mountain, Warm Springs Mountain	Unknown – may occur in Piru Creek, downstream of Pyramid Lake, and in San Francisquito Creek with a known breeding site upstream of the Castaic transmission line crossing	Recovery Plan (USFWS 2002a) 5-Year Review (none)
Blunt-nosed Leopard Lizard ( <i>Gambelia sila [silus]</i> )	FE, SE, SFP	Reptile endemic to San Joaquin Valley and adjacent foothills at elevations below 2,600 feet in open, sparsely vegetated areas of grassland and scrub. Most of the extant populations are in undeveloped areas on the Central Valley floor from Merced County to Kern County.	Lebec	No – Project is outside of species range (no known historical or extant occurrences in Los Angeles County)	Recovery Plan (USFWS 1998c) 5-Year Review (USFWS 2010a)
Mojave Desert Tortoise ( <i>Gopherus agassizii</i> )	FT, ST	A large, terrestrial, burrowing turtle found in the Mojave and Sonoran Deserts north and west of the Colorado River. Habitats are primarily in creosote bush ( <i>Larrea tridentata</i> ) flats, less frequently on sloping ground in salt desert scrub and alluvial fans.	None	No – Project is outside of species range. In addition to information in the Recovery Plan, the species range is based on information in Germano et al. (1994) and Nussear et al. (2009)	Recovery Plan (USFWS 2011b) 5-Year Review (USFWS 2010c)
California Condor ( <i>Gymnogyps californianus</i> )	FE, SE, SFP	Very large, soaring bird that seeks carrion in open habitats and nests mostly in cavities on escarpments and in hollows of old growth conifers. All wild California condors are descendants of birds removed from the wild for a captive breeding program, which continues to supplement natural breeding. See Section 5.4.3 for additional information.	Liebre Mountain, Black Mountain, Piru, Cobblestone Mountain, Whittaker Peak	Yes	Recovery Plan (USFWS 1996) 5-Year Review (USFWS 2013)
Coastal California Gnatcatcher ( <i>Polioptila californica californica</i> )	FT, SSC	Non-migratory songbird associated with coastal sage scrub and less often within chaparral in coastal California to Baja California, Mexico, mostly below 2,000 feet elevation. See Section 5.4.3 for additional information.	Lebec, Mint Canyon, Newhall	Unknown – suitable habitat may be present	Recovery Plan (none) 5-Year Review (USFWS 2010b)
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	FE, SE, FSS	Migratory songbird found during the breeding season in dense, riparian thickets along streams and wetlands. Range includes southern California from Kern County south. See Section 5.4.3 for additional information.	None	Unknown – suitable habitat may be present	Recovery Plan (USFWS 2002b) 5-Year Review (USFWS 2017a)



**ESA-Listed Species (continued)**

Common Name/ Scientific Name	Status	Habitat Associations	Known Occurrences in Project Vicinity Quadrangles	Occurrence in Project Area	USFWS Recovery Plans and 5-Year Reviews
Least Bell's Vireo ( <i>Vireo bellii pusillus</i> )	FE, SE	Migratory songbird found during the breeding season in dense, willow-dominated riparian habitat and adjacent chaparral in river valleys. Found historically from interior northern California to northwestern Baja California, Mexico. See Section 5.4.3 for additional information.	Val Verde, Newhall, Warm Springs Mountain, Piru	Unknown – suitable habitat may be present	Recovery Plan (USFWS 1998a) 5-Year Review (USFWS 2006)
Western Yellow-billed Cuckoo, western DPS ( <i>Coccyzus americanus</i> )	FT, SE, FSS	Migratory songbird associated with large blocks of riparian habitat, which contain trees of different ages, especially large, mature trees required for nesting and foraging. As such, breeding populations generally not found on smaller streams. Winters in South America. See Section 5.4.3 for additional information.	Val Verde	No – no recent records, Project is not within species' current known range, and the species was not identified by IPaC as a concern	Recovery Plan (none) 5-Year Review (none)
San Joaquin Kit Fox ( <i>Vulpes macrotis mutica</i> )	FE, ST	Small canid found associated with open, level, sandy ground where deep, sub-surface dens are inhabited. Occurs in San Joaquin Valley as far south as Kern County and northeastern Santa Barbara County. Habitats include alkali scrub/shrub and arid grasslands.	None	No – Project is outside of the species range	Recovery Plan (USFWS 1998c) 5-Year Review (USFWS 2010d)
Slender-horned Spineflower ( <i>Dodecahema [Centrostegia] leptoceras</i> )	FE, SE	Annual herb (Family Polygonaceae) found on floodplain terraces and sandy benches, areas that flood infrequently. Occurrences are associated with alluvial fan scrub. See Section 5.4.3 for additional information.	Newhall, Mint Canyon	Unknown	Recovery Plan (none) 5-Year Review (USFWS 2010)
Marsh Sandwort ( <i>Arenaria paludicola</i> )	FE, SE	Annual herb (Family Caryophyllaceae) found historically in scattered sites in swamps and freshwater marshes (sea level to 1,480 feet). Currently known to occur at only two sites in San Luis Obispo County, California. Some sources suggest the species may be under-reported due to misidentification. See Section 5.4.3 for additional information.	None	Unknown	Recovery Plan (USFWS 1998b, 2018b) 5-Year Review (USFWS 2008a)
Nevin's barberry ( <i>Berberis nevini</i> )	FE, SE	Perennial (evergreen) shrub (Family Berberidaceae) native to chaparral and adapted to the natural fire regime for this habitat (also in washes). Endemic to southern California in scattered occurrences in Riverside, Los Angeles, and San Bernardino Counties (mostly 1,400 to 1,700 feet in elevation, rarely to 2,000 feet). See Section 5.4.3 for additional information.	Newhall, Warm Springs Mountain	Unknown – assessment is complicated by horticultural introductions	Recovery Plan (none) 5-Year Review (USFWS 2009b)
Gambel's Watercress ( <i>Nasturtium [Rorippa] gambelii</i> )	FE, ST	Perennial herb (Family Brassicaceae) found historically at scattered sites in freshwater marshes and near streams in southern California and a site in Mexico. Nearly all known populations have been extirpated, including hybridization with common watercress ( <i>N. aquaticum</i> ). Currently known to occur at one site in Santa Barbara County and introduced at another site in San Luis Obispo County. Some sources suggest the species may be under-reported. See Section 5.4.3 for additional information.	None	Unknown	Recovery Plan (USFWS 1998b, 2018b) 5-Year Review (USFWS 2011c)

**ESA-Listed Species (continued)**

Common Name/ Scientific Name	Status	Habitat Associations	Known Occurrences in Project Vicinity Quadrangles	Occurrence in Project Area	USFWS Recovery Plans and 5-Year Reviews
Conejo Dudleya ( <i>Dudleya parva</i> [ <i>D. abramsii</i> ssp. <i>parva</i> ])	FT	Succulent perennial herb (Family Crassulaceae) endemic to the western part of the Simi Hills south of the Santa Clara River between Moorpark and Thousand Oaks. Found only in a band of Conejo volcanics and growing in shallow rocky soils at the base of outcrops.	None	No – Project is outside of species range	Recovery Plan (USFWS 1999b) 5-Year Review (USFWS 2015)
Braunton's Milk-vetch ( <i>Astragalus brauntonii</i> )	FE	Perennial herb (Family Fabaceae) associated with carbonate substrates (or downwash sites below carbonate substrates) in chaparral and coastal sage scrub where shrubs are sparse. Appears after fire or mechanical soil disturbance, but short-lived. Known only from small disjunct areas in Simi Hills, Santa Monica Mountains, and Santa Ana Mountains in Ventura, Los Angeles, and Orange Counties (800 to 2,100 feet in elevation).	None	No – Project is outside of species range	Recovery Plan (USFWS 1999b) 5-Year Review (USFWS 2009c)
Spreading Navarretia ( <i>Navarretia fossalis</i> )	FT	Annual herb (Family Polemoniaceae) occurring in vernal pools and poorly drained, seasonally flooded, alkali playas Known only from Riverside County, San Diego County, and a few sites in Los Angeles County, as well as in northwestern Baja California, Mexico (100 to 2,200 feet in elevation). See Section 5.4.3 for additional information.	Mint Canyon	Unknown	Recovery Plan (USFWS 1998d) 5-Year Review (USFWS 2009d)
Lyon's Pentachaeta ( <i>Pentachaeta lyonii</i> )	FE, SE	Annual herb (Family Asteraceae) associated with rocky, clay soils in relatively open pocket grasslands transitional to shrublands within chaparral and coastal sage scrub. Does not compete well with introduced annual grasses and weeds. Currently known only from two areas of coastal California in Ventura and Los Angeles Counties (extirpated from Palos Verdes Peninsula and Santa Catalina Island) (280 to 2,060 feet in elevation).	None	No – Project is outside of species range	Recovery Plan (USFWS 1999b) 5-Year Review (USFWS 2008b)
California Orcutt Grass ( <i>Orcuttia californica</i> )	FE, SE	Annual grass (Family Poaceae) endemic to deep vernal pools with clay soils in Ventura, Los Angeles, Riverside, and San Diego Counties. Typically found in the parts of vernal pools that remain wet for the longest period. See Section 5.4.3 for additional information.	Mint Canyon	Unknown	Recovery Plan (USFWS 1998d) 5-Year Review (USFWS 2011a)

Sources: CDFW 2018, USFWS 2018a

Note:

Species identified by queries for Project Vicinity quadrangles on USFWS' online Information for Planning and Consultation (IPaC) (USFWS 2018a), the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018), and the California Fish and Wildlife California Natural Diversity Database (CNDDDB) (CDFW 2018).

