

Fish Passage Improvement at Crossing 9, Quiota Creek

2017

Introduction:

1. Cachuma Operation and Maintenance Board (COMB) will implement the Quiota Creek Fish Passage Improvement at Crossing 9. The purpose of the project is to replace an existing Arizona low-flow crossing. This effort will continue the long-term effort and sequence of projects that will remove all remaining man-made migration barriers within Quiota Creek and throughout the Santa Ynez River basin in Santa Barbara County.

This project will allow *O. mykiss* to gain upstream access to the perennial portions of Quiota Creek as spring and summer flows diminish. In its current state, Crossing 9 acts as a barrier to fish at low flows and any *O. mykiss* found below the crossing are subject to stranding and desiccation in the summer months, particularly in years with below average rainfall (such as 2012-2016). Installing the proposed bottomless arched culvert will allow fish passage for juvenile and adult steelhead/rainbow trout during all flows, which is even more critical during drought years when *O. mykiss* need to seek refuge in perennial habitat further upstream.

2. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Work in flowing streams is restricted per the Army Corp of Engineers Regional General Permit. Actual project start and end dates, within this timeframe, are at the discretion of the California Department of Fish and Wildlife.
3. All habitat improvements will follow techniques described in the *California Salmonid Stream Habitat Restoration Manual*, Volume I, and Volume II Part XI and Part XII. The Grantee/landowner will maintain the new crossing, inspect the crossing in a timely manner and remove debris as necessary during the storm season.

Objective(s):

1. Removing the impediment at Crossing 9 on Quiota Creek and replacing it with a free span bridge will provide access to 2.73 miles of high quality upstream habitat for southern steelhead (*Oncorhynchus mykiss*) spawning, rearing and over-summering. Despite a prolonged period of below average rainfall (Water Year 2012 through 2016), the upper reaches of Quiota Creek (above Crossing 9) continue to hold water and *O. mykiss*, showing its resiliency in maintaining flow and a population of *O. mykiss*.
2. Addresses task "SYR-SCS-3.1 - Develop and implement plan to remove or modify fish passage barriers within the watershed" from the *Southern California Steelhead Recovery Plan*

Project Description:

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Location: The Quiota Creek watershed is located in the lower half of the Santa Ynez River watershed, 8.4 stream miles below Bradbury Dam (Lake Cachuma) (Figures 1 and 2 in Project Location Topographic Map) and 39.6 miles inland from the Pacific Ocean and east of the cities of Lompoc and Buellton. Quiota Creek enters the Santa Ynez River near the town of Santa Ynez within the County of Santa Barbara. Crossing 9 is located 3.30 miles upstream of the Santa Ynez River.

The proposed work in the creek will extend approximately 100 feet upstream and 100 feet downstream of the South Refugio Road crossing. The proposed roadwork extends approximately 200 feet east and 150 feet west of the stream crossing. The project extends from the upstream County Right-of-Way to downstream of the County Right-of-Way and is bounded by privately owned parcels. COMB has actively collaborated with the landowners and will continue to work with each landowner with regard to temporary construction easements and impacts during the implementation of this project.

Quiota Creek Crossing #9 - 34.55477000 : -120.08171000 - location of ford crossing removal and installation of bottomless-arch culvert. The total length of stream that will be treated is 0.04 miles.

Project Set Up:

COMB will be implementing the Quiota Creek Crossing 9 Project. This includes all required permitting, project management (Timothy H. Robinson), and contract administration (preparation of bid documents, advertising the construction project, awarding the contract, conducting the prebid meeting as well as the pre-construction meeting). COMB has on staff two qualified biologists (Scott J. Volan and Scott B. Engblom) who will be conducting surveys for O. mykiss and red-legged frog prior to any construction activities and conduct pre-project safety meetings. COMB is also responsible for erosion control at the project site, and assisting in the installation of the dewatering system (if needed). Biologists will be on site daily to sweep the entire construction site for any sensitive species and conduct daily water quality monitoring if the stream is flowing and bypass system is necessary. Towards the end of the project, COMB will be responsible for planting and maintaining all mitigation trees.

The HDR Fisheries Design Center is responsible for the design and engineering of the Quiota Creek Crossing 9 Project. Specifically, Michael Garello (Civil Engineer, PE) is the lead designer for this project. HDR will conduct site visits for design, engineering oversight and regular communication with the project manager, contractor and subcontractors.

