

Reclaiming our Public Lands and Watersheds from the Environmental Threats of Trespass Cannabis Cultivation

2017

Introduction:

Public land stewards and managers of fish and wildlife of California are aware of the high-profile environmental impacts that cannabis cultivation has on our natural resources including the toxicants present, water theft and diversions, food, trash and other infrastructure that growers inflict and discard within our watersheds. Information and publications on the topic have been limited and only with recent efforts have new data demonstrated that this emerging threat to California's landscape is quite possibly much larger than previously perceived. In fact, over 90% of the scientific peer-reviewed publication on the matter have been generated only in the past six years, with over 80% of those publications authored by Integral Ecology Research Center. This clearly demonstrates the developing awareness and increasing trend of illicit cultivation of cannabis on our public lands.

This project, implemented by Integral Ecology Research Center (IERC) aims to utilize a protocol that IERC developed on a project in conjunction with United States Forest Service to document and remove all non-hazardous refuse and infrastructure that is posing an immediate environmental threat to watersheds and forests, and the many of species of conservation concern in these areas, on public lands within a large portion of the grant's geographic scope. Finally, this project will be a conduit for training and building the capacity of qualified groups to assist further the land and natural resource agencies addressing this environmental impact challenge in the future.

IERC shall not proceed with on the ground implementation until all necessary permits, consultations, and Notice to Proceed are secured.

Though our proposed work will not implement any of the specific methods outlined in the *California Salmonid Stream Habitat Restoration Manual*, our proposed project most closely aligns with the protocol Part X Upslope Assessment and Restoration Practices. Nearly all the reclamation work to be conducted will occur upslope from streams and riparian zones.

Objective(s):

Through this project, our collaborative team will effectively accomplish the objectives of restoring habitats and protecting aquatic, riparian and other at-risk species from the risks associated with 170 cannabis cultivation sites in the Klamath, Trinity, and Salmon River watersheds. From IERC's investigations of 108 trespass cannabis grow sites in northern California alone, we've discovered that 100% of sites have at least one kind of contaminant hazardous to aquatic and many terrestrial species. However, a large majority of sites have several types of contaminants including high nitrogen fertilizers (which are hazardous in excessive amounts), organophosphate and carbamate

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insecticides, anticoagulant and neurotoxicant rodenticides, pyrethroid insecticides (particularly detrimental to aquatic invertebrates and fish), molluscicides, and even leaking car batteries. Often, these contaminants are within 100 meters of a stream since the growers generally locate their camps and planting plots close to perennial water sources. These hazards remain in place indefinitely, until they degrade and leach into the soil and watershed, or are cleaned-up.

For the sake of restoring and protecting habitats, it is critical to remove all contaminants and other types of risks to species and their habitats. By removing all refuse associated with these illegal cannabis grow sites, we can remove the risk of remaining contaminants being leached into the soil, then into the watershed. We also remove the chance that remaining pesticides, fertilizers, battery acid, and other hazardous materials move directly into adjacent streams with heavy rains, wind, or dispersal by wildlife, thus preventing the movement of contaminants into the watershed.

Project Description:

Location: This project will address/restore 170 trespass Cannabis grow sites throughout the Klamath, Trinity, Salmon and New River watersheds. Collectively, these 170 sites fall within the boundaries of the Six Rivers National forest, Shasta-Trinity National Forest, Klamath National Forest, and Hoopa Valley Indian reservation.

Project Set Up:

Integral Ecology Research Center has already identified 170 grow sites in heavily-impacted subwatersheds throughout the Klamath, Trinity, and Salmon River watersheds. These sites include all known trespass grow sites between 2010 and 2016, in addition to several already established at the time of this proposal in 2017. IERC personnel (Co-directors/ Ecologists Dr. Mourad Gabriel and Dr. Greta Wengert, and Associate Ecologist Corrina Kamoroff) will be responsible for the following tasks and subtasks (see next section for Task descriptions):