Key:

FE = federal endangered, FT = federal threatened, FSS = U.S. Department of Agriculture, Forest Service, Sensitive Species, SE = California State endangered, ST = California State threatened, SFP = California State fully protected, SSC = California State species of special concern

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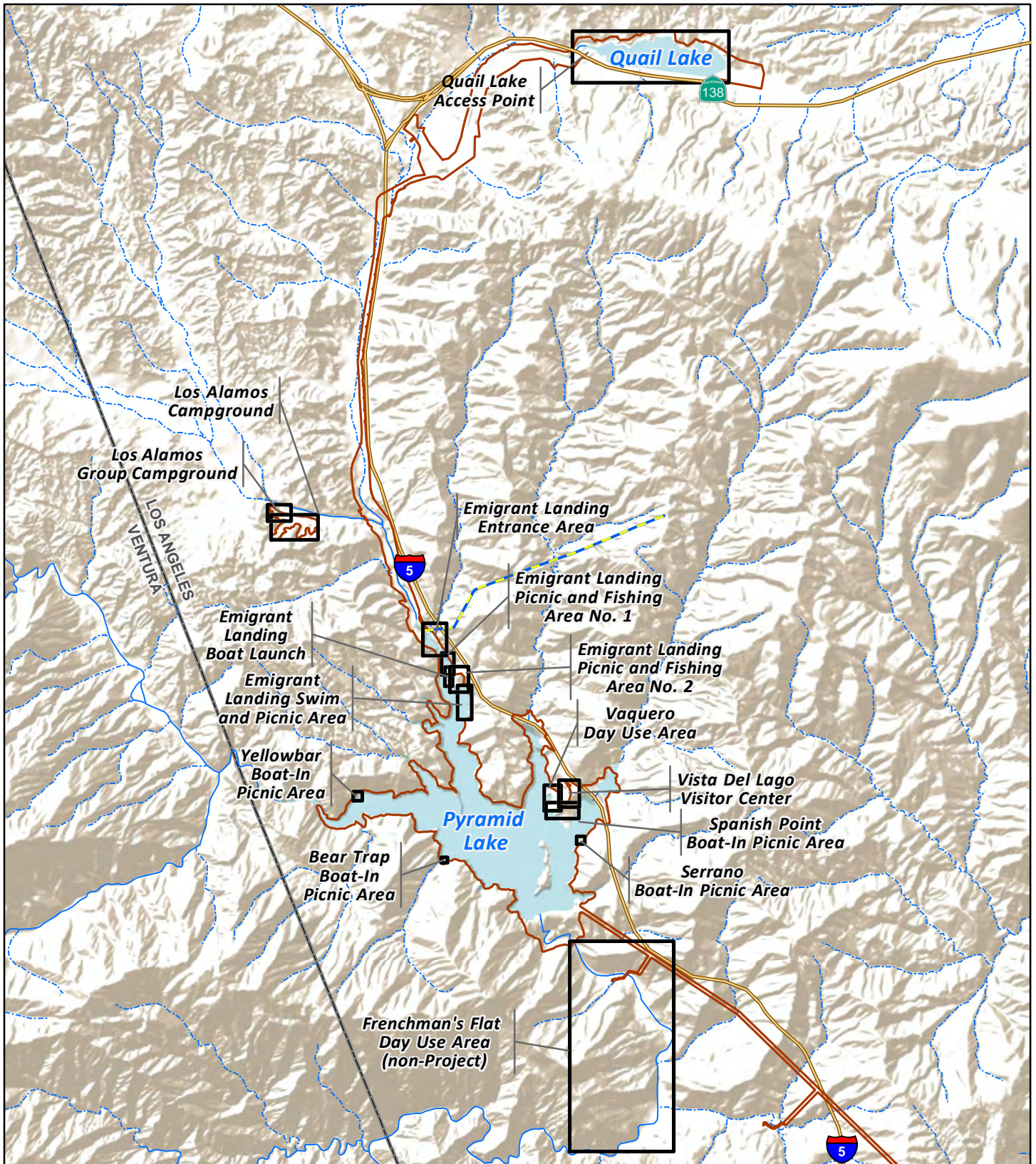
## **Appendix Q**

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### ***Project Recreation Facilities Mapbook***

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**Legend**

- Transmission Line
- Intermittent Stream/River
- Perennial Stream/River
- Major Highways
- Proposed Project Boundary (v.20190718)
- Individual Recreation Map Book Page Extent
- County Boundary

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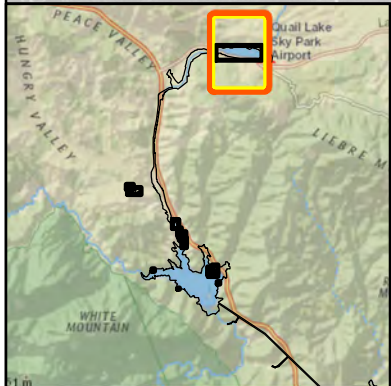
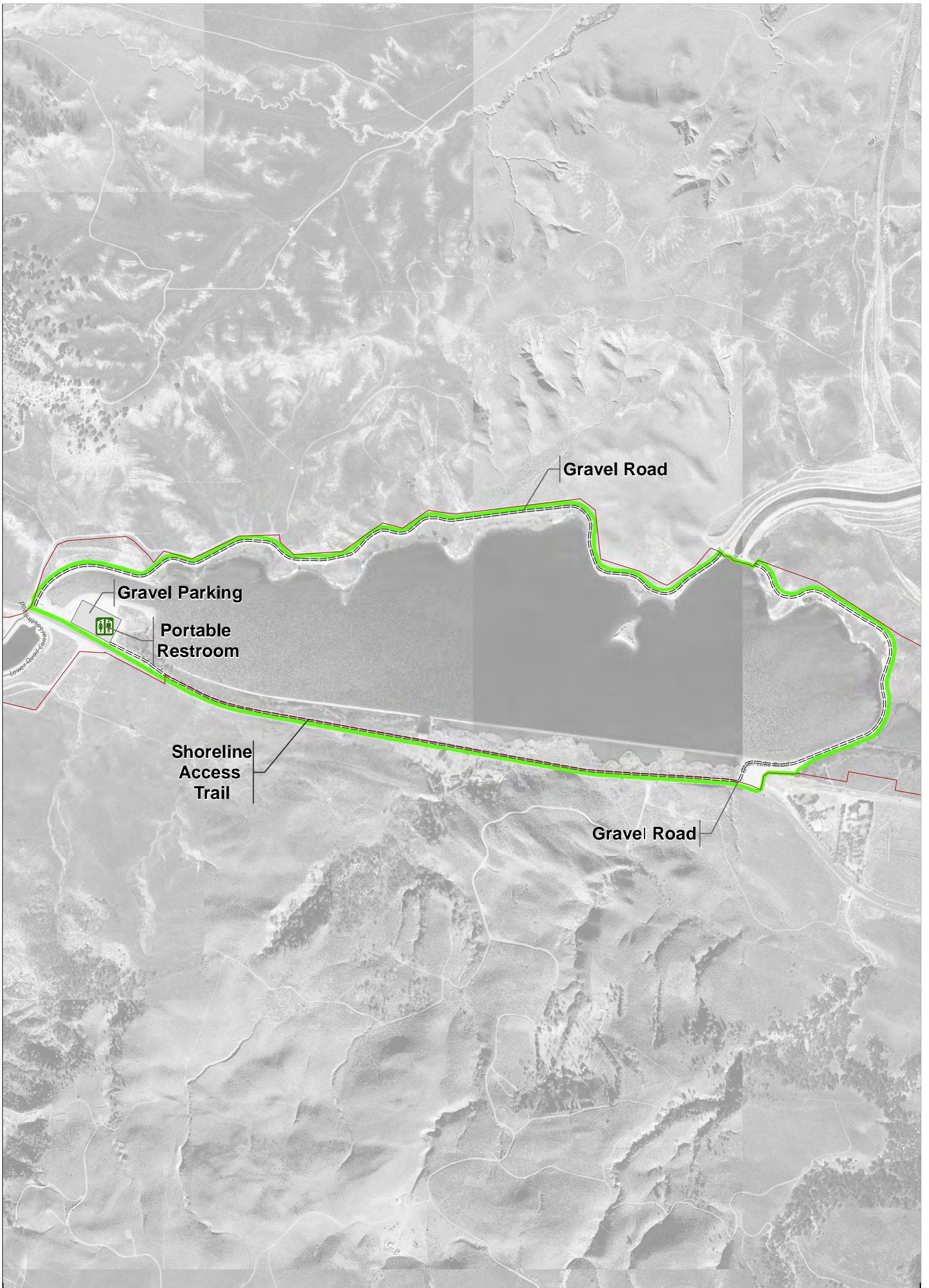
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**Recreation Map Book  
 Page Index**