The hired contractor (awarded by COMB through a competitive bidding process, to be named later) will be responsible for the bulk of the on-the-ground construction activities. The hired contractor will be responsible for the mobilization of equipment, demolition of the existing concrete crossing and culvert, and the installation of the new 55-foot bottomless-arched culvert. The contractor will install and operate the dewatering system

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(if needed). The contractor will be responsible for site excavation and prep, exporting unsuitable material, preparing and constructing the Cast-in-Place (CIP) footings for the bridge, building the instream rock weirs, site drainage, and installing the new bridge. Once the bridge is installed, the contractor will complete the road embankment fill, compaction, and grading. The contractor will be preparing, grading, and installing the road base pavement for the road. The contractor will be installing the rock riffle, ESM, backfill, and RSP within and around the stream corridor. The contractor will be responsible for the finished grade, and installation of the cattle exclusion fencing (pickets). Finally, the contractor will be responsible for site clean-up and demobilization, the required County signs and delineators, bridge graffiti coating, and the protection of existing facilities.

The awarded construction contractor will subcontract the following job duties:

- Materials testing
- Hydromulch/hydroseed application
- Guardrail and bridge rail fabrication and installation
- Ranch fence installation

Materials:

If water is present at Crossing 9 during construction, stream bypass and dewatering systems will be installed if necessary, including sandbags, straw bales, visqueen, and piping/culvert, sump pumps, screens, and piping material. Erosion and sedimentation materials will include silt fencing and straw bales.

Bridge Footing preparation will include imported foundation (float) rock and geotextile fabric. Concrete for cast-in-place (CIP) concrete forms will be delivered via truck and a concrete pump truck with an 80-foot boom to reach both footings. The 15 pieces of the 55-foot prefabricated bridge will be constructed at an off-site facility and brought in via large semi-trucks to the project site. A large crane and boom system will be used at the project site to pick from the semi-trucks and place each bridge segment. The vertical profile of Quiota Creek will be maintained with buried rock weir grade control structures, using rocks of 44-inches to 54-inches, approximately 600 tons of material.

Compactable soil (fill) to backfill both road approaches to the new bridge, and areas behind the wing-walls; an excavator, skid steer loader, and vibratory compacters will be used to place and compact the soil.

Crushed road base will be delivered via haul truck to the project site and installed to form the road approaches and across the new bridge. A skid steer loader and vibratory compactor will be used to transfer, grade and compact the new road base material.

Geotextile fabric will be placed to line road drainage areas. Quarry spalls (cobble sized rock) will be imported via haul truck and placed on top of the geotextile to armor the drainages.

Once the road base is installed, graded, and compacted, asphalt will be spread on the bridge approach roads and over the new bridge. Approximately 370 linear feet of guard and bridge rail will be fabricated off-site and then imported to site. The rails will be installed by hand and using a post driver. Anti-graffiti coating will be applied to the new bridge—approximately 22 gallons of concrete sealer (and masonry stain) and 22 gallons of anti-graffiti coating will be used on the new bridge. A power washer, airless sprayer, and 12 feet of scaffolding will be used to clean the bridge and apply the coating.

Approximately 515 tons of ESM will be delivered to the project site. This material will be placed and spread with a large excavator and watered in with gravels, sands and fines. Approximately 660 tons of RSP will be delivered and placed around the bridge foundations and in front of all wingwalls to prevent lateral scour under the bridge and toe scour along the channel slopes to maintain bank stability. Geotextile fabric will be placed under the RSP. Soil will be placed (within the interstitial spaces of the RSP) to facilitate willow stakes and hydraulic roughness. RSP will be imported to the project site and placed with a large excavator.

Towards the end of the project, trees will be planted at the appropriate mitigation rate, commensurate with the number of trees removed or damaged as a result of the project. Only local native trees will be used for revegetation. In addition, hydro-mulch and hydro-seed with a native seed mix approved by CDFW will be broadcast throughout the project footprint.

Cattle exclusion fencing is necessary to keep the herds separate on either side of the creek. A flexible system of picket fence will be installed underneath the bridge. Lumber, wire rope, and hardware will be brought into the project site to build the needed cattle exclusionary fencing. A newly aligned fence line will then be installed to secure the cattle in relation to the new bridge. The contractor will install the pickets and the replacement fencing will be installed by a subcontractor (to be named later).