- Conduct Initial Site Assessments at each individual grow site/ complex and develop Site Specific Restoration Plans for all 170 sites.
- Test suspected Hazardous Materials for pesticide residue using field test kits
 - Safely mitigate pesticide-positive infrastructure by containing them in Hazardous Material designated containers in conjunction with chemical, biological, radiological, and nuclear (CRBN) teams and US Forest Service (USFS) Hazardous Material specialists
 - Collect samples for confirmatory analysis at California Animal Health and Food Safety Laboratory (CAHFS)

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- Coordinate all entities involved in each planned reclamation including cost-shared and contracted helicopter support, law enforcement, U.S. Forest Service dispatch, and reclamation teams
- Lead reclamation teams in the field at each site and at the landing zone (LZ) and refuse drop-points
- Collect, enter, and organize all data collected
- Write all required reports, including Site-Specific Restoration Plans, Quarterly Reports of Reclamation Completed, Draft and Final Reports
- Execute subcontracts
- Invoicing

IERC is collaborating with four other entities, all of whom have ample experience in the reclamation of trespass cannabis cultivation sites throughout northern California. These include Trinity County Resource Conservation District (RCD), The Watershed Training and Research Center (WTRC), Environmental Reclamation Team of the High Sierra Trail Crew (ERT), and the California Conservation Corps (CCC). These four groups will be responsible for:

- Field labor to gather and bag-up refuse and infrastructure, and haul to appropriate pick-up points for helicopter
- In some cases, haul bagged or bundled material by hand to nearest road for pick-up
- Provide trucks/ trailers for hauling refuse to dumps or transfer stations

The following geographic breakdown will be designated for work by each of these four entities:

- Trinity County: RCD and WTRC, occasionally CCC
- Humboldt County: CCC
- Siskiyou County: CCC

ERT will assist in each of these areas where it is deemed additional labor force is required.

Air Shasta will be the likely helicopter company we will contract with for this project.

Materials:

For the Initial Assessment and Hazardous Materials testing, we will need the following materials:

- Neogen Agri-Screen pesticide test kits
 - To field-test suspected contaminated materials for pesticide residue

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- Ensure safety of reclamation workers when handling refuse
 - Dacron swabs, whirl-packs, screw-top air-tight vials for sampling materials
 - To sample field-test positive materials for analysis at CAHFS
 - To determine need for further remediation work post-reclamation
 - Nitrile and butyl gloves
 - For handling suspected Hazardous Materials for sampling
 - To ensure personnel safety with PPE at Initial Assessment
- For the reclamation (refuse removal), we will need the following materials:
- Contractor garbage bags
 - For bagging refuse at grow sites
 - Air-tight buckets
 - For Hazardous Material sequestering
 - To prevent further contamination and risk to biotic and abiotic resources
 - Caution flagging
 - To mark hazards prior to reclamation
 - Prevents reclamation workers from contacting hazardous materials
 - Duct tape
 - For enclosing garbage bags once they are filled with refuse, also,
 - To secure multiple lines of irrigation pipe together for easier removal by hand or helicopter
 - Cargo nets
 - For bundling garbage bags and long-lining out with helicopter
 - Cobiners
 - For hauling out bundled irrigation pipe with helicopter
 - Disinfectant wipes
 - Wipe down personal equipment, clothes, skin
 - To disinfect any possible contamination with pesticides
 - Cartridges for respirators
 - To wear during initial assessment if Hazardous Materials are found
 - Personnel safety

Tasks:

Task 1. Project Management and Administration

Approach for Task 1: Dr. Greta Wengert, co-director of IERC, will be assigned as Project Manager for this program. All planning, coordination, logistics, and communication will be led by Dr. Wengert along with assistant Project Manager,

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Dr. Mourad Gabriel. They will be responsible for site selection and scheduling of site visits and planned reclamation, communication with law enforcement, developing all required reports, communication with CDFW grant manager(s), subcontracting, and invoicing.

