

## **Introduction:**

The Whitethorn Grove Clean Up project, implemented by Sanctuary Forest, Inc., is needed to address impacts to Sanctuary Forest's property as a result of a trespass marijuana cultivation site that occurred from approximately 2014 – 2016. Impacts to the property included forest clearing of approximately 0.5 acre(s) as well as additional tree topping and extensive dumping of garbage (approximately 160,000 lbs) along the riparian zone of the upper mainstem of the Mattole River (See location map).

Currently, every winter heavy rainfall combined with a high water table results in pooling of water on the site, causing leaching from the piles of garbage, used soil, fertilizers, car batteries, etc. This hazardous waste is mobilized during these events and discharges off the site directly into the adjacent Mattole River, negatively affecting downstream fish, wildlife, and drinking water supplies. This project is needed to facilitate the thorough and efficient garbage cleanup; proper handling and treatment of environmentally hazardous materials, and re-establishing the site to its historic conditions as redwood forestland using trained professionals.

Sanctuary Forest shall not proceed with on the ground implementation until all necessary permits, consultation, and/or Notice to Proceed are secured.

There are no protocols in the California Stream Habitat Restoration Manual for the cleanup of solid waste, environmental hazards, or other garbage related to marijuana cultivation sites. Prior to cleanup, Sanctuary Forest will consult with North Coast Water Quality Control Board and CA EPA to determine appropriate best management practices based on what types of materials are identified in the pre-project monitoring.

Revegetation activities will follow protocols as described in ***Part XI 15-24 Riparian Habitat Restoration, in the Ca. Salmonid Stream Habitat Restoration Manual.***

## **Objective(s):**

The cleanup project will protect and restore aquatic, riparian, and other at risk species habitat impacted by marijuana cultivation by addressing the residual impacts of past trespass marijuana cultivation and related garbage dumping, forest clearing, and introduction of harmful fertilizers, pesticides, and other hazardous materials to the food web. Specifically, aquatic habitat will be restored and protected by removal and proper disposal of environmentally hazardous pollutants and garbage that have been discharging into the Mattole River. Removal of environmental contaminants and waste will directly benefit species being negatively affected by their continued presence, leaching into the groundwater and running off into the Mattole during periods of heavy rainfall. During the project Sanctuary Forest (SFI) and RFI representatives will ensure the proper handling and disposal of all environmental contaminants from the cultivation

site. Following clean-up and site remediation, SFI will work with the neighboring landowner to monitor the site and ensure that it is not reoccupied.

## **Project Description:**

### **Location:**

The proposed project will be implemented in the headwaters of the Mattole River mainstem, in the Whitethorn Grove. The Mattole River drains an area of approximately 300 square miles and enters the Pacific Ocean west of the town of Petrolia, California in Humboldt County. The project location is just outside the rural town of Whitethorn, CA.

Latitude: 40° 1'22.54"N

Longitude: 123°56'42.17"W

### **Project Set Up:**

Sanctuary Forest is the project lead and grant applicant. CDFW fisheries/watershed restoration staff are providing input on design and CDFW will be the lead permitting agency and funder if the project is selected for funding.

The project tasks by organization and personnel category are described below:

- **Sanctuary Forest:** SFI will oversee and coordinate the project, manage the grant, purchase any/all materials, provide pre and post project monitoring, and conduct revegetation activities following completion of the cleanup.
- **SFI Project Manager:** The SFI project manager will manage the overall project including subcontracts, grant agreements, permits, and supervision of SFI supporting staff.
- **SFI Project Coordinator:** The SFI project assistant manager & field staff will be responsible for project coordination with the subcontractors, materials purchase (including seedlings for revegetation) and delivery, invoicing and grant reporting; pre and post project monitoring and will also conduct post-cleanup revegetation tasks.
- **SFI volunteers** will assist with hand labor tasks related to the revegetation component of the project.
- **SFI Bookkeeper and Grants Manager:** The SFI bookkeeper and grants manager will manage the grant and subcontract budgets and perform all invoicing and payments.
- **Restoration Forestry:** Restoration Forestry (RFI) will be the implementation subcontractor of the project. RFI will contribute to site assessment and project design and be responsible for implementation including providing heavy equipment for clean-up and remediation, supervision of hand crew(s), and contracting with Eel River Disposal for transportation of materials to an approved disposal location.