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**Legend**

- Proposed Project Boundary (v.20190718)
- Recreation Site
- Portable Restroom
- Gravel Parking
- Gravel Access Road/Trail

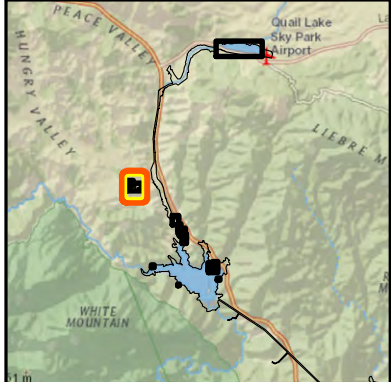
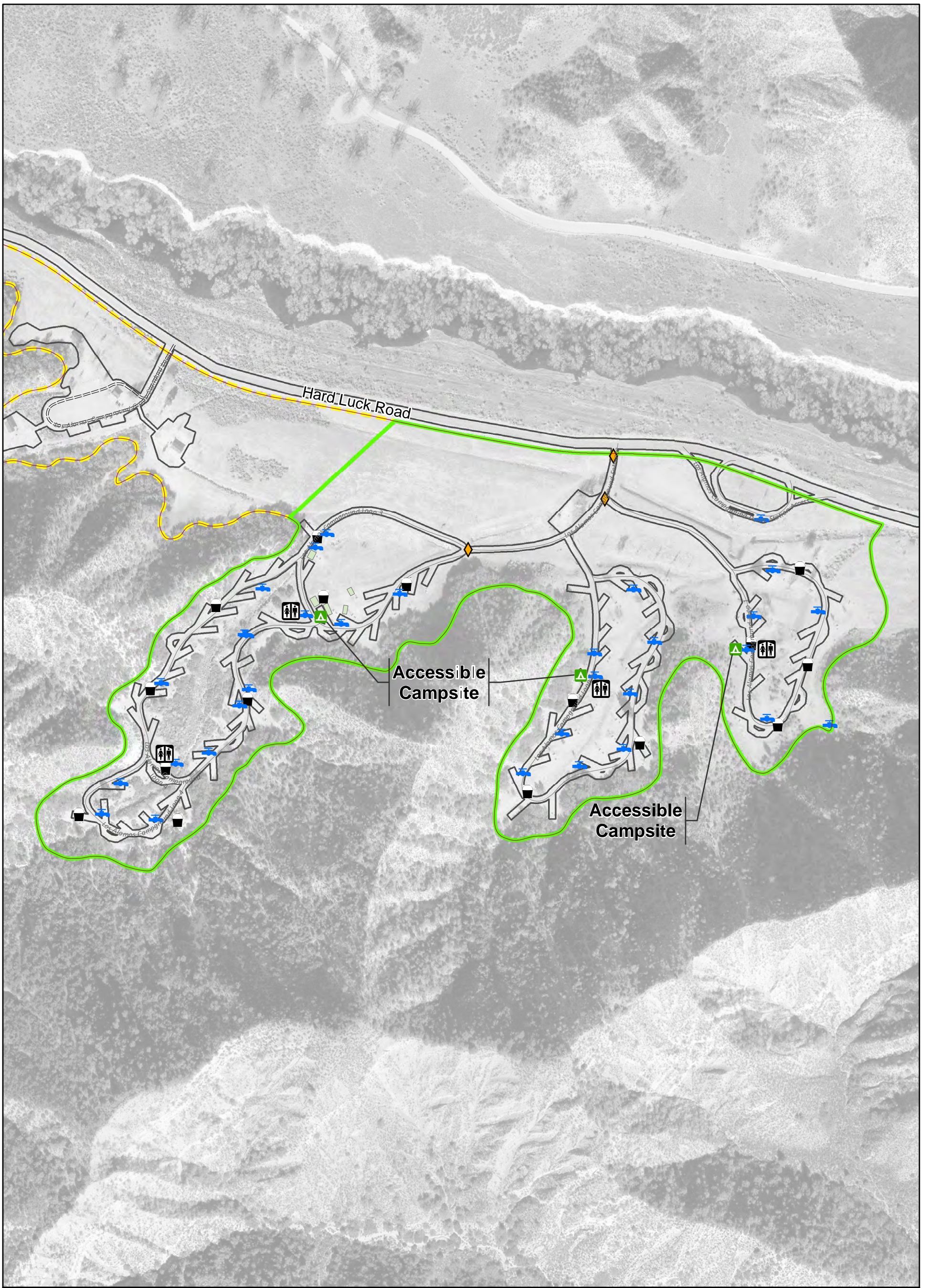
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Quail Lake Day Use Area**  
**Figure 1 of 14**





**Legend**

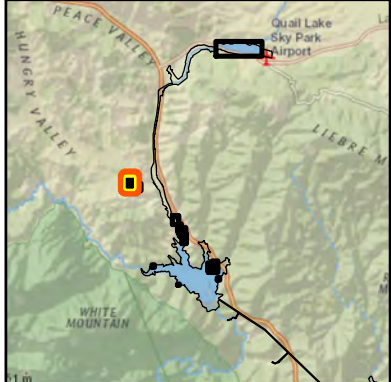
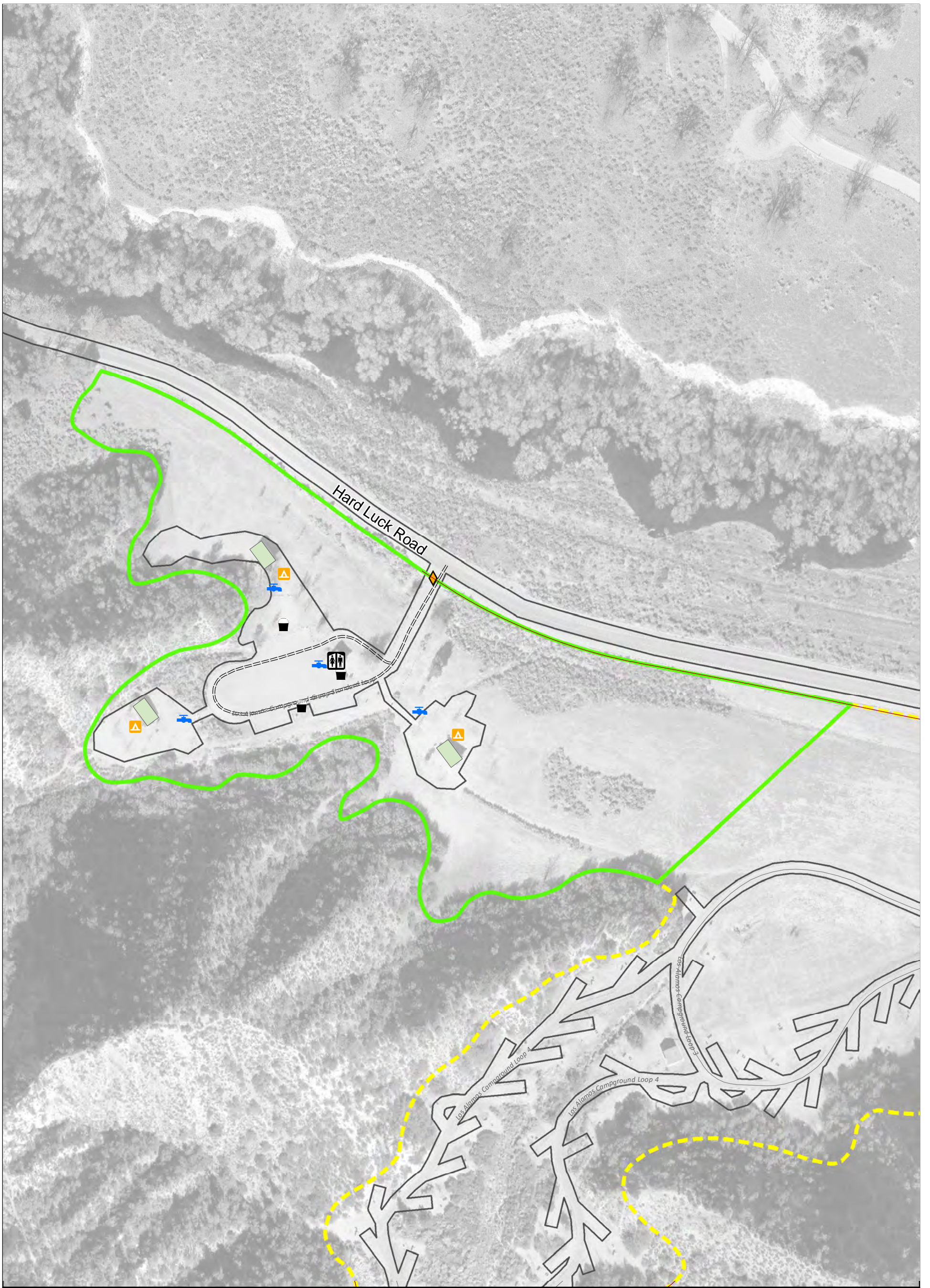
Proposed Project Boundary (v.20190718)	Trash
Recreation Site	Shade Ramada
Adjacent Recreation Site	Gravel Access Road/Trail
Existing Recreation Plan Common Features	
Campsite (Accessible)	
Gate	
Spigot	
Restroom	