Task 2. Conduct Initial Site Assessments and develop Site Specific Restoration Plans for all 170 sites

Approach for Task 2: We will conduct Initial Site Assessments at each individual grow site/complex in order to develop Site Specific Restoration Plans for all 170 sites. This task will include quantifying the following items: estimated weight of household refuse to be removed (includes food, clothes, personal items, camping gear, tarps, propane tanks, etc.), estimated length/ weight of plastic irrigation pipe to be removed, number of water diversions to be dismantled, estimated number of garbage bags required to bag all refuse, estimated number of nets (for refuse) and cobiners (for pipe) required to long-line refuse and infrastructure by helicopter, estimated number of person-hours required to stage all refuse for long-line removal, proposed LZ coordinates for helicopter, coordinates for start-point of hike-in for reclamation teams, and coordinates of hazardous materials staged for later removal.

In addition, IERC is highly adept at discovering likely storage places that growers use to conceal weapons, irrigation pipe, banned chemicals, and other materials they wish to hide from law enforcement. As such, determining the sources of waterline, even when the source originates several miles from the actual grow site, is a skill that IERC has developed after hundreds of visits to trespass grow sites in California, and will use to identify all source points for illegal water diversions, such that they can be removed during reclamation. After the initial site assessment, a Site-Specific Restoration Plan will be completed for distribution to the reclamation teams, law enforcement partners involved in both the on-site reclamation efforts as well as the helicopter operations, and Forest Leadership and dispatch. These Plans will include all the information described above to increase the efficiency and effectiveness of the reclamation teams to conduct the work.

Task 3. At the same time we complete the Initial Site Assessment, we will also assess and mitigate any Hazardous Material presence at all 170 trespass cannabis cultivation sites.

Approach for Task 3: Each site will be visited by at least two IERC scientists accompanied by at least one law enforcement officer (federal, state, or county). All grow site camps, trash dumps, planting plots, and trails will be thoroughly searched for any pesticides, including rodenticides, insecticides, and molluscicides. Over-the-counter bought pesticides will be assessed for any contents. Any empty bottles

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(non-hazardous) will be left in place for reclamation. Hazardous materials will be identified (if possible), handled properly (all IERC scientists have proper training, 40-hour HAZWOPER, and personal protective equipment (PPE) to safely handle all hazardous materials), mitigated into air-tight containers designed specifically to contain hazardous materials, and designated at a location well away from watercourses. Repurposed containers (often water bottles, Gatorade bottles, other beverage containers) suspected of having been repurposed for pesticide application and displaying signs of contents other than what would logically be inside will be treated as hazardous materials and mitigated using the same methods as those for confirmed hazardous materials. All hazardous materials will be disposed of properly. However, in the case of banned and restricted-use pesticides, which are often found at these sites, transportation on a public road is in violation of California law. Therefore, these chemicals will be mitigated as described above so as to pose no further risk to the environment or reclamation workers, and staged in an area for later removal by U.S. Forest Service contractors hired for this specific purpose. When available, we will work with CBRN personnel specifically trained to deal with hazardous materials. IERC has worked with CBRN specialists in the past and have a good-standing relationships with this team, such that support and assistance is likely to be available.

Task 4. With knowledge of any hazardous material present, SAFELY execute all goals outlined in each Site-Specific Restoration Plan to remove all trash, infrastructure, and non-hazardous materials and dispose of it properly at 170 trespass cannabis cultivation sites on public lands.

Approach for Task 4: For sites that will require helicopter support for removal of all refuse and infrastructure, IERC scientists will perform all coordination with the air support team (whether contractual, USFS Exclusive-Use ship, or CDFW Exclusive-Use Ship) for estimated hours/days required by each, or a set of, grow sites for reclamation. This will include conveying coordinates of the LZ and target landing time. Radio communications between personnel at the LZ and the pilot will be established ahead of time, such that communication plans are in place before the operation starts.

Reclamation teams will be organized according to the knowledge gained in the Initial Site Assessment. Teams will organize at pre-determined meeting times and places and a safety briefing will be conducted for each site. Safety briefings and trainings will include discussion of risks associated with this type of work, how to avoid and report these risks, chain of command for each team (law enforcement concerns), proper PPE, emergency response, and other safety concerns specific to each site. Proper PPE will be worn by all reclamation team members including nitrile or butyl gloves, work gloves, hard hats, and eye protection when necessary.

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Teams will proceed to sites according to the plans and lead by IERC personnel, and commence reclamation.