- RFI Project Manager: The RFI Project Manager will manage such tasks as subcontracts and budgets, as well as implementation oversight and field supervision.
- RFI Bookkeeper: The RFI bookkeeper will create invoicing and track budgets.

## **Materials:**

Revegetation Materials: Revegetation materials include 50-60 redwood and/or Douglas fir seedlings for re-establishment of forest conditions, Dibble bars (for tree planting), tree shelter/protector tubes, bamboo stakes, and additional mulch for erosion control.

Miscellaneous tools and supplies: The miscellaneous tools and supplies lump sum includes but is not limited to: shovels, rakes, wire cutters, garbage bags, gloves, safety equipment for dealing with hazardous materials, erosion control mulch, etc.

## **Tasks:**

### **1. Project Management and Administration:**

Manage grant agreements, invoicing and payments, and reporting pursuant to grant and regulatory guidelines. Upon final execution of the Grant and prior to receiving a Final Notice to Proceed, deliver the final landowner access agreement, subcontracts, and assure all permits are finalized. Write and deliver quarterly progress reports for invoicing, Annual Progress Reports, and a Final Report to CDFW Project Manager. Include pre and post project photos and monitoring results in the final report.

### **2. Permitting:**

Acquire all necessary permits from regulatory agencies to proceed with project implementation. Permits include but are not limited to CDFW 1600 agreement, and Cal Recycle Special Permit for hauling/disposal of hazardous materials (i.e. used tires, car batteries, spoils from cultivation activities, etc.).

### **3. Pre-Project Monitoring:**

Conduct on-site monitoring prior to project implementation to document amount of garbage, type of garbage, and extent of environmental damage.

### **4. Pre-Project Photo Documentation:**

Conduct photo documentation of abandoned marijuana cultivation site, including representative points (i.e. piles of garbage). Identify any potential hazardous materials and use appropriate disposal methods (i.e. permits for disposal of used tires, car batteries, etc.).

### **5. Final Project Planning and Design:**

Work/consult with all project partners and funders to finalize clean up and revegetation plans, obtain approval from landowners, partners, and CDFW project manager.

**6. Project Implementation I:**

Appropriately dispose of spent soil medium. Purchase materials for hand crews. Coordinate delivery of garbage dumpsters for loading and removal of garbage. Coordinate arrival of end dump for hauling scrap metal, etc. Coordinate with RFI heavy equipment operator to schedule work to load dumpsters, end dump, etc., for hauling to offsite disposal location. Coordinate with the CCC's to conduct hand labor needed for final site cleanup and spreading of erosion control mulch. Order seedlings for planting in winter following site cleanup and suitable rainfall for planting conditions.

**7. Project Implementation II: Post Cleanup Site Mulching and Revegetation:**

Following implementation, mulch sites with native materials or rice straw where appropriate. Plant vegetation in areas that were cleared as a result of the marijuana cultivation. Plant 50-60 seedlings of redwood and/or Douglas fir. Sanctuary Forest staff and volunteers will plant seedlings in winter following significant rainfall and sufficient soil moisture levels.

**8. Post-Project Monitoring:**

Evaluate site cleanup and ensure that there is no runoff of sediment or other environmental contaminants. Conduct monitoring in year 1, year 2, year 5 and year 10 following site cleanup and revegetation activities to ensure 80% or greater survival of planted seedlings. Replant as needed. Add additional erosion control mulch as needed. Confirm that the site is not under threat of being reoccupied following completion of the project by monitoring during the following growing season, and staying in communication with the neighboring landowner.

**9. Post-Project Photo Documentation:**

Conduct post-project photo documentation at all sites and in relation to pre-project photo documentation.