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
 \\Us0349-pfss01\shared\_projects\224202042\gis\_MXDs\Recreation\SSWP\_Recreation\_Mapbook\_20190819.mxd

SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities**  
**Los Alamos Campground**  
**Figure 2 of 14**



**Legend**

- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- ▲ Group Campsite
- ◆ Gate
- + Spigot
- ♿ Restroom
- Trash
- Shade Ramada
- Gravel Access Road/Trail

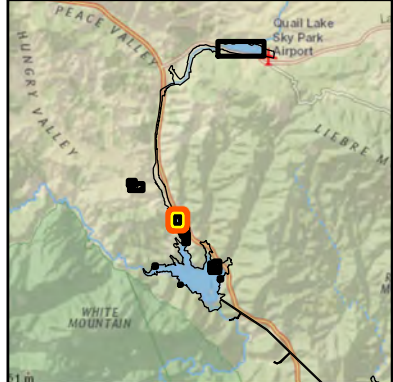
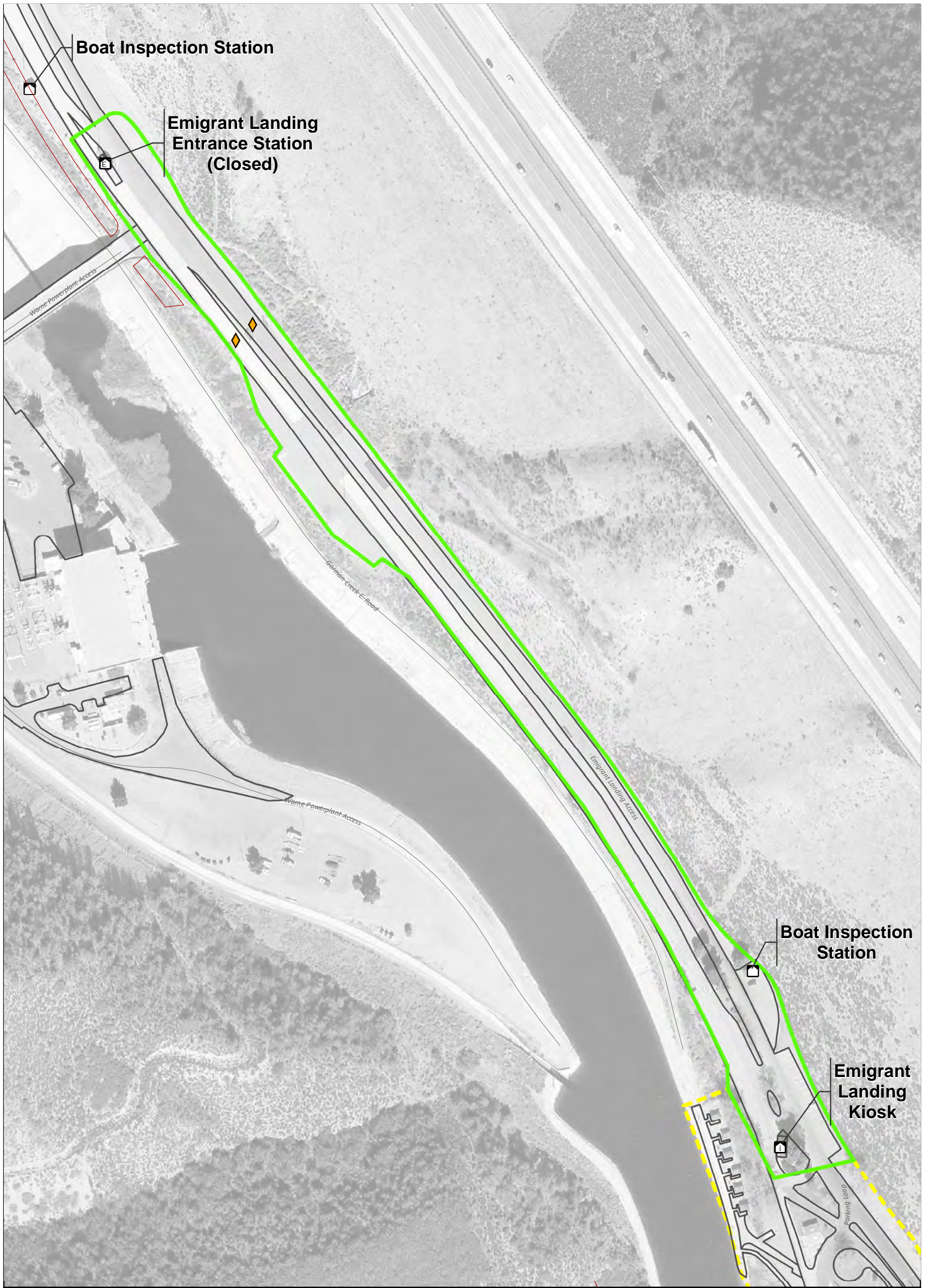
0    62.5    125    250  
 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Los Alamos Group Campground**  
**Figure 3 of 14**



**Legend**

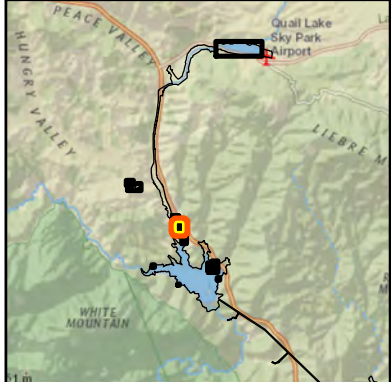
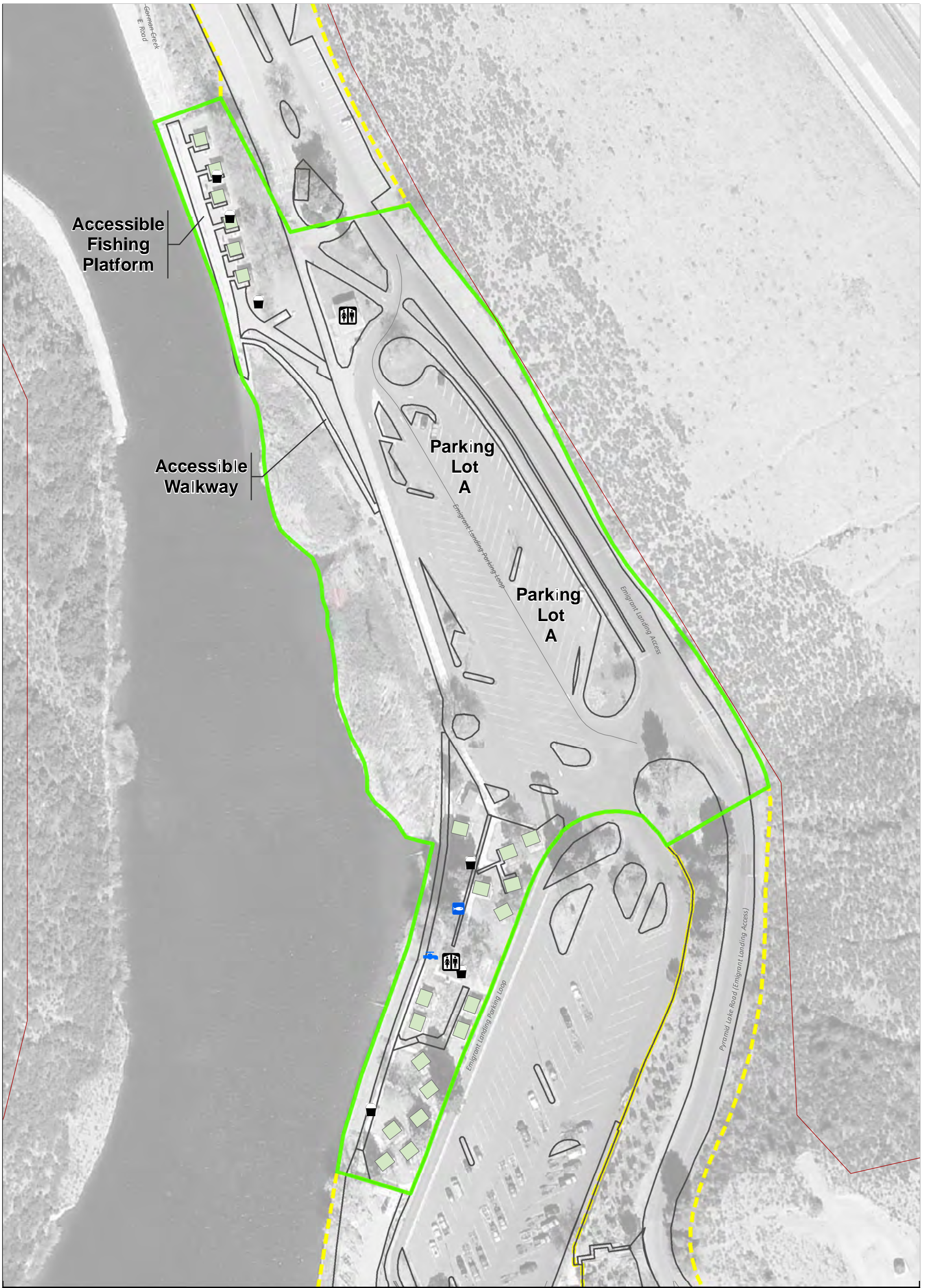
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- Building
- E Entrance Building
- Kiosk
- Gate

