

Introduction:

San Mateo County Resource Conservation District (Grantee) will implement the San Gregorio Creek Habitat Enhancement Project – Phase 2, by installing large woody debris (LWD) structures, boulders and boulder structures, and other instream features to increase habitat complexity and improve pool frequency and depth, with the goal of enhancing populations of coho salmon and steelhead trout in the San Gregorio Creek watershed. The project is proposed pursuant to recommendations contained in the watershed enhancement plan (Stillwater Sciences, 2010), and LWD assessment (American Rivers, 2014) that were prepared specifically for the San Gregorio Creek watershed.

Objective:

The objective of the project is to install approximately 38-56 pieces of large woody debris (LWD) into San Gregorio Creek at a minimum of 14 separate and distinct locations. The addition of LWD structures as designed will result in greater habitat complexity, improved pool frequency and depth via scour, thereby resulting in improved cover for juvenile fish. The project will also provide high-flow refugia in a reach that currently lacks sufficient quantities of LWD.

Project Description:

Location:

The project site is approximately 8.52 miles upstream of the mouth of San Gregorio Creek. The mid-point of the 0.42 mile of stream reach being treated is located at latitude/longitude 37.31170000: -122.31200000.

Project Set Up:

RCD STAFF:

The Natural Resource Specialist will be the primary person responsible for completion of activities described under Task 1 – Project Management, as well as completing technical work under Task 2 – Permitting and Task 4 - Construction, as well as physical surveys conducted under Task 3 – Biological Monitoring & Physical Surveys. The Natural Resource Specialist will coordinate with RCD staff, contractors, resource agency staff, landowners, and other project partners to ensure the project is completed successfully and on time. The Natural Resource Specialist will oversee completion of all other tasks including responsibilities assumed by the Conservation Assistant, the Program Assistant, subcontractors, the landowner, and other project partners. The Natural Resource

Specialist will also assist as a Biological Monitor under supervision by the Qualified Biologist for the project.

The Conservation Assistant(s) will assist the Natural Resource Specialist as needed to perform work associated with Tasks 1, 2 and 3. This includes but is not limited to conducting surveys and photo documentation of sites, assisting with report and/or map preparation, conducting geospatial analysis using ESRI ArcGIS, installing and tracking the tagging of LWD used in the project, and any other task deemed appropriate by the Natural Resource Specialist. The Conservation Assistants will assist as Biological Monitors under supervision by the Qualified Biologist for the project.

The Program Assistant will assist the Natural Resource Specialist and the Finance Director with duties under Task 1 as needed to set up and maintain project management software (QuickBase), prepare invoices, manage subcontracts, process payments for subcontractors, maintain financial records, prepare reports, prepare press releases and/or social media content about the project, create and update the project webpage, or any other task deemed appropriate by the Natural Resource Specialist.

The Finance Director will assist with duties in Task 1, including responsibility for all aspects of fiscal management, such as invoicing, maintaining financial records, reviewing contracts and subcontracts for fiscal impacts, accounting and bookkeeping, reporting financials to the Board of Directors and the public, and auditing.

The Executive Director will be the signatory to all contracts and assist with strategy, permitting, and overall project direction as part of Task 1.

SUBCONTRACTORS:

The Registered Professional Forester will implement all engineered structure designs including placement of project LWD/boulders in the active channel, install all anchoring hardware, procure LWD from onsite, and coordinate delivery of offsite LWD under Task 4 – Construction. The Registered Professional Forester will assist with implementation monitoring including photo points and project LWD metrics under Task 3 – Biological Monitoring & Physical Surveys.

The Project Technician will be employed by the Registered Professional Forester, and will assist the project team with duties under Task 4 - Construction, including implementation monitoring, photo points, project LWD metrics, and implementation of engineered designs and permits as planned. The Project Technician will also assist the Registered Professional Forester and the Licensed Timber Operator throughout the construction of the engineered structure designs including placement of project LWD/boulders in the active channel, installation of

anchoring hardware, logistics of procuring LWD from onsite, erosion control, and any additional permitting requirements.

The Licensed Timber Operator and their Timber Operation Staff will be the lead equipment operator responsible for all construction as listed in Task 4 – Construction. This includes but is not limited to placement of project LWD/boulders in the active channel, installation of all anchoring hardware, procuring LWD from onsite, and assisting in coordinating delivery of offsite LWD. All heavy equipment work will be done or directly overseen by the Licensed Timber Operator and Timber Operation Staff, with guidance as needed from the Project Engineer.