**Deliverables:**

Deliverables by Task are as follows:

1. Signed grant agreement; final landowner access agreement; signed subcontracts; Quarterly Progress Reports submitted with each invoice; Annual Report; Project data - Documentation of pre and post Monitoring; Final Project Report.
2. Lake or Streambed Alteration Agreement with a check for the cost of the 1600 permit; Special Permit from Cal Recycle for transportation of hazardous materials.
3. Pre-project monitoring reports
4. Pre-project site photos
5. Finalize cleanup plan - Site evaluation for hazardous materials; Final revegetation plan;
6. Cleanup and disposal of: ~60,000 lbs solid waste; ~5,000 -10,000 lbs hazardous waste; ~100,000 lbs scrap metal
7. Erosion control mulching; Revegetation - planting of 50-60 redwood and/or Douglas fir seedlings
8. Post-project monitoring reports – clean up; revegetation  
Post project photo documentation – clean up; revegetation

**Timelines:**

| <b>Task No.</b> | <b>Task Title</b>                     | <b>Deliverables and Key Project Milestones</b>  | <b>Estimated Completion Dates</b>  |
|-----------------|---------------------------------------|---|--|
| 1               | Project Management and Administration | 1.1 Signed grant agreement<br>1.2 Final Landowner Access Agreement<br>1.3 Quarterly Progress Reports<br><br>1.4 Quarterly Invoices<br><br>1.5 Executed Subcontracts<br><br>1.6 Annual Report<br>1.7 Project Data<br>1.8 Draft Final Report<br>1.9 Final Report<br>1.10 Project Close-Out Report<br>1.11 Final Invoice | 1.1 January 2018<br>1.2 February 2018<br><br>1.3 May 31, 2018; July 31, 2018; Oct 31, 2018; January 31, 2019; May 31, 2019; July 31, 2019; Oct 31, 2019<br>1.4 May 31, 2018; July 31, 2018; Oct 31, 2018; January 31, 2019; May 31, 2019; July 31, 2019; Oct 31, 2019<br>1.5 Due with Quarterly Progress Reports (see dates above)<br><br>1.6 January 31, 2019<br>1.7 Due with Final Report – November 30, 2019<br>1.8 October 31, 2019<br>1.9 November 30, 2019<br>1.10 December 31, 2019<br>1.11 December 31, 2019 |
| 2               | Permitting                            | 2.1 1600 Permit<br>2.2 Cal Recycle Hauling/Disposal Permits   | 2.1 May 1, 2018<br>2.2 May 15, 2018  |
| 3               | Pre-Project Monitoring                | 3.1 Monitoring Report   | 3.1 May 15 – June 15, 2018   |
| 4               | Pre-Project Photo Documentation       | 4.1 Photo pages for monitoring report   | 4.1 May 15 – June 15, 2018   |
| 5               | Final Project Planning and Design     | 5.1 Cleanup Implementation Plan<br>5.2 Revegetation Plan  | 5.1 May 15 – June 15, 2018<br>5.2 May 15 – June 15, 2018   |

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| <b>Task No.</b> | <b>Task Title</b>                       | <b>Deliverables and Key Project Milestones</b>  | <b>Estimated Completion Dates</b>   |
|-----------------|---|---|---|
| 6               | Project Implementation I: Cleanup       | 6.1 Cleanup Site  | 6.1 June 15 – November 1, 2018  |
| 7               | Project Implementation II: Post Cleanup | 7.1 Erosion control mulching<br>7.2 Revegetation  | 7.1 Immediately following completion of cleanup, prior to first rainfall.<br>7.2 November 15, 2018 – January 15, 2019 (dependent on rainfall/soil moisture) |
| 8               | Post-Project Monitoring                 | 8.1 Monitoring Report (cleanup specific)<br>8.2 Monitoring Report (revegetation specific)                             | 8.1 January 31, 2019 (w/ quarterly progress report)<br>8.2 May 31, 2019 (w/ quarterly progress report)  |
| 9               | Post-Project Photo Documentation        | 9.1 photo pages for Cleanup specific Monitoring report<br>9.2 photo pages for revegetation specific Monitoring Report | 9.1 January 31, 2019 (w/ monitoring report above)<br>9.2 May 31, 2019 (w/ monitoring report above)  |