0    62.5    125    250 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
 U:\224202042\gis\MXDs\Recreation\SSWP\_Recreation\_Mapbook\_20190819.mxd

SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities**  
**Emigrant Landing Entrance Station**  
**Figure 4 of 14**



**Legend**

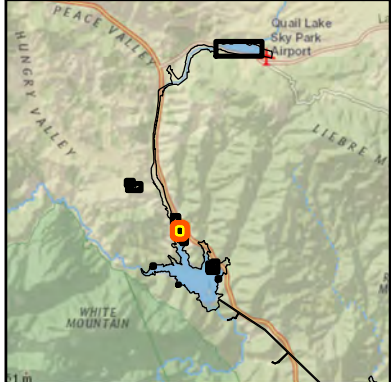
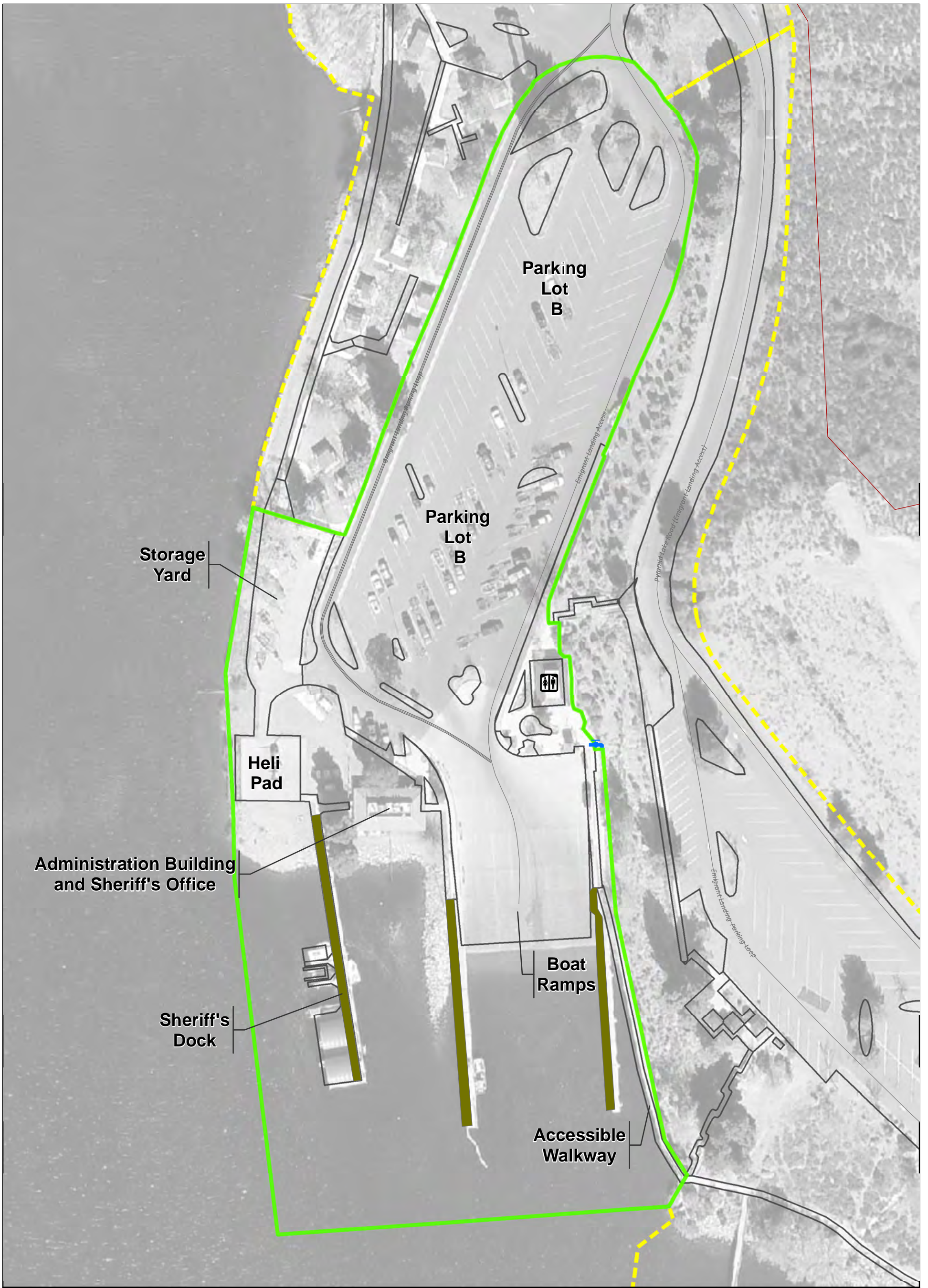
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- Fish Cleaning Station
- Spigot
- ♿ Restroom
- ♻️ Trash
- Shade Ramada
- Paved Access Road

0    40    80    160  
 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
 U:\224202042\gis\MXDs\Recreation\SSWP\_Recreation\_Mapbook\_20190819.mxd


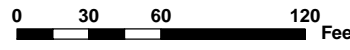
SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities**  
**Emigrant Landing Picnic and Fishing**  
**Area No. 1**  
**Figure 5 of 14**



**Legend**



- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- + Spigot
- ♿ Restroom
- Boat Dock
- Paved Access Road

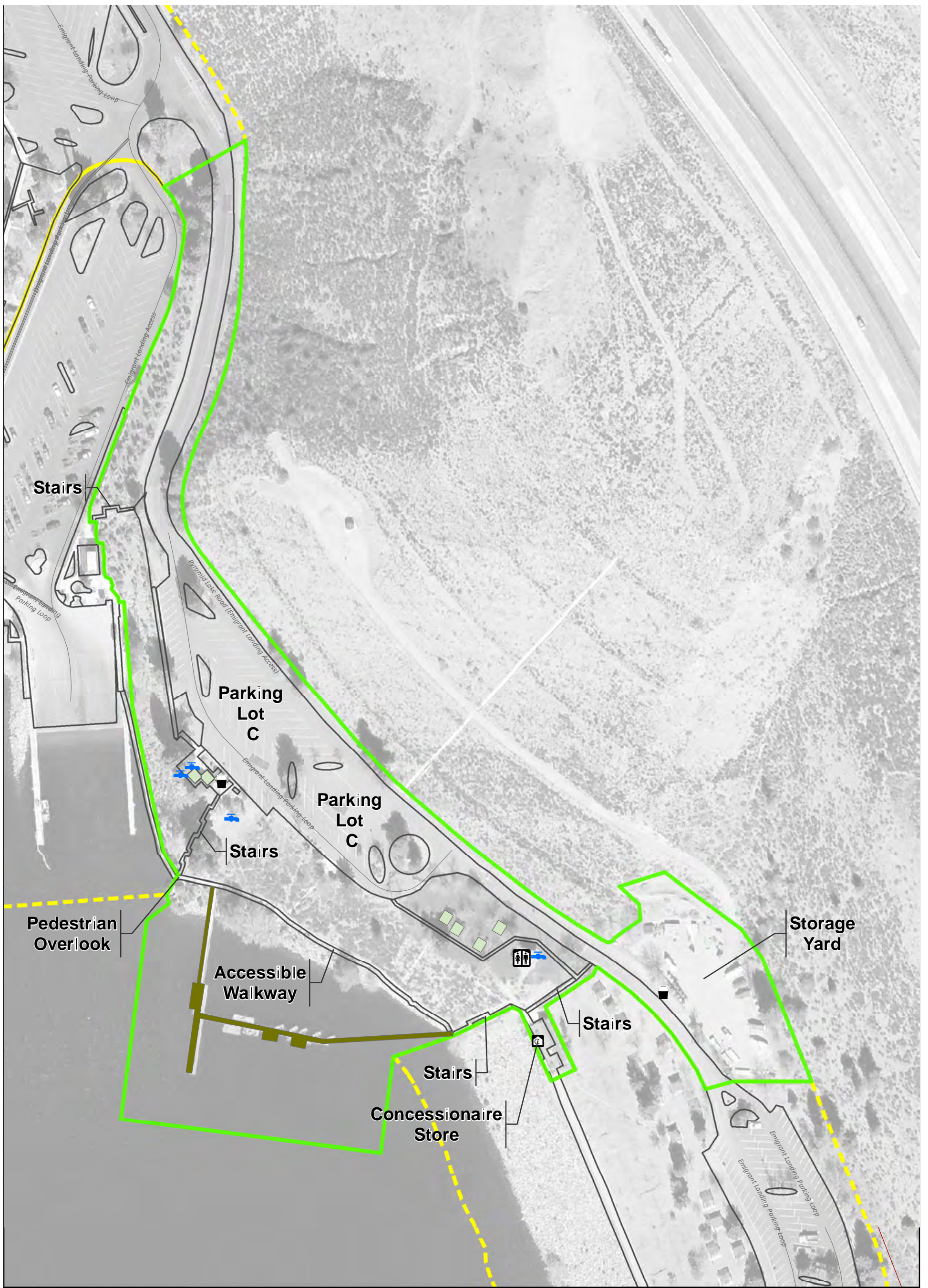
Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
 U:\224202042\gis\_MXDs\Recreation\SSWP\_Recreation\_Mapbook\_20190819.mxd

SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities**  
**Emigrant Landing Boat Launch**  
**Figure 6 of 14**





**Legend**

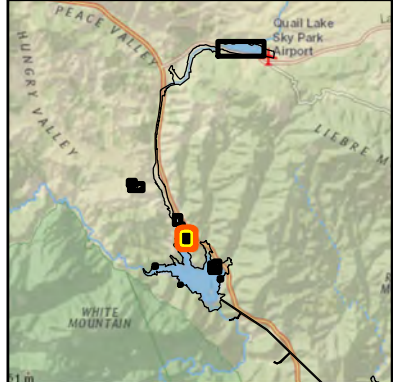
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- Boat Dock
- Shade Ramada
- Paved Access Road
- Concessionaire
- Spigot
- Restroom
- Trash

0   50   100   200 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities  
Emigrant Landing Picnic and Fishing  
Area No. 2  
Figure 7 of 14**



**Legend**

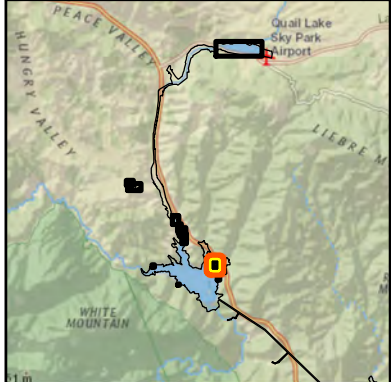
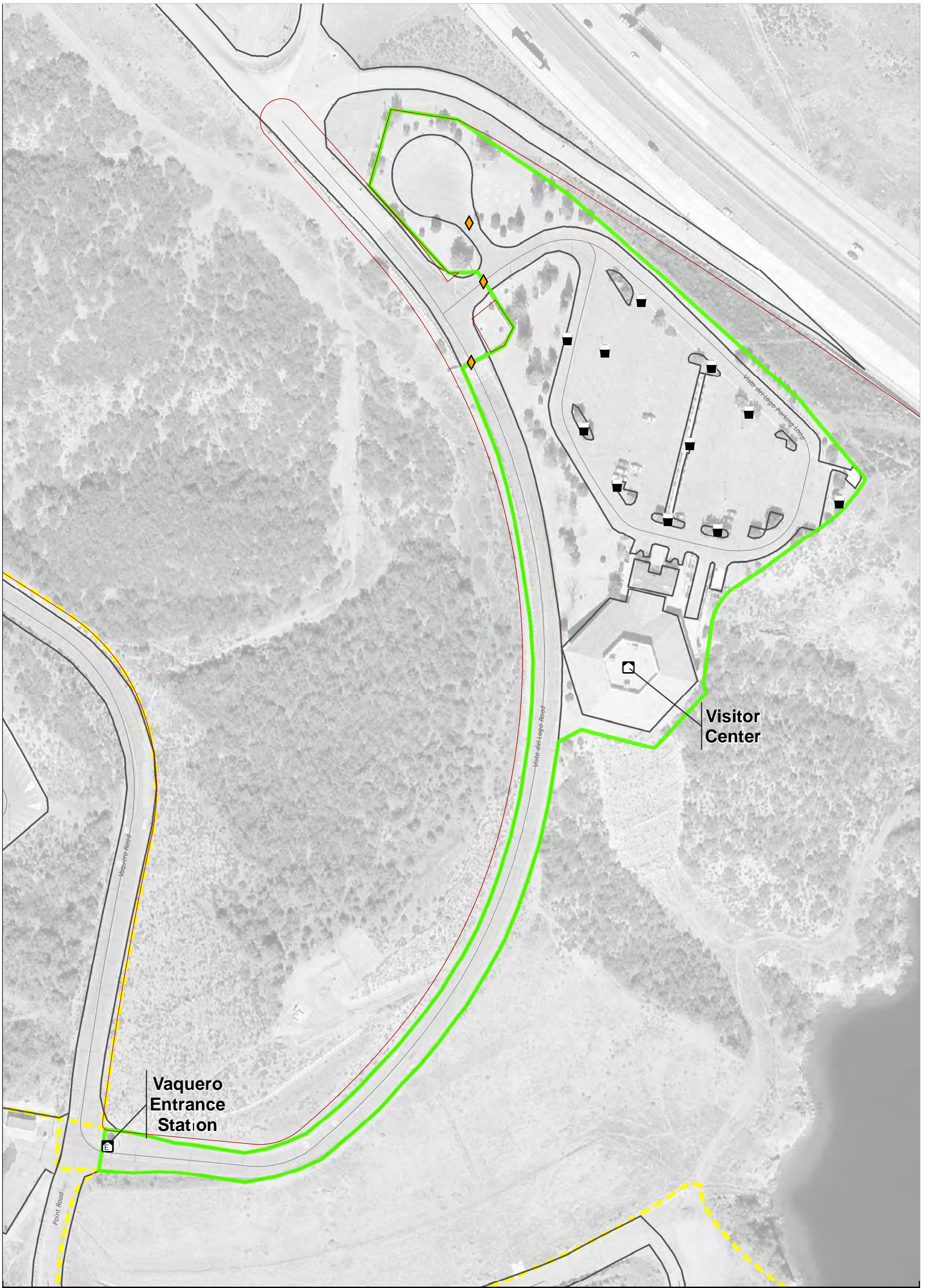
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- Spigot
- Lifeguard Tower
- Restroom
- Trash
- Shade Ramada

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

**South State Water Project Recreation Facilities  
Emigrant Landing Swim and Picnic  
Area**

**Figure 8 of 14**



**Legend**

- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- Building
- Entrance Building
- ◆ Gate
- Trash

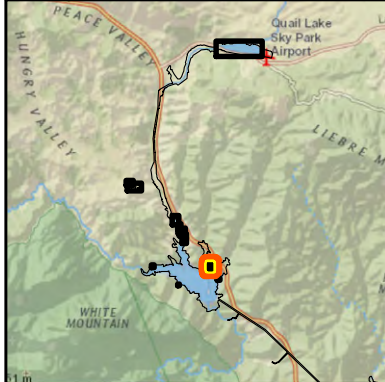
0    50    100    200 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Vista Del Lago Visitor Center**  
**Figure 9 of 14**



**Legend**

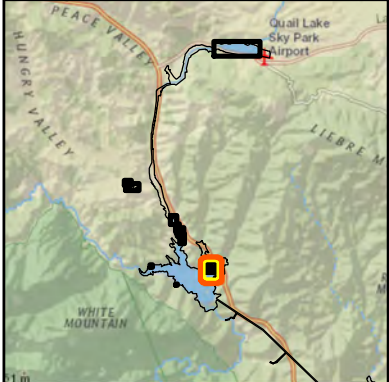
Proposed Project Boundary (v.20190718)	Recreation Site	Boat Dock	Shade Ramada
Adjacent Recreation Site	Existing Recreation Plan Common Features	Spigot	Lifeguard Tower
Spigot	Restroom	Trash	

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
 Prepared: August 2019  
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**SOUTH SWP HYDROPOWER RELICENSING**  
**FERC PROJECT NO. 2426**

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**South State Water Project Recreation Facilities**  
**Vaquero Day Use Area**  
**Figure 10 of 14**