Once the bridge, road and guardrails are installed, delineators and guardrail reflectors will be placed on both sides of the road. In addition, the County required signage and delineators will be installed as specific by County code.

Tasks:

1. Project management: COMB will conduct and coordinate all aspects of pre-project planning, administration, preparing bid documents, advertising, awarding the contract, running the prebid meeting, project oversight, billing and grant administration and reimbursements.
2. Pre-construction meeting: All landowners will be invited to discuss the impending project, expectations, access needs, timeline and meet the contractor.

3. **Permitting:** Permits include Army Corps of Engineers Permit (ACOE), CDFW 1600 (LSA), S.B. County Encroachment Permit, and SWRCB 401 Certification. All permits will be submitted in the spring of 2018 and are expected to be complete (approved and signed) several months before the start of construction.
4. **Stormwater Pollution Prevention Plan and Traffic Control Plan:** These plans will be completed by the contractor. All plans will be approved and signed by the necessary parties before the start of construction.
5. **Dewatering, Erosion Control, Fish Removal, Road Access, Maintenance and Monitoring, and Re-vegetation Plans:** These will be reviewed and approved through the design approval, by CDFW and NMFS.
6. **Fish and California red-legged frog rescue and relocation:** Although it is unlikely that fish will be present prior to and during construction due to the prolonged drought, appropriate regulatory agencies (CDFW, NMFS, and USFWS) will be notified and a rescue/relocation operation will commence as recommended by the agencies if fish are present. COMB biologists will also be conducting pre-project protocol surveys (and subsequent relocation if present within the footprint) for red-legged frogs and other sensitive species and will provide a report to USFWS.
7. **Stream bypass/dewatering system:** Prior to any on-the-ground construction within the stream channel, the contractor and COMB personnel will install the stream bypass system in the event that water is present within the project site. If a stream bypass is needed, careful consideration will be made to allow all surface water to be reconnected with the stream downstream of the project footprint.
8. **Erosion Control:** COMB will lay out all of the erosion control measures prior to on-the-ground-construction and will maintain it (with assistance from the contractor) throughout the construction.
9. **Demolition:** The contractor will be using heavy equipment (excavator, jackhammer, and haul truck) to demo and remove the existing crossing and road approaches.
10. **Excavation:** The contractor will be using heavy equipment to excavate, stockpile, separate and prepare the area for the installation of the bridge and wingwall footings and reuse existing native materials.
11. **Export material:** The contractor will haul out all unwanted material created from excavation of the project site and dispose in an approved manner.
12. **Footing preparation:** The bridge footings will be prepared by the contractor by laying out geotextile fabric and putting foundation rock below the footings. The contractor will build the footing forms on top of the foundation rock.

13. CIP footings: The contractor will prepare cast-in-place concrete forms and reinforcement. The concrete will be delivered to the site and then pumped to each foundation.
14. Installation of arch bridge and wing walls: The contractor, with the help of a crane truck and crew, will pick each individual piece (15 total) of the 55-foot span prefabricated bridge arch system off a semi-truck and construct the bridge.
15. Road embankment fill, compaction, and grading: The contractor will use various pieces of heavy equipment to move, place and compact soil fill, mainly to construct the road approaches and tie in all other elements of the project up to the designed grade.
16. Installation of Engineered Streambed Material (ESM): The contractor will use an excavator to move and place ESM within the stream channel to create the design stream grade/profile throughout the project site. Native stream bed materials will be used for the ESM.
17. Placement of Rock Slope Protection (RSP): The contractor will place geotextile fabric (by hand) along the banks of the project site that are in need of stabilization and use an excavator to move and place RSP on top of the geotextile. Voids between placed rock will be filled with native cobbles and dirt to allow for revegetation.
18. Site drainage: The contractor will use geotextile fabric and quarry spalls to create the appropriate drainage around the project site.
19. Asphalt road: The contractor will place asphalt along both road approaches and over the bridge.
20. Anti-graffiti treatment: The contractor will clean all exposed areas of the bridge and wingwalls with a power washer, and then use an airless sprayer to apply concrete sealer, masonry stain, and anti-graffiti coating.
21. Installation of Bridge and road guardrails: A subcontractor (to be named later) will install the required guardrails for the road and the bridge once the bridge and wingwalls are in place. Sections of guardrail will be delivered by truck, lifted and installed with appropriate machinery.
22. Replace existing fence: A subcontractor (to be named later) will replace all damaged/removed sections of existing fence line along South Refugio Road.
23. Cattle exclusion fencing: The contractor will construct and install a picket fence underneath the new bridge to prevent cattle from moving into adjacent properties.