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



**Query Criteria:** Quad (Briceland (4012318) OR Honeydew (4012421) OR Ettersburg (4012328) OR Miranda (4012327) OR Garberville (4012317) OR Piercy (3912387) OR Bear Harbor (3912388) OR Shelter Cove (4012411))

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| Species   | Element Code | Federal Status      | State Status         | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|--------------|---------------------|----------------------|-------------|------------|--------------------------------|
| <b>American peregrine falcon</b><br><i>Falco peregrinus anatum</i>                            | ABNKD06071   | Delisted            | Delisted             | G4T4        | S3S4       | FP                             |
| <b>coast fawn lily</b><br><i>Erythronium revolutum</i>  | PMLIL0U0F0   | None                | None                 | G4G5        | S3         | 2B.2                           |
| <b>coho salmon - southern Oregon / northern California ESU</b><br><i>Oncorhynchus kisutch</i> | AFCHA02032   | Threatened          | Threatened           | G4T2Q       | S2?        |                                |
| <b>Cooper's hawk</b><br><i>Accipiter cooperii</i>   | ABNKC12040   | None                | None                 | G5          | S4         | WL                             |
| <b>fisher - West Coast DPS</b><br><i>Pekania pennanti</i>                                     | AMAJF01021   | Proposed Threatened | Candidate Threatened | G5T2T3Q     | S2S3       | SSC                            |
| <b>foothill yellow-legged frog</b><br><i>Rana boylei</i>                                      | AAABH01050   | None                | Candidate Threatened | G3          | S3         | SSC                            |
| <b>giant fawn lily</b><br><i>Erythronium oregonum</i>   | PMLIL0U0C0   | None                | None                 | G4G5        | S2         | 2B.2                           |
| <b>golden eagle</b><br><i>Aquila chrysaetos</i>   | ABNKC22010   | None                | None                 | G5          | S3         | FP                             |
| <b>Howell's montia</b><br><i>Montia howellii</i>  | PDPOR05070   | None                | None                 | G3G4        | S2         | 2B.2                           |
| <b>Humboldt milk-vetch</b><br><i>Astragalus agnicidus</i>                                     | PDFAB0F080   | None                | Endangered           | G2          | S2         | 1B.1                           |
| <b>leafy reed grass</b><br><i>Calamagrostis foliosa</i>                                       | PMPOA170C0   | None                | Rare                 | G3          | S3         | 4.2                            |
| <b>leafy-stemmed mitrewort</b><br><i>Mitellastrum caulescens</i>                              | PDSAX0N020   | None                | None                 | G5          | S4         | 4.2                            |
| <b>little willow flycatcher</b><br><i>Empidonax traillii brewsteri</i>                        | ABPAE33041   | None                | Endangered           | G5T3T4      | S1S2       |                                |
| <b>long-eared myotis</b><br><i>Myotis evotis</i>  | AMACC01070   | None                | None                 | G5          | S3         |                                |
| <b>maple-leaved checkerbloom</b><br><i>Sidalcea malachroides</i>                              | PDMAL110E0   | None                | None                 | G3          | S3         | 4.2                            |
| <b>marsh pea</b><br><i>Lathyrus palustris</i>   | PDFAB250P0   | None                | None                 | G5          | S2         | 2B.2                           |
| <b>Mendocino Coast paintbrush</b><br><i>Castilleja mendocinensis</i>                          | PDSCR0D3N0   | None                | None                 | G2          | S2         | 1B.2                           |
| <b>Methuselah's beard lichen</b><br><i>Usnea longissima</i>                                   | NLLEC5P420   | None                | None                 | G4          | S4         | 4.2                            |