Reclamation will include gathering and bagging of all non-hazardous refuse left behind at the cultivation sites, bundling of irrigation pipe, and moving this infrastructure in addition to large items (camp stoves, propane tanks, generators, water pumps) to a central location for long-line pick-up by helicopter, or to be hauled out by hand. Once material is staged on a road either by hand-haul or helicopter long-line, it will be loaded into a trailer provided by one of our subcontractors, and hauled to the nearest waste management station or transfer station (IERC is familiar with all the waste and transfer stations available in Siskiyou, Humboldt, and Trinity Counties).

Task 5. Develop a list of sites with highest priority for further restoration efforts (e.g. sediment control, spring restoration, in-stream bank stabilization), a description of extent of environmental damage at each site, and recommended restoration tactics to remedy the damage to provide to California Department of Fish and Wildlife for future restoration planning.

Approach for Task 5: Using on-the-ground knowledge obtained while conducting initial assessments and cleaning-up each site, we will carefully observe and determine additional restoration projects required in order to fully restore and remediate sites to their natural condition. Special note will be taken on riparian and upslope forest clearing, ground-terracing that enhances erosion and runoff, bank destabilization, stream channel and spring damage, and soil contamination. Assessments will be made at each site and appropriate restoration measures will be determined. This information will be included in quarterly reports being generated from reclamation work completed at each site (see list of Deliverables).

Task 6. Post-implementation Monitoring

Approach for Task 6: For each site initially assessed and reclaimed, we will conduct post-implementation monitoring. We will use the following output performance measures which track whether reclamation activities were completed successfully.

For each site, this includes:

- 1) Characterization of baseline and post-project conditions and all pre-implementation data (collected during Initial Assessment and reported in Site-specific Restoration Plan),
- 2) Pre- and post-implementation photos from fixed points to document pre/during/post restoration site conditions and to indicate,
- 3) Whether all trash and infrastructure was removed and disposed of properly,

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- 4) Measurements of:
 - a) Feet of irrigation line removed,
 - b) Weight and type of fertilizers removed,
 - c) Weight and type of chemicals removed,
 - d) Waste, trash, and equipment removed from the site,
 - e) Length (linear feet) and area (acres) of aquatic, riparian, and upslope habitat disturbed by grow site,
 - f) Number and type of stream structures implemented within stream channel by grow site, and
 - g) Number of weapons discovered, if any.
- 5) Evaluation of factors that may be influencing ecosystem outcomes (how much food/ wildlife attractant was removed, if at all present; how much rodenticide or other substances harmful to fish and wildlife is removed)
- 6) The amount of water returned to streams through removal of diversions that were present before reclamation.

Outcome performance measures that evaluate direct ecosystem responses to project activities (e.g., responses by target wildlife populations and responses in ecosystem function) will be difficult to measure, but in conjunction with our ongoing collaboration with the Hoopa Tribe and U.S. Forest Service, we can extend a monitoring effort outside the scope of this grant. These programs in which IERC is heavily involved continually monitor sensitive wildlife populations throughout the geographic scope of this project, by monitoring the health of wildlife through continued AR screening of fisher and barred owl populations in the area, and rodent populations being monitored as part of a Section 6 grant scheduled to be awarded to IERC in late 2017. Furthermore, our partner WRTC conducts fish monitoring projects in many of the watersheds we propose to target for grow site reclamation. We will continue to work with this group to exchange information on fish populations and trends in those specific watersheds we will be conducting reclamation.

Another measure of outcome performance is whether or not growers re-occupy sites once they have been reclaimed. In general, there is a high likelihood of reuse for grow sites that have no or partial reclamation completed, while the likelihood of reuse of fully reclaimed sites is tiny. Through our secure and close partnerships with local, state and federal law enforcement agencies, we will assess the reuse of sites in the growing seasons following reclamation.

Task 7. Public Outreach and Multi-media Development

Approach for Task 7: Throughout all tasks of this project, we will document the planning phase, initial site assessments, development of Site-Specific Restoration Plans, Hazardous Materials assessment and mitigation, on-the-ground

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reclamation efforts, helicopter support, refuse transportation, and all other subtasks included in this project. Documentation will include a web page dedicated to all aspects of this project with bi-weekly updates and a publicly available program on the successes of this operation in a combination of video, photo, and written formats. The goal will be to raise awareness about this pervasive issue to the general public and highlight the successes of collaborations of agency, non-governmental organizations, and tribes to tackle this huge environmental issue.

Deliverables:

For Task 1, the draft and final project reports will include all the above information summarized in addition to a summary of all site reclamation statistics and data from the quarterly reports described above. In addition, we will analyze any trends detected in grow site characteristics from 2010 to 2017, including fertilizer use, pesticide use, levels of water diversion, and spatial size of grow site, among other notable characteristics of the sites. Finally, all raw data will be submitted to CDFW in a database that includes information from each site and its individual data.

For Tasks 2 and 3, we will submit to CDFW every Site-Specific Restoration Plan resulting from each Initial Assessment for each grow site to be reclaimed, which will also include the field-test results of pesticide screening of materials and a detailed map of each site.

For Tasks 4 – 6, we will submit to CDFW quarterly reports of reclamation statistics of completed grow sites. Statistics will include the site name and coordinates, ALL information indicated in Task 6 above, names of all entities involved, quantities of refuse removed, quantities of irrigation pipe removed, Hazardous Materials contained and staged for later removal, total flight hours required (if helicopter support is used), and total personnel hours required to complete each site. In each quarterly report, a list of sites with highest priority for further restoration efforts (sediment control, spring restoration, in-stream bank stabilization), a description of extent of environmental damage at each site, and recommended restoration projects to remedy the damage will be provided.

For Task 7, we will provide constant access by CDFW to the website devoted to this project. At the completion of the project, we will provide a first-look at the multi-media program on this project to CDFW prior to dissemination to the general public.

We expect that the total amounts of refuse removed from all 170 of these trespass cannabis grow sites will be approximately 764,000 lbs, including 576 miles of

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irrigation pipe. We also expect to restore up to 1.17 billion gallons of water to Klamath, Trinity, and Salmon River watersheds.

Timelines:

| Task No. | Task Title | Deliverables and Key Project Milestones | Estimated Completion Dates |
|----------|--|--|---|
| 1 | Project Management and Administration | 1.1 Quarterly Progress Reports 1.2 Quarterly Invoices 1.3 Executed Subcontracts 1.4 Project Data 1.5 Draft Final Report 1.6 Final Report 1.7 Project Close-Out Report 1.8 Final Invoice | 1.1 Due within thirty (30) days following each quarterly month for the duration of the agreement. 1.2 Due within thirty (30) days following each month (or) quarterly month (or) semi-annual. 1.3 Due with Quarterly Progress Reports 1.4 All data due with Final Report 1.5 June 1, 2020 (estimated) 1.6 July 1, 2020 (estimated) 1.7 July 31, 2020 (estimated) 1.8 July 31, 2020 (estimated) |
| 2 & 3 | Conduct Initial Assessments and Hazardous Materials Assessment | 2.1 Site-specific Restoration Plans for each grow site including Hazardous Materials assessment | 2.1 Within 7 days of completing Initial Assessments |
| 4 | Conduct reclamation of 170 grow sites | 4.1 Execute reclamation based on Site-specific Restoration Plans of 170 sites | 4.1 Ongoing, throughout life of grant |

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| Task No. | Task Title | Deliverables and Key Project Milestones | Estimated Completion Dates |
|----------|--|---|---|
| | | 4.2 Summarize reclamation completed including statistics from each reclaimed site in a Quarterly report | 4.2 Quarterly, throughout life of grant |
| 5 | Conduct assessment of further restoration projects required at each site | 5.1 List of sites with further restoration project required, descriptions of environmental damage needing restoration, recommended restoration projects in a Quarterly report | 5.1 Quarterly, throughout life of grant |
| 6 | Post-project monitoring | 6.1 Output performance measurements in reports including reclamation statistics and quantification | 6.1 Quarterly, throughout life of grant |
| 7 | Public outreach and multi-media documentation program | 7.1 Website access 7.2 Final program of multi-media documentation | 7.1 Continuous, throughout life of grant 7.2 Submitted with Draft final Report |