**Legend**

- Proposed Project Boundary (v.20190718)
- Recreation Site
- Adjacent Recreation Site
- Existing Recreation Plan Common Features
- ◆ Gate
- Restroom
- Trash
- Shade Ramada

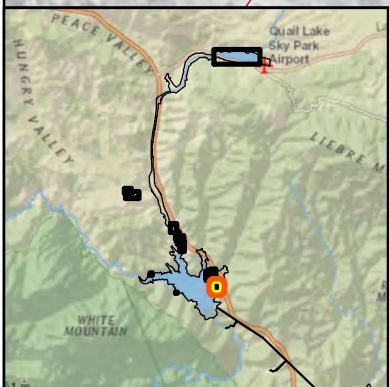
0 85 170 340 Feet

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Spanish Point Boat-In Picnic Area**  
**Figure 11 of 14**



**Legend**

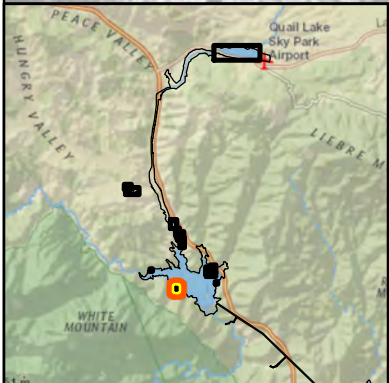
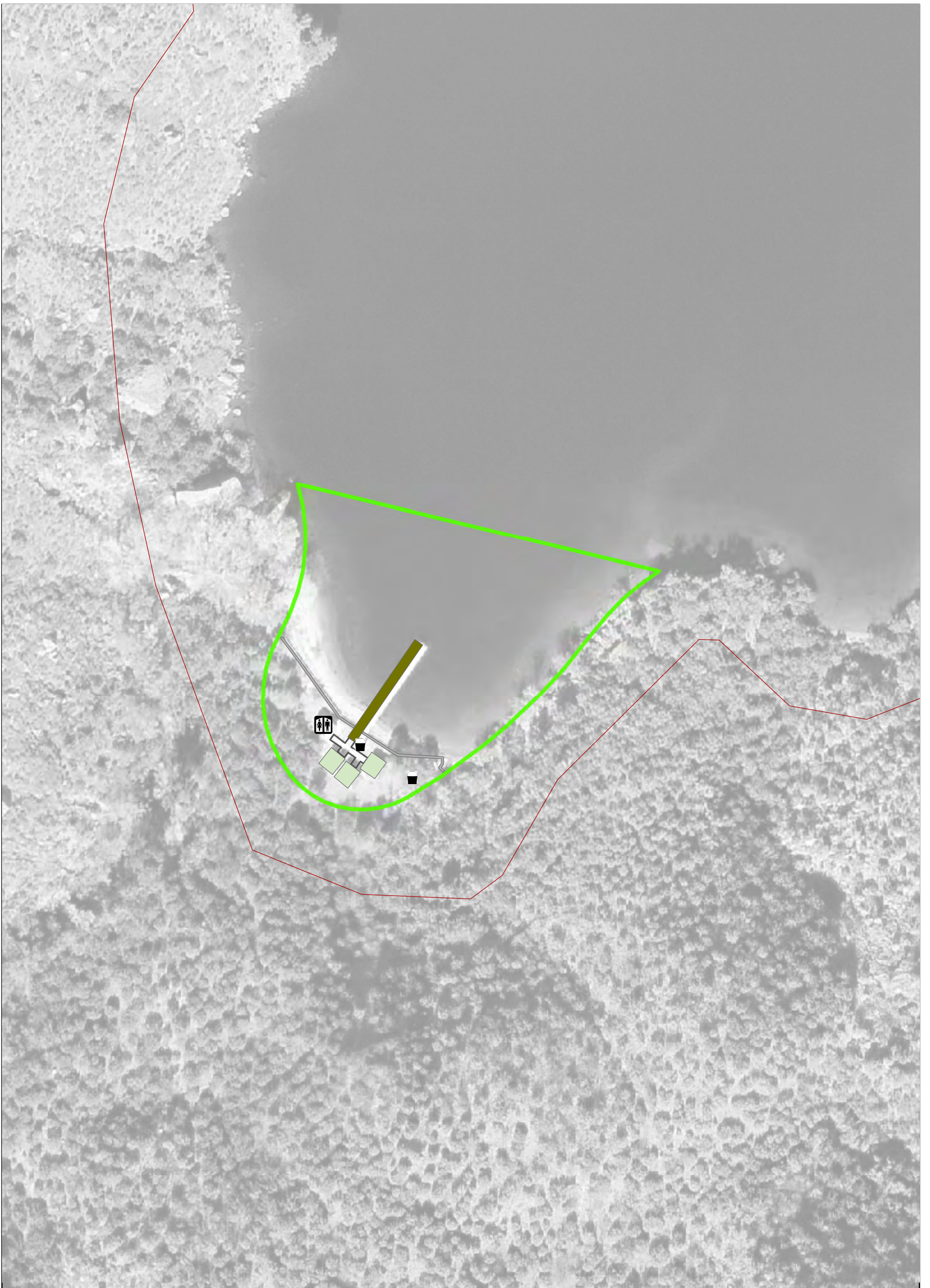
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Restroom
- Trash
- Boat Dock
- Shade Ramada

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Serrano Boat-In Picnic Area**  
**Figure 12 of 14**



**Legend**

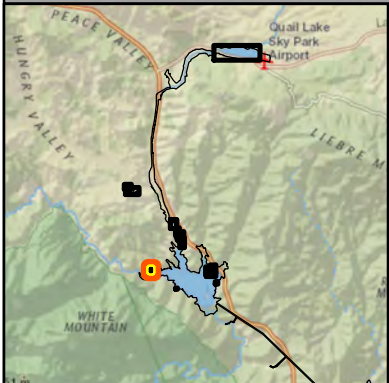
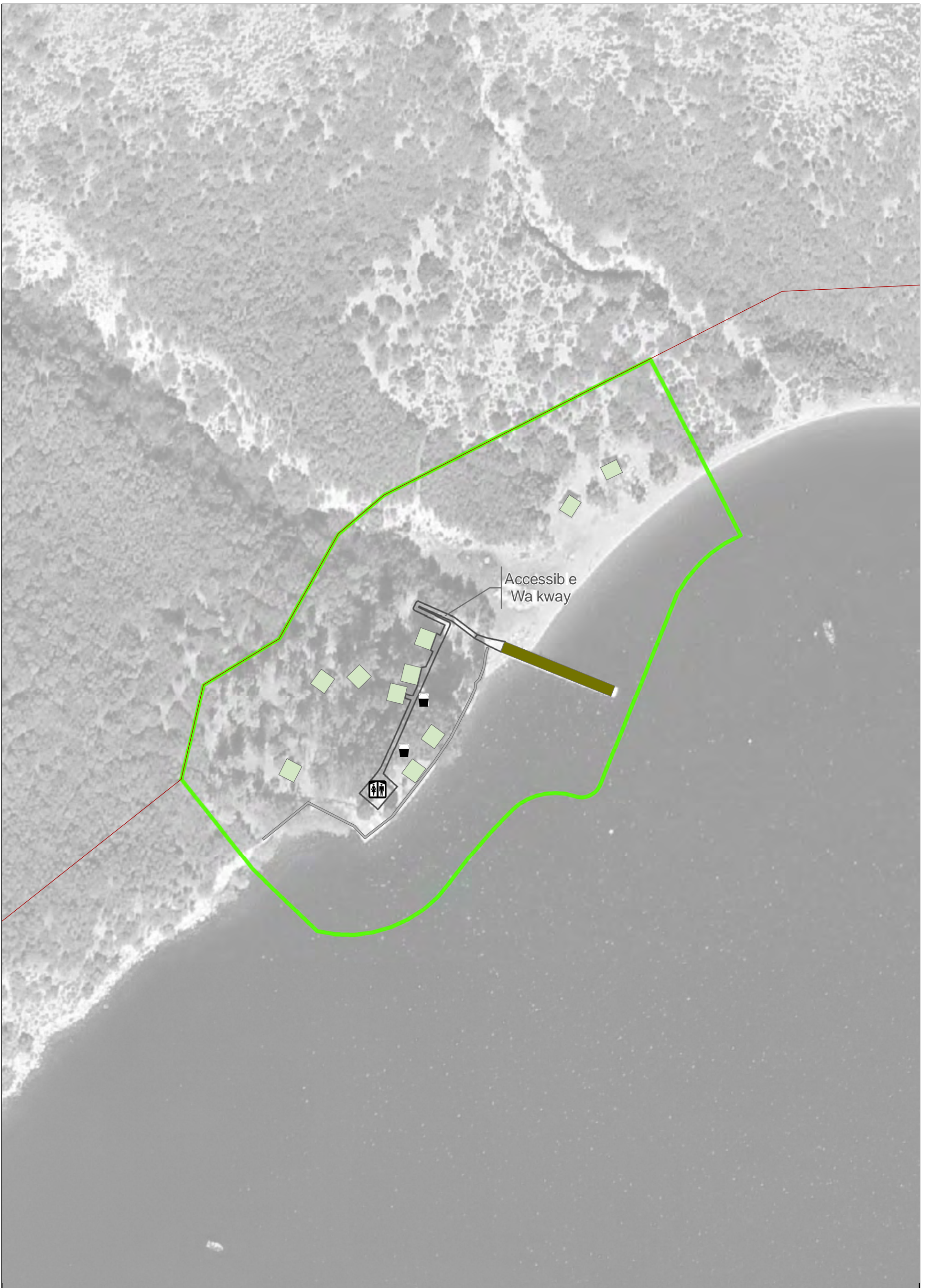
- Proposed Project Boundary (v.20190718)
- Recreation Site
- Existing Recreation Plan Common Features
- Restroom
- Trash
- Boat Dock
- Retaining Wall
- Shade Ramada