The Project Engineer will oversee implementation and construction of the project pursuant to Tasks 1 and 4, while providing assistance as needed with Tasks 2 and 3. The Project Engineer will review and approve any necessary changes to the 100% designs, and perform a minimum of two site visits during construction to ensure that the project is being constructed as designed. The Project Engineer will be available to answer specific permitting-related questions about components of the project related to design, engineering, and construction under Task 2 and will perform as-built surveys to insure the project was constructed as designed under Task 3.

The Qualified Biologist will complete biological surveys and monitoring under Task 3 – Biological Monitoring & Physical Surveys with assistance from the Natural Resource Specialist and Conservation Assistants, as needed. The Qualified Biologist will assume multiple responsibilities for this project providing biological monitoring for all species under Task 3, project design field support under Task 4 – Construction, coordination with IWRP, and project management support under Task 1 – Project Management, and any needed permitting support under Task 2 - Permitting. The Qualified Biologist is also expected to have some role offering strategic support under all tasks of this project.

Materials:

- Logs, trees and rootwads: Logs, trees and rootwads of various sizes will be used to construct the bulk of the instream habitat structures.
- Boulders: Boulders will be used to anchor the large wood to prevent it from floating away in large storm events.
- Field Supplies: Field supplies may include but are not limited to metal tags (for LWD), chainsaw files, and personal protection equipment (PPE). Metal tags are affixed to all project LWD to facilitate identification and future monitoring of all structures installed as part of this project. Chainsaw files are used to keep the chainsaw running safely and effectively when cutting LWD. Chains are filed daily and often more frequently depending on field conditions.

PPE includes but is not limited to gloves, helmets, earplugs, safety glasses, chainsaw caps, rebar caps and Dayglo vests. PPE is necessary to insure the proper protection and safety of all personnel during the construction process. PPE is considered replaceable equipment.

- **Anchoring Supplies:** Anchoring supplies include but are not limited to threaded rebar, epoxy, wood screws, washers, nuts, eyenuts, and quick links. These supplies are used to anchor new large wood to boulders and existing trees.
- **Weed Free Rice Straw Mulch:** Straw mulch will be used for erosion control upon completion of the project.
- **Native Seed:** Native grass seed will be used to seed all disturbed areas to promote revegetation and prevent erosion.
- **Redwood Seedlings:** Redwood seedlings will be planted in the project area to promote long term regeneration of coniferous wood sources.
- **Willow Stakes:** Willow stakes will be sourced onsite and planted adjacent to wood structures to promote riparian revegetation and help stabilize stream banks.
- **Exclusionary Fencing:** Exclusionary fencing will be installed around the construction staging area to avoid impacts to the San Francisco garter snake.
- **Total Station:** A total station will be used for conducting physical surveys to document pre- and postproject conditions. (Grantee has access to a total station and is not requesting funding for rental or purchase of this equipment.)
- **Solinst Level Logger, Barologger, and Optical Reader:** These instruments will be used to conduct surveys of water depths and estimated flow velocities within the enhanced floodplain during winter flows measuring ≥ 500 cubic feet per second (cfs) at Feature 3.
- **Installation Supplies:** Installation supplies will be used to install the Solinst monitoring instruments. This includes but is not limited to 10' of 1.5" diameter PVC pipe, PVC cap, fencepost, and wire.

Tasks:

TASK 1 - PROJECT MANAGEMENT

Task 1 will be performed by the Natural Resource Specialist (NRS) with significant support from the Conservation Assistants (CA) and Program Assistant (PA). The Executive Director (ED) and Finance Director (FD) will provide input and guidance as needed.

Task elements include:

- Convene project team meetings (CA, NRS)
- Finalize workplan (ED, NRS)
- Draft and finalize subcontracts (ED, FD, NRS)
- Manage project contracts (PA, FD)
- Manage project budget, prepare invoices (NRS, PA, FD)

- Coordinate with project partners (NRS, CA)
- Submit financial and progress reports (NRS, CA, PA, FD, ED)
- Draft and submit final report (NRS, CA, PA, FA, ED)
- Disseminate project materials and results, prepare progress reports and final report (NRS, CA)

TASK 2 - PERMITTING

This task will be performed by the NRS with assistance from the CA, the ED and subcontractors Qualified Biologist (QB) and Project Engineer (PE).