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24. Revegetation: COMB will acquire native trees at the required mitigation rate (depending on how many trees are damaged/removed) during the construction of the new bridge and plant them within or in the vicinity of the project area. A subcontractor (to be named later) will spray hydromulch and CDFW approved native seed on all disturbed areas of the project site.

25. County road safety requirements: The contractor will install all required signage and reflectors on the bridge and road guardrails.

26. Protection of existing facilities: The contractor will coordinate with truck drivers and install measures to protect storm water facilities and private property existing within the road right-of-way during all aspects of construction, specifically during Bridge delivery and installation.

27. Site cleanup: The contractor will be cleaning up the entire project site and will leave no traces of construction material, trash, and rubbish. Material will be moved offsite and disposed at an approved facility.

28. Invoice: Invoices will be submitted by COMB to the CDFW FRGP grant program during construction with the final invoice in January, shortly after the completion of the project.

29. Final Report: A final report will be submitted by COMB to the CDFW FRGP grant program. The report will summarize the construction and post-monitoring data to verify that the project was successful in addressing the known limiting factors and identified threats.

Deliverables:

(Tasks 1-5) - Pre-project checklist items (including contract management, design, meetings, and required permits and plans). The bidding and eventual hiring of the contractor will be conducted through a competitive bidding process with the ultimate goal of hiring a licensed, experienced, competent, and efficient construction crew.

(Tasks 6-8) - COMB biologists will be on site daily to make sure all protection measures are in place prior to the commencement of work each day. Erosion control measures will be installed and maintained throughout the project area prior to construction activities to prevent sedimentation and impact to local wildlife and sensitive species, adjacent properties, land, and water.

(Tasks 9-19) - This portion of the task list will allow fish passage to designated critical spawning and rearing habitat upstream by removing the Arizona crossing and replacing it with a prefabricated 55-foot bottomless arched culvert (bridge) that will provide adult and

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juvenile steelhead passage across the full range of identified fish passage flows (1-148 cfs). The new load capacity of the Bridge will be designed to the HL-93 loading factor.

(Tasks 20-21) - Once the new bridge has been installed, the contractor will focus on refurbishing and redesigning the project footprint along Refugio Road to meet County standards and requirements. All safety standards, signage, and road/bridge rails will be constructed. The exposed concrete of the 55-foot bottomless-arched culvert will be treated with concrete sealer, masonry stain, and treated with anti-graffiti coating.

(Tasks 22-23) - Once the bridge is installed, the contractor will replace all damaged/removed sections of the fence lines with new fencing. The contractor will also construct and install a wooden picket fence underneath the new bridge to prevent movement between adjacent properties.

(Task 24) – Any removed trees will be replaced at or above the required mitigation rate, and are maintained for years after the project is finished to ensure a greater than 80% survival rate. Hydromulch and hydro-seed will be spread throughout all disturbed areas of the project site.

(Tasks 25-27) - The final elements include road delineators, signs, site cleanup, and the protection of existing facilities.

(Task 28) - Invoices will be submitted by COMB to the CDFW FRGP grant program during construction with the final invoice in January.

(Task 29) - A final report will be submitted by COMB to the CDFW FRGP grant program.

Additional Deliverables:

1. Post-project monitoring to evaluate the structural and biological effectiveness of the project.
2. Conducting public outreach through a) conference presentations highlighting the successes of the Crossing 9 Project and b) local presentations to the general public and to further promote recovery efforts.
3. Annual performance evaluation of the structural stability and fish passage conditions as well as the success of the re-vegetation effort that will be submitted to CDFW and NMFS.

Timelines:

The proposed project is anticipated to take one year to prepare and construct within a 2 year time-frame (pending no permitting or final decision review delays). The 100% design approval is expected by the summer of 2018. Permits will be submitted in the spring of 2018 and will be completed by the summer of 2018.