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
 FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Bear Trap Boat-In Picnic Area**  
**Figure 13 of 14**



**Legend**

- Proposed Project Boundary (v.20190718)
- Recreation Site
- Existing Recreation Plan Common Features
- Restroom
- Trash
- Boat Dock
- Retaining Wall
- Shade Ramada

Projection: NAD 1983 2011 StatePlane California V FIPS 0405 Ft US  
 Background: USGS (2013)  
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SOUTH SWP HYDROPOWER RELICENSING  
FERC PROJECT NO. 2426

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**South State Water Project Recreation Facilities**  
**Yellowbar Boat-In Picnic Area**  
**Figure 14 of 14**



**Appendix R**

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***Pyramid and Quail Lake Visitor Use Summary 2018***

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## APPENDIX Q -PYRAMID AND QUAIL LAKE VISITOR USE SURVEY 2018

The Department of Water Resources is conducting interviews of visitors at Pyramid and Quail Lake Recreation Sites as well as Frenchman’s Flat. The information collected will help us better serve our visitors by knowing what activities they do, how long they stay, and how satisfied they are with the facilities and services provided. Your participation is voluntary, and all information is confidential. Scan the QR code to the right to take this survey on your smart device.



### Screening Questions

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Site:** \_\_\_\_\_ **Surveyor:** \_\_\_\_\_

1. I need to select just one of you to complete this interview. Which of you had the most recent birthday and is 16 years of age or older? *(Direct ALL questions to only this person)*
2. What is your home ZIP code? \_\_\_\_\_ or if visiting from outside of U.S., name of country you are visiting from: \_\_\_\_\_ (Optional)

3. What is the primary purpose of your visit? *(Choose only one)*

<input type="checkbox"/>	Working or commuting to work. <b>End Survey</b> "Thank you. That's all the information I need today."
<input type="checkbox"/>	Only stopping to use the bathroom. <b>End Survey</b> "Thank you. That's all the information I need today."
<input type="checkbox"/>	Only passing through, going somewhere else. <b>End Survey</b> "Thank you. That's all the information I need today."
<input type="checkbox"/>	Some other reason. <b>End Survey</b> "Thank you. That's all the information I need today."
<input type="checkbox"/>	Recreation (GO TO Q5)

4. When did you arrive at Pyramid Lake, Los Alamos Campground, Frenchman’s Flat, and/or Quail Lake?

Date: \_\_\_\_\_ Time: \_\_\_\_\_ a.m. p.m.

5. When do you plan to leave Pyramid Lake, Los Alamos Campground, Frenchman’s Flat, and/or Quail Lake? *(Choose only one)*

<input type="checkbox"/>	Not leaving this site today.
<input type="checkbox"/>	Don't know.
<input type="checkbox"/>	Leaving now Time: _____ <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
<input type="checkbox"/>	Leaving later Time/Date: _____ <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.

### Regarding your recreation activities

6. Including this visit, how many times have you come to this site for recreation in the past 12 months? \_\_\_\_\_

**DWR SSWP RECREATION SURVEY - INTERCEPT AND OBSERVATION SURVEY DATA ANALYSIS**

0 – Appendix Q -Pyramid and Quail Lake Visitor Use Survey 2018

7. Which of the following activities have you participated in or intend to participate in during this visit to the area?

<input type="checkbox"/>	RV/trailer camping	<input type="checkbox"/>	Water skiing	<input type="checkbox"/>	Sunbathing	<input type="checkbox"/>	Jet skiing
<input type="checkbox"/>	Tent camping	<input type="checkbox"/>	Windsurfing	<input type="checkbox"/>	Picnicking	<input type="checkbox"/>	Family time/reunion
<input type="checkbox"/>	Fishing from shore	<input type="checkbox"/>	Sailing	<input type="checkbox"/>	Sightseeing	<input type="checkbox"/>	Paddle boarding
<input type="checkbox"/>	Fishing from boat	<input type="checkbox"/>	Sports/exercise	<input type="checkbox"/>	Wildlife viewing	<input type="checkbox"/>	Swimming
<input type="checkbox"/>	Fishing (belly boat)	<input type="checkbox"/>	Canoeing/kayaking	<input type="checkbox"/>	Hiking	<input type="checkbox"/>	Biking
<input type="checkbox"/>	Motor boating	<input type="checkbox"/>	Pontoon boating	<input type="checkbox"/>	Pet play	<input type="checkbox"/>	Other_____

8. Which of the above activities is your primary activity for this recreation visit?

\_\_\_\_\_

9. How many hours do you anticipate participating in the primary activity noted above during this visit? \_\_\_\_\_

10. Are you interested in a remote stream based camping experience?  Yes  No

11. If yes to the above question, would you like more of this type of experience available near Pyramid and/or Quail Lake?  Yes  No

12. Overall how satisfied are you with this visit to Pyramid Lake, Los Alamos Campground, Frenchman’s Flat, and/or Quail Lake?

<input type="checkbox"/>	Very dissatisfied	<input type="checkbox"/>	Somewhat dissatisfied	<input type="checkbox"/>	Neither dissatisfied nor satisfied	<input type="checkbox"/>	Somewhat satisfied	<input type="checkbox"/>	Very satisfied
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13. What is the number one improvement you would like to see at Pyramid Lake, Los Alamos Campground, Frenchman’s Flat, and/or Quail Lake?

\_\_\_\_\_

**DWR SSWP RECREATION SURVEY - INTERCEPT AND OBSERVATION SURVEY DATA ANALYSIS**

0 – Appendix Q -Pyramid and Quail Lake Visitor Use Survey 2018

14. The following section lists things you may or may not have experienced at Pyramid Lake, Los Alamos Campground, Frenchman’s Flat, and/or Quail Lake. Please rate the following amenities or conditions.

	A big problem	A moderate problem	A slight problem	Not a problem	No Opinion
Easy access to the destination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of trash receptacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling of safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of Restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of shaded areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of desired picnic sites/ tables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise or disturbances from other users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Site crowding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of getting around between recreation areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequacy of directional or information signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facility fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of desired campsites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wait times to launch a boat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Numbers of watercraft on the lake	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Choice of food/supplies at concession area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____ _____ _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**DWR SSWP RECREATION SURVEY - INTERCEPT AND OBSERVATION SURVEY DATA ANALYSIS**

0 – Appendix Q -Pyramid and Quail Lake Visitor Use Survey 2018

15. How do you feel about the following?

	Too High	About Right	Too Low	No Opinion	Specific Location (if applicable)
Availability of electric power sources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Amount of nearby parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Law enforcement presence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The availability of trails/paths between recreation sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Number of group facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access to areas on shoreline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Amount of screening/privacy between campsites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Amount of educational signs and information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Availability of cell phone service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

16. What, if anything, enhanced your recreation experience today?

\_\_\_\_\_

**Regarding you and your group (optional)**

(This set of questions will help us better understand you and compare your answers to those of other people. Your answers will not be used for anything other than to create general categories of recreation visitors.)

17. How many people (including you) traveled here in the same vehicle as you? \_\_\_\_\_

18. How many are children (under the age of 16)? \_\_\_\_\_

19. What is your age group?  6-25 years  25-40 years  40-60 years  60 + years

20. Do you or anyone in your group have a disability?  Yes  No

21. If yes, were the facilities or areas you visited accessible (The Department of Water Resources wants to make sure they provide opportunities for everyone including those with disabilities)? Yes  No

22. With which ethnic group(s) do you most closely identify? (please choose one or more - Optional)

<input type="checkbox"/>	Hispanic or Latino(a)	<input type="checkbox"/>	American Indian/Alaska Native	<input type="checkbox"/>	Asian	<input type="checkbox"/>	Black/African American
<input type="checkbox"/>	Native Hawaiian or other Pacific Islander	<input type="checkbox"/>	White	<input type="checkbox"/>	Other		