Task elements include:

- Develop and finalize a Lake and Streambed Alteration Agreement (LSAA) (NRS, QB, CA, PE)
- Preparation of all other necessary local permits or environmental compliance documents (NRS, QB, CA, PE)
- Develop and finalize specific conditions for protection of the San Francisco garter snake, including avoidance and minimization measures to be implemented during construction (NRS, CA, QB, PE)

TASK 3 - BIOLOGICAL MONITORING & PHYSICAL SURVEYS

Biological monitoring will be conducted and overseen by the QB with assistance from the NRS and CA. Physical surveys will be conducted and overseen by the PE with assistance from the QB, NRS and CA. Sensitive species with potential habitat within the project area *will be assumed present* and appropriate avoidance and minimization measures to avoid impacts to those species will be followed as indicated in the 2016 FRGP Mitigated Negative Declaration and the LSAA issued for this project. California red legged frogs, San Francisco garter snakes, marbled murrelets, San Francisco dusky footed woodrat, western pond turtle, and anadromous salmonids are species with special status protections that will be assumed present in the project area. The QB and all proposed biological monitors must seek and receive approval from the US Fish and Wildlife Service to handle listed species that may require relocation out of harm's way.

Task elements include:

- Conduct pre-construction reconnaissance surveys for birds, sensitive fish, amphibians, reptiles and mammals in the project area and along access routes as per the requirements of the FRGP CEQA document and RGP to identify potential habitat for special status species (QB, NRS, CA)
- Install exclusionary fencing as needed around project area, staging areas, equipment storage areas and any other location deemed necessary. Exclusionary fencing shall be checked daily to ensure it is functioning as intended and maintenance performed as necessary.

- Conduct biological monitoring during construction for all special status species within the project area, along access routes and adjacent to any stockpile or staging areas associated with the project (QB, NRS, CA)
- Conduct as-built surveys to document that each structure was constructed as designed, or to document field adjustments that were required (PE, QB, NRS, CA)
- Conduct pre- and post-construction topographic surveys of LWD installation sites to measure changes in physical conditions associated with project goals. Survey methods will be based on CDFW's California Salmonid Stream Habitat Restoration Manual (4th edition), instream channel reference sites and illustrated guide to field technique (Harrelson et. al. 1994). The pre-construction survey will be conducted in spring 2016 prior to construction. Post-construction surveys will be repeated annually in the following next three winters (2017, 2018 and 2019). (NRS, CA, QB, PE)
- Conduct one pre-construction in 2016 and three (3) annual post-construction longitudinal profiles in 2017, 2018 and 2019. Cross sections no less than 200' apart will be measured using a total station throughout the project reach. At each LWD implementation site, several cross sections will be measured (as needed) along with pool scour depths, pool area, amount of cover contributed, and aggradation of streambed material. (NRS, CA, QB, PE)
- Conduct three (3) annual non-intrusive visual presence/absence post-construction surveys in 2017, 2018 and 2019 for juvenile anadromous salmonids (NRS, CA)
- Conduct three (3) annual post-construction pebble counts in 2017, 2018 and 2019, in a designated location downstream of each installed LWD structure that is intended to effect development of scour pools and/or substrate sorting (NRS, CA)
- Develop (with guidance from CDFW biologists) a monitoring plan for Feature 3 that will include a minimum of three (3) annual post-construction surveys of water depths and estimated flow velocities within the enhanced floodplain during winter flows of ≥ 500 cfs. Flow measurements shall be taken using a Solinst Level Logger, Barologger, and Optical Reader, which will be installed using 10' of 1.5" diameter PVC pipe, PVC cap, fencepost, and wire. (QB, NRS, CA)

While no dewatering or reach-wide electro-fishing is planned for the project, the QB, NRS, and CA will consult with the Grant Manager to assess conditions at the time of construction, and ensure that all required protective measures are followed during construction.

TASK 4. CONSTRUCTION

All responsibilities under Task 4 will be completed or directly overseen by the Licensed Timber Operator (LTO), and the Registered Professional Forester (RPF) with assistance from the Project Technician (PT) and Timber Operation Staff (TOS). Additional guidance and assistance from the PE, NRS and QB may be provided as necessary. Timber harvest on-site will be directly overseen by the Licensed Professional Forester (LPF). When placing wood, the equipment will be restricted to flat or gently sloping ground (less than 40% slope), with existing roads used whenever possible. At no time will heavy equipment enter the wetted portion of the channel. None of the site designs call for logs to be placed in a manner to control grade; channel-spanning logs will be placed with one end on the streambank and the other in the channel (i.e. not level). Some large trash is present at the proposed LWD sites, and will be removed from the stream channel before placing wood. The construction window will be between September 15 and October 31 to avoid marbled murrelet nesting season.

Task elements include:

- Install and anchor up to 14 Large Woody Debris (LWD) structures in previously identified placement locations within the project footprint on San Gregorio Creek, utilizing a mix of logs, rootwads, and/or whole trees (LTO, TOS, PE, NRS).
- Perform fine adjustment and bucking (where appropriate) of placed logs may be performed with hand tools including chain saws, winches, rockbars, and shovels. (LTO, TOS)
- Source and harvest between 4 and 12 trees on-site in accordance with accepted forestry practices. Source, purchase and deliver up to 30 logs, trees and/or root wads from off-site locations. (LPF, PT)
- All placed wood pieces will be tagged for identification and monitoring (NRS, CA, PT)

The 14 identified placement locations extend across the 0.42 mile project reach.

Deliverables:

Under TASK 1 - PROJECT MANAGEMENT

- Final long-term access agreements with landowners
- Quarterly progress reports and invoices
- Executed contracts
- Draft and Final Project reports. The final report will include the following information: (1) general grant information, (2) location of work, (3) project access, (4) participating landowner's name and address, (5) a description and analysis of the restoration and planning person hours expended, (6) a quantified description of the results of the project, including log numbers, (7) dates of work and the number of person hours expended, (8) labeled

before and after photos of selected restoration activities and techniques, (9) grant dollars spent and contributed and/or in kind services used to complete the project, and (10) GIS generated maps and shapefiles of the project area.

Under TASK 2 - PERMITTING

- Submitted permit applications
- Secured permits
- If needed, approved fish relocation plan

Under TASK 3 - BIOLOGICAL MONITORING & PHYSICAL SURVEYS

- Pre-construction special status species survey reports
- Daily monitor logs
- Final reports detailing results of pre- and post-construction physical surveys

Under TASK 4 - CONSTRUCTION

- A minimum of fourteen (14) constructed instream LWD structures
- As-built or red-line descriptions of each structure
- Final (stamped and signed by PE) plans and maps
- Log tag ID number, length, and large and small end diameters for each log
- Photos taken before, during, and after construction to show conditions and restoration techniques

Timelines:

Project Start Date: July 2016 or date of execution of grant contract, whichever occurs later.

TASK 1. PROJECT MANAGEMENT: July 2016 – January 2020

TASK 2. PERMITTING: July 2016 – January 2017

TASK 3. BIOLOGICAL MONITORING & PHYSICAL SURVEYS: July 2016/2017 – November 2019

TASK 4. CONSTRUCTION: September 2016/2017 – October 2016/2017

Project End Date: January 2020

Additional Requirements:

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.

No equipment maintenance will be performed within or near the stream channel where pollutants (such as petroleum products) from the equipment may enter the channel via rainfall or surface runoff. Appropriate spill containment devices (e.g., oil absorbent pads, tarpaulins) will be used when refueling equipment. Any and all equipment will be removed from the streambed and flood plain areas at the end of each workday.

All equipment and gear will be brushed with a stiff brush prior to leaving each stretch of stream to avoid the transport of aquatic invasive species (AIS). All crew members will decontaminate equipment and shoes for AIS according to the standards detailed in the California Department of Fish & Wildlife Aquatic Invasive Species Decontamination Protocol.

During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

If the project requires dewatering of the site, and the relocation of salmonids, the Grantee shall notify the Grant Manager via email a minimum of five (5) 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. Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

- a. If fish relocation is deemed necessary by the Grant Manager, fish relocation activities shall be restricted to 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. Electrofishing, if necessary, 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.

This project does not currently include dewatering or fish relocation activities. Alternatively, the Grantee will install the following additional protective measures:

- d. There will be no grading or earthmoving work conducted in the wetted channel for construction of any of the proposed structures. All work will be done from either the top of bank or from stable dry gravel bars along the toe of the banks.

- e. Grantee expects one temporary channel crossing to be necessary in order to access Features 1 and 2. Rubber tired equipment will cross the creek on a series of sandbags, gravel bags, or logs that will be covered in either plywood and polyethylene plastic sheeting to (a) allow unimpeded flow through the crossing, (b) keep equipment at least 12 inches above the water surface elevation, and (c) prevent any accident spill of fluids into the live stream. All materials used to construct temporary channel crossing(s) will be removed from the channel and the site upon completion of the project.
- f. Flow levels at this site are very low during the required construction season (September 15 – October 31), and stream flow will be able to percolate through the sand/gravel bags or logs. Remaining sites will be accessed via the main ranch and established crossings adjacent to the project sites.
- g. Grantee will use on-site small woody debris (SWD) and pin remnant pieces under larger LWD structures and incorporate them into the structures to add complexity.
- h. All habitat improvements will follow techniques described in the *California Salmonid Stream Habitat Restoration Manual*. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings.

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
724673 San Gregorio Creek Habitat Enhancement Project - Phase 2
M 07S 04W Section 20
San Mateo County

| Common Name/Scientific Name | Element Code | Federal Status | State Status | GRank | SRank | CDFG or CNPS |
|--|--------------|----------------|--------------|---------|-------|--------------|
| 1 Alameda song sparrow <i>Melospiza melodia pusillula</i> | ABPBXA301S | | | G5T2? | S2? | SC |
| 2 American badger <i>Taxidea taxus</i> | AMAJF04010 | | | G5 | S3 | SC |
| 3 Anderson's manzanita <i>Arctostaphylos andersonii</i> | PDERI04030 | | | G2 | S2 | 1B.2 |
| 4 Bay checkerspot butterfly <i>Euphydryas editha bayensis</i> | IILEPK4055 | Threatened | | G5T1 | S1 | |
| 5 Ben Lomond spineflower <i>Chorizanthe pungens var. hartwegiana</i> | PDPGN040M1 | Endangered | | G2T1 | S1 | 1B.1 |
| 6 Blasdale's bent grass <i>Agrostis blasdalei</i> | PMPOA04060 | | | G2 | S2 | 1B.2 |
| 7 Bonny Doon manzanita <i>Arctostaphylos silvicola</i> | PDERI041F0 | | | G1 | S1 | 1B.2 |
| 8 Butano Ridge cypress <i>Hesperocyparis abramsiana var. butanoensis</i> | PGCUP04082 | Endangered | Endangered | G1T1 | S1 | 1B.2 |
| 9 California black rail <i>Laterallus jamaicensis coturniculus</i> | ABNME03041 | | Threatened | G3G4T1 | S1 | |
| 10 California clapper rail <i>Rallus longirostris obsoletus</i> | ABNME05016 | Endangered | Endangered | G5T1 | S1 | |
| 11 California least tern <i>Sternula antillarum browni</i> | ABNNM08103 | Endangered | Endangered | G4T2T3Q | S2 | |
| 12 California red-legged frog <i>Rana draytonii</i> | AAABH01022 | Threatened | | G2G3 | S2S3 | SC |
| 13 California tiger salamander <i>Ambystoma californiense</i> | AAAAA01180 | Threatened | Threatened | G2G3 | S2S3 | SC |
| 14 Choris' popcornflower <i>Plagiobothrys chorisianus var. chorisianus</i> | PDBOR0V061 | | | G3T2Q | S2 | 1B.2 |
| 15 Congdon's tarplant <i>Centromadia parryi ssp. congdonii</i> | PDAST4R0P1 | | | G3T2 | S2 | 1B.1 |
| 16 Crotch bumble bee <i>Bombus crotchii</i> | IIHYM24480 | | | G3G4 | S1S2 | |
| 17 Crystal Springs fountain thistle <i>Cirsium fontinale var. fontinale</i> | PDAST2E161 | Endangered | Endangered | G2T1 | S1 | 1B.1 |
| 18 Crystal Springs lessingia <i>Lessingia arachnoidea</i> | PDAST5S0C0 | | | G1 | S1 | 1B.2 |
| 19 Dudley's lousewort <i>Pedicularis dudleyi</i> | PDSCR1K0D0 | | Rare | G2 | S2 | 1B.2 |
| 20 Edgewood Park micro-blind harvestman <i>Microcina edgewoodensis</i> | ILARA47010 | | | G1 | S1 | |
| 21 Edgewood blind harvestman <i>Calicina minor</i> | ILARA13020 | | | G1 | S1 | |
| 22 Franciscan onion <i>Allium peninsulare var. franciscanum</i> | PMLIL021R1 | | | G5T1 | S1 | 1B.2 |

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| 23 Franciscan thistle <i>Cirsium andrewsii</i> | PDAST2E050 | | | G3 | S3 | 1B.2 |
| 24 Hoover's button-celery <i>Eryngium aristulatum var. hooveri</i> | PDAPI0Z043 | | | G5T1 | S1 | 1B.1 |
| 25 Kellman's bristle moss <i>Orthotrichum kellmanii</i> | NBMUS56190 | | | G2 | S2 | 1B.2 |
| 26 Kellogg's horkelia <i>Horkelia cuneata var. sericea</i> | PDROS0W043 | | | G4T2 | S2? | 1B.1 |
| 27 Kings Mountain manzanita <i>Arctostaphylos regismontana</i> | PDERI041C0 | | | G2 | S2 | 1B.2 |
| 28 Marin western flax <i>Hesperolinon congestum</i> | PDLIN01060 | Threatened | Threatened | G2 | S2 | 1B.1 |
| 29 Methuselah's beard lichen <i>Usnea longissima</i> | NLLEC5P420 | | | G4 | S4 | 4.2 |
| 30 Monterey Pine Forest | CTT83130CA | | | G1 | S1.1 | |
| 31 Monterey pine <i>Pinus radiata</i> | PGPIN040V0 | | | G1 | S1 | 1B.1 |
| 32 Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i> | IILEPJ608C | Endangered | | G5T1 | S1 | |
| 33 N. Central Coast Calif. Roach/Stickleback/Steelhead Stream | CARA2633CA | | | GNR | SNR | |
| 34 North Central Coast Drainage Sacramento Sucker/Roach River | CARA2623CA | | | GNR | SNR | |
| 35 North Central Coast Short-Run Coho Stream | CARA2632CA | | | GNR | SNR | |
| 36 North Central Coast Steelhead/Sculpin Stream | CARA2637CA | | | GNR | SNR | |
| 37 Northern Coastal Salt Marsh | CTT52110CA | | | G3 | S3.2 | |
| 38 Northern Interior Cypress Forest | CTT83220CA | | | G2 | S2.2 | |
| 39 Ohlone manzanita <i>Arctostaphylos ohloneana</i> | PDERI042Y0 | | | G1 | S1 | 1B.1 |
| 40 Point Reyes meadowfoam <i>Limnanthes douglasii ssp. sulphurea</i> | PDLIM02038 | | Endangered | G4T2 | S2 | 1B.2 |
| 41 Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i> | IICOL5V010 | | | G2? | S2? | |
| 42 Sacramento-San Joaquin Coastal Lagoon | CALA1360CA | | | GNR | SNR | |
| 43 San Francisco campion <i>Silene verecunda ssp. verecunda</i> | PDCAR0U213 | | | G5T2 | S2 | 1B.2 |
| 44 San Francisco collinsia <i>Collinsia multicolor</i> | PDSCR0H0B0 | | | G2 | S2 | 1B.2 |
| 45 San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i> | AMAFF08082 | | | G5T2T3 | S2S3 | SC |
| 46 San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i> | ARADB3613B | Endangered | Endangered | G5T2Q | S2 | |
| 47 San Francisco popcornflower <i>Plagiobothrys diffusus</i> | PDBOR0V080 | | Endangered | G1Q | S1 | 1B.1 |

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|---|--------------|----------------|----------------------|--------|-------|--------------|
| 48 San Mateo thorn-mint <i>Acanthomintha duttonii</i> | PDLAM01040 | Endangered | Endangered | G1 | S1 | 1B.1 |
| 49 San Mateo woolly sunflower <i>Eriophyllum latilobum</i> | PDAST3N060 | Endangered | Endangered | G1 | S1 | 1B.1 |
| 50 Santa Clara red ribbons <i>Clarkia concinna ssp. automixa</i> | PDONA050A1 | | | G5?T3 | S3 | 4.3 |
| 51 Santa Cruz Mountains beardtongue <i>Penstemon rattanii var. kleei</i> | PDSCR1L5B1 | | | G4T2 | S2 | 1B.2 |
| 52 Santa Cruz Mountains pussypaws <i>Calyptridium parryi var. hesseae</i> | PDPOR09052 | | | G3G4T2 | S2 | 1B.1 |
| 53 Santa Cruz cypress <i>Hesperocyparis abramsiana var. abramsiana</i> | PGCUP04081 | Endangered | Endangered | G1T1 | S1 | 1B.2 |
| 54 Santa Cruz kangaroo rat <i>Dipodomys venustus venustus</i> | AMAFD03042 | | | G4T1 | S1 | |
| 55 Santa Cruz microseris <i>Stebbinsoseris decipiens</i> | PDAST6E050 | | | G2 | S2 | 1B.2 |
| 56 Santa Cruz wallflower <i>Erysimum teretifolium</i> | PDBRA160N0 | Endangered | Endangered | G2 | S2 | 1B.1 |
| 57 Schreiber's manzanita <i>Arctostaphylos glutinosa</i> | PDERI040G0 | | | G1 | S1 | 1B.2 |
| 58 Serpentine Bunchgrass | CTT42130CA | | | G2 | S2.2 | |
| 59 Toren's grimmia <i>Grimmia torenii</i> | NBMUS32330 | | | G2 | S2 | 1B.3 |
| 60 Townsend's big-eared bat <i>Corynorhinus townsendii</i> | AMACC08010 | | Candidate Threatened | G3G4 | S2 | SC |
| 61 Valley Needlegrass Grassland | CTT42110CA | | | G3 | S3.1 | |
| 62 Valley Oak Woodland | CTT71130CA | | | G3 | S2.1 | |
| 63 arcuate bush-mallow <i>Malacothamnus arcuatus</i> | PDMAL0Q0E0 | | | G2Q | S2 | 1B.2 |
| 64 bank swallow <i>Riparia riparia</i> | ABPAU08010 | | Threatened | G5 | S2 | |
| 65 black swift <i>Cypseloides niger</i> | ABNUA01010 | | | G4 | S2 | SC |
| 66 coast yellow leptosiphon <i>Leptosiphon croceus</i> | PDPLM09170 | | | G1 | S1 | 1B.1 |
| 67 coastal marsh milk-vetch <i>Astragalus pycnostachyus var. pycnostachyus</i> | PDFAB0F7B2 | | | G2T2 | S2 | 1B.2 |
| 68 coho salmon - central California coast ESU <i>Oncorhynchus kisutch</i> | AFCHA02034 | Endangered | Endangered | G4 | S2? | |
| 69 foothill yellow-legged frog <i>Rana boylei</i> | AAABH01050 | | | G3 | S3 | SC |
| 70 fragrant fritillary <i>Fritillaria liliacea</i> | PMLIL0V0C0 | | | G2 | S2 | 1B.2 |

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
724673 San Gregorio Creek Habitat Enhancement Project - Phase 2
M 07S 04W Section 20
San Mateo County

| Common Name/Scientific Name | Element Code | Federal Status | State Status | GRank | SRank | CDFG or CNPS |
|--|--------------|----------------|--------------|--------|-------|--------------|
| 71 great blue heron <i>Ardea herodias</i> | ABNGA04010 | | | G5 | S4 | |
| 72 hoary bat <i>Lasiurus cinereus</i> | AMACC05030 | | | G5 | S4 | |
| 73 legenere <i>Legenere limosa</i> | PDCAM0C010 | | | G2 | S2 | 1B.1 |
| 74 long-eared owl <i>Asio otus</i> | ABNSB13010 | | | G5 | S3? | SC |
| 75 longfin smelt <i>Spirinchus thaleichthys</i> | AFCHB03010 | Candidate | Threatened | G5 | S1 | SC |
| 76 lost thistle <i>Cirsium praeteriens</i> | PDAST2E2B0 | | | GX | SX | 1A |
| 77 marbled murrelet <i>Brachyramphus marmoratus</i> | ABNNN06010 | Threatened | Endangered | G3G4 | S1 | |
| 78 marsh microseris <i>Microseris paludosa</i> | PDAST6E0D0 | | | G2 | S2 | 1B.2 |
| 79 mimic tryonia (=California brackishwater snail) <i>Tryonia imitator</i> | IMGASJ7040 | | | G2 | S2 | |
| 80 minute pocket moss <i>Fissidens pauperculus</i> | NBMUS2W0U0 | | | G3? | S2 | 1B.2 |
| 81 monarch - California overwintering population <i>Danaus plexippus pop. 1</i> | IILEPP2012 | | | G4T2T3 | S2S3 | |
| 82 obscure bumble bee <i>Bombus caliginosus</i> | IIHYM24380 | | | G4? | S1S2 | |
| 83 pallid bat <i>Antrozous pallidus</i> | AMACC10010 | | | G5 | S3 | SC |
| 84 perennial goldfields <i>Lasthenia californica ssp. macrantha</i> | PDAST5L0C5 | | | G3T2 | S2 | 1B.2 |
| 85 rose leptosiphon <i>Leptosiphon rosaceus</i> | PDPLM09180 | | | G1 | S1 | 1B.1 |
| 86 round-leaved filaree <i>California macrophylla</i> | PDGER01070 | | | G3? | S3? | 1B.2 |
| 87 salt-marsh harvest mouse <i>Reithrodontomys raviventris</i> | AMAFF02040 | Endangered | Endangered | G1G2 | S1S2 | |
| 88 salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i> | AMABA01071 | | | G5T1 | S1 | SC |
| 89 saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i> | ABPBX1201A | | | G5T3 | S3 | SC |
| 90 sand-loving wallflower <i>Erysimum ammophilum</i> | PDBRA16010 | | | G2 | S2 | 1B.2 |
| 91 short-leaved evax <i>Hesperevax sparsiflora var. brevifolia</i> | PDASTE5011 | | | G4T3 | S2 | 1B.2 |
| 92 slender silver moss <i>Anomobryum julaceum</i> | NBMUS80010 | | | G4G5 | S2 | 4.2 |

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| Common Name/Scientific Name | Element Code | Federal Status | State Status | GRank | SRank | CDFG or CNPS |
|---|--------------|----------------|--------------|---------|-------|--------------|
| 93 slender-leaved pondweed <i>Stuckenia filiformis</i> ssp. <i>alpina</i> | PMPOT03091 | | | G5T5 | S3 | 2B.2 |
| 94 steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus</i> | AFCHA0209G | Threatened | | G5T2T3Q | S2S3 | |
| 95 tidewater goby <i>Eucyclogobius newberryi</i> | AFCQN04010 | Endangered | | G3 | S3 | SC |
| 96 two-fork clover <i>Trifolium amoenum</i> | PDFAB40040 | Endangered | | G1 | S1 | 1B.1 |
| 97 unsilvered fritillary <i>Speyeria adiaсте adiaсте</i> | IILEPJ6143 | | | G1G2T1 | S1 | |
| 98 vaginulate grimmia <i>Grimmia vaginulata</i> | NBMUS32340 | | | G2G3 | S1 | 1B.1 |
| 99 western leatherwood <i>Dirca occidentalis</i> | PDTHY03010 | | | G2 | S2 | 1B.2 |
| 100 western pearlshell <i>Margaritifera falcata</i> | IMBIV27020 | | | G4G5 | S1S2 | |
| 101 western pond turtle <i>Emys marmorata</i> | ARAAD02030 | | | G3G4 | S3 | SC |
| 102 western snowy plover <i>Charadrius alexandrinus nivosus</i> | ABNNB03031 | Threatened | | G3T3 | S2 | SC |
| 103 white-flowered rein orchid <i>Piperia candida</i> | PMORC1X050 | | | G3 | S3 | 1B.2 |
| 104 white-rayed pentachaeta <i>Pentachaeta bellidiflora</i> | PDAST6X030 | Endangered | Endangered | G1 | S1 | 1B.1 |
| 105 woodland woollythreads <i>Monolopia gracilens</i> | PDAST6G010 | | | G3 | S3 | 1B.2 |

San Gregorio Creek Habitat Enhancement Project – Phase 2
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0 125 250 500 750 1,000 Feet

Project Location Map
USGS 7.5 Minute Quad - La Honda

-  Impacted Stream
-  San Gregorio Watershed