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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| <b>mountain shoulderband</b><br><i>Helminthoglypta arrosa monticola</i>    | IMGASC2035   | None           | None         | G2G3T1      | S1         |                                |
| <b>North American porcupine</b><br><i>Erethizon dorsatum</i>               | AMAFJ01010   | None           | None         | G5          | S3         |                                |
| <b>obscure bumble bee</b><br><i>Bombus caliginosus</i>                     | IIHYM24380   | None           | None         | G4?         | S1S2       |                                |
| <b>Oregon coast paintbrush</b><br><i>Castilleja litoralis</i>              | PDSCR0D012   | None           | None         | G3          | S3         | 2B.2                           |
| <b>Oregon goldthread</b><br><i>Coptis laciniata</i>                        | PDRAN0A020   | None           | None         | G4          | S3         | 4.2                            |
| <b>osprey</b><br><i>Pandion haliaetus</i>                                  | ABNKC01010   | None           | None         | G5          | S4         | WL                             |
| <b>Pacific gilia</b><br><i>Gilia capitata ssp. pacifica</i>                | PDPLM040B6   | None           | None         | G5T3        | S2         | 1B.2                           |
| <b>Pacific tailed frog</b><br><i>Ascaphus truei</i>                        | AAABA01010   | None           | None         | G4          | S3S4       | SSC                            |
| <b>pallid bat</b><br><i>Antrozous pallidus</i>                             | AMACC10010   | None           | None         | G5          | S3         | SSC                            |
| <b>perennial goldfields</b><br><i>Lasthenia californica ssp. macrantha</i> | PDAST5L0C5   | None           | None         | G3T2        | S2         | 1B.2                           |
| <b>red-bellied newt</b><br><i>Taricha rivularis</i>                        | AAAAF02020   | None           | None         | G4          | S2         | SSC                            |
| <b>small groundcone</b><br><i>Kopsiopsis hookeri</i>                       | PDORO01010   | None           | None         | G4?         | S1S2       | 2B.3                           |
| <b>Sonoma tree vole</b><br><i>Arborimus pomo</i>                           | AMAFF23030   | None           | None         | G3          | S3         | SSC                            |
| <b>southern torrent salamander</b><br><i>Rhyacotriton variegatus</i>       | AAAAJ01020   | None           | None         | G3G4        | S2S3       | SSC                            |
| <b>summer-run steelhead trout</b><br><i>Oncorhynchus mykiss irideus</i>    | AFCHA0213B   | None           | None         | G5T4Q       | S2         | SSC                            |
| <b>Ten Mile shoulderband</b><br><i>Noyo intersessa</i>                     | IMGASC5070   | None           | None         | G2          | S2         |                                |
| <b>Townsend's big-eared bat</b><br><i>Corynorhinus townsendii</i>          | AMACC08010   | None           | None         | G3G4        | S2         | SSC                            |
| <b>Upland Douglas Fir Forest</b><br><i>Upland Douglas Fir Forest</i>       | CTT82420CA   | None           | None         | G4          | S3.1       |                                |
| <b>western bumble bee</b><br><i>Bombus occidentalis</i>                    | IIHYM24250   | None           | None         | G2G3        | S1         |                                |
| <b>western pond turtle</b><br><i>Emys marmorata</i>                        | ARAAD02030   | None           | None         | G3G4        | S3         | SSC                            |
| <b>white-flowered rein orchid</b><br><i>Piperia candida</i>                | PMORC1X050   | None           | None         | G3          | S3         | 1B.2                           |