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Construction, restoration, and pre-/post-construction monitoring will begin in the late summer of 2018 and end in December of that year. If there are any delays the project will then be constructed in the fall of 2019.

The timeline below is linked to the tasks (task list section above), with estimated completion dates in parenthesis.

1. Project management, contract administration and prebid meeting: (February-August)
2. Pre-construction landowner meeting: (August-September)
3. Permitting (Army Corps of Engineers Permit (ACOE), CDFW 1600 (LSA), S.B. County Encroachment Permit, and SWRCB 401 Certification): (February-May)
4. Stormwater Pollution Prevention Plan and Traffic Control Plan: (June-August)
5. Dewatering, Erosion Control, Fish Removal, Road Access, Maintenance and Monitoring, and Re-vegetation Plans: (September)
6. Fish and California red-legged frog rescue and relocation: (September-December)
7. Stream bypass/dewatering system: (September-December)
8. Erosion control: (September-December)
9. Demolition: (September-December)
10. Excavation: (September-December)
11. Export material: (September-December)
12. Footing preparation: (September-December)
13. CIP footings: (September-December)
14. Installation of arch bridge and wing walls: (September-December)
15. Road embankment fill, compaction, and grading: (September-December)
16. Installation of Engineered Streambed Material (ESM): (September-December)
17. Placement of Rock Slope Protection (RSP): (September-December)
18. Site drainage: (September-December)
19. Asphalt road: (September-December)
20. Anti-graffiti treatment: (September-December)
21. Installation of bridge and road guardrails: (September-December)
22. Replace existing fence: (November-December)
23. Cattle exclusion fencing: (November-December)
24. Revegetation: (November-December)
25. County road safety requirements: (November-December)
26. Protection of existing facilities: (September-December)
27. Site cleanup: (November-December)
28. Final Invoice: (December-January)
29. Final Report: (January-February)

Additional Requirements:

The Grantee shall notify the Grantor Project Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for Grantor personnel to oversee the implementation of the water diversion plan and the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of

salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

- a. Fish dewatering and relocation activities shall only occur between June 15 and October 31 of each year.
- b. Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
- c. The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible as approved by the CDFW Grant Manager and pursuant to conditions in the USACE Regional General Permit and NMFS Biological Opinion.
- d. All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- e. USFWS Approved fisheries biologists will provide fish relocation data via the Grantee to the CDFW Grant Manager on a form provided by CDFW.



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: Quad IS (Santa Ynez (3412051) OR Zaca Creek (3412062) OR Los Olivos (3412061) OR Figueroa Mtn. (3411968) OR Solvang (3412052) OR Lake Cachuma (3411958) OR Gaviota (3412042) OR Dos Pueblos Canyon (3411948) OR Tajiguas (3412041))

Possible species within Santa Ynez Quad and surrounding quads for 725521 Fish Passage Improvement at Crossing 9, Quiota Creek, T06N R30W S31, Santa Barbara County

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abrams' oxytheca <i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	PDPGN0J041	None	None	G4?T1T2	S1S2	1B.2
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
black-flowered figwort <i>Scrophularia atrata</i>	PDSCR1S010	None	None	G2?	S2?	1B.2
California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California tiger salamander <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
chaparral ragwort <i>Senecio aphanactis</i>	PDAST8H060	None	None	G3	S2	2B.2
coast horned lizard <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G3G4	S3S4	SSC
Contra Costa goldfields <i>Lasthenia conjugens</i>	PDAST5L040	Endangered	None	G1	S1	1B.1
Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040	None	None	G5	S4	WL
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	PDAST5L0A1	None	None	G4T2	S2	1B.1
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	None	G3G4	S1S2	
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	PDCHE041T1	None	None	G5T1	S1	1B.2
ferruginous hawk <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Gaviota tarplant <i>Deinandra increscens</i> ssp. <i>villosa</i>	PDAST4R0U3	Endangered	Endangered	G4G5T2	S2	1B.1
globose dune beetle <i>Coelus globosus</i>	IICOL4A010	None	None	G1G2	S1S2	



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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Hoover's bent grass <i>Agrostis hooveri</i>	PMPOA040M0	None	None	G2	S2	1B.2
La Purisima manzanita <i>Arctostaphylos purissima</i>	PDERI041A0	None	None	G2	S2	1B.1
late-flowered mariposa-lily <i>Calochortus fimbriatus</i>	PMLIL0D1J2	None	None	G3	S3	1B.3
least Bell's vireo <i>Vireo bellii pusillus</i>	ABPBW01114	Endangered	Endangered	G5T2	S2	
mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	PDROS0W045	None	None	G4T1	S1	1B.1
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	PDFAB0F2X3	None	None	G5T2	S2	1B.2
monarch - California overwintering population <i>Danaus plexippus</i> pop. 1	IILEPP2012	None	None	G4T2T3	S2S3	
northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S3	SSC
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	
Ojai fritillary <i>Fritillaria ojaiensis</i>	PMLIL0V0N0	None	None	G2?	S2?	1B.2
pale-yellow layia <i>Layia heterotricha</i>	PDAST5N070	None	None	G2	S2	1B.1
pallid bat <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
Palmer's mariposa-lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	PMLIL0D122	None	None	G3T2	S2	1B.2
Refugio manzanita <i>Arctostaphylos refugioensis</i>	PDERI041B0	None	None	G3	S3	1B.2
round-leaved filaree <i>California macrophylla</i>	PDGER01070	None	None	G4	S4	1B.2
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	AMAFF08041	None	None	G5T3T4	S3S4	SSC
sandy beach tiger beetle <i>Cicindela hirticollis gravida</i>	IICOL02101	None	None	G5T2	S2	
Santa Barbara honeysuckle <i>Lonicera subspicata</i> var. <i>subspicata</i>	PDCPR030R3	None	None	G5T2?	S2?	1B.2
Santa Barbara jewelflower <i>Caulanthus amplexicaulis</i> var. <i>barbarae</i>	PDBRA0M012	None	None	G4T2	S2	1B.1
Santa Ynez false lupine <i>Thermopsis macrophylla</i>	PDFAB3Z0E0	None	Rare	G1	S1	1B.3
seaside bird's-beak <i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1



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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sonoran maiden fern <i>Thelypteris puberula</i> var. <i>sonorensis</i>	PPTHE05192	None	None	G5T3	S2	2B.2
southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	ABPBX91091	None	None	G5T3	S3	WL
Southern California Steelhead Stream <i>Southern California Steelhead Stream</i>	CARE2310CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest <i>Southern Coast Live Oak Riparian Forest</i>	CTT61310CA	None	None	G4	S4	
Southern Cottonwood Willow Riparian Forest <i>Southern Cottonwood Willow Riparian Forest</i>	CTT61330CA	None	None	G3	S3.2	
southern curly-leaved monardella <i>Monardella sinuata</i> ssp. <i>sinuata</i>	PDLAM18161	None	None	G3T2	S2	1B.2
southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	PDAST4R0P4	None	None	G3T2	S2	1B.1
Southern Vernal Pool <i>Southern Vernal Pool</i>	CTT44300CA	None	None	GNR	SNR	
Southern Willow Scrub <i>Southern Willow Scrub</i>	CTT63320CA	None	None	G3	S2.1	
southwestern willow flycatcher <i>Empidonax traillii extimus</i>	ABPAE33043	Endangered	Endangered	G5T2	S1	
steelhead - southern California DPS <i>Oncorhynchus mykiss irideus</i>	AFCHA0209J	Endangered	None	G5T1Q	S1	
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SSC
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
two-striped gartersnake <i>Thamnophis hammondi</i>	ARADB36160	None	None	G4	S3S4	SSC
umbrella larkspur <i>Delphinium umbracolorum</i>	PDRAN0B1W0	None	None	G3	S3	1B.3
Valley Needlegrass Grassland <i>Valley Needlegrass Grassland</i>	CTT42110CA	None	None	G3	S3.1	
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
western spadefoot <i>Spea hammondi</i>	AAABF02020	None	None	G3	S3	SSC



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
white-veined monardella <i>Monardella hypoleuca ssp. hypoleuca</i>	PDLAM180A3	None	None	G4T3	S3	1B.3

Record Count: 61

Project Location Watershed Map



Figure 1a: Santa Ynez River Watershed (green) showing the Quiota Creek Watershed (pink).