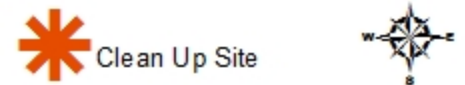
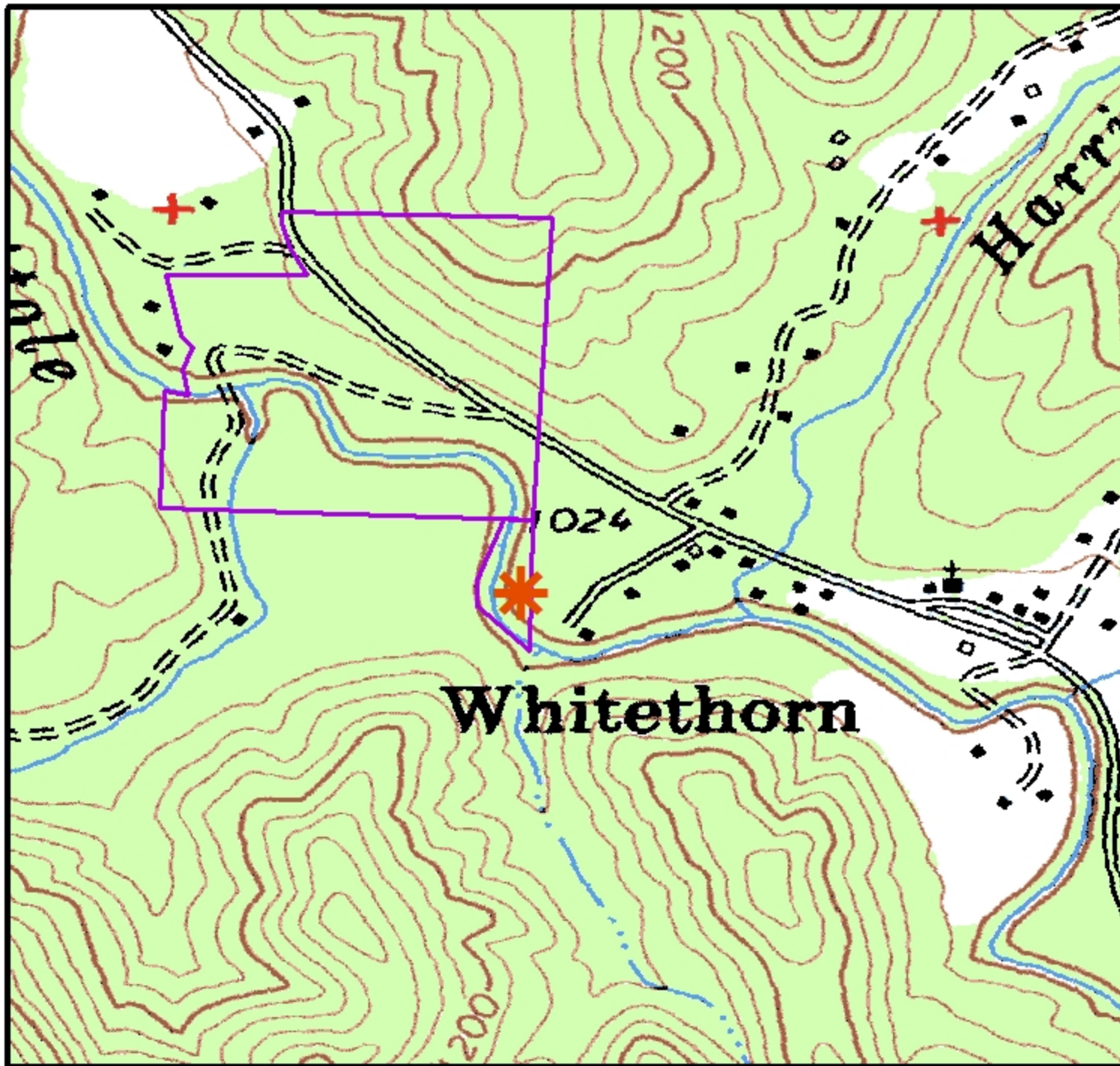
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| <b>Species</b>   | <b>Element Code</b> | <b>Federal Status</b> | <b>State Status</b> | <b>Global Rank</b> | <b>State Rank</b> | <b>Rare Plant Rank/CDFW SSC or FP</b> |
|--|---------------------|-----------------------|---------------------|--------------------|-------------------|---------------------------------------|
| <b>Whitney's farewell-to-spring</b><br><i>Clarkia amoena ssp. whitneyi</i> | PDONA05025          | None                  | None                | G5T1               | S1                | 1B.1                                  |
| <b>Yuma myotis</b><br><i>Myotis yumanensis</i>                             | AMACC01020          | None                  | None                | G5                 | S4                |                                       |
| northern spotted owl<br><i>Strix occidentalis caurina</i>                  | ABNSB12011          | Threatened            | Candidate           | G3T3               | S2S3              | SC                                    |

**Record Count: 42**

# Whitethorn Grove Clean Up



0 0.05 0.1 0.2 Miles

USGS Briceland Quadrangle

Produced by  
Sanctuary Forest 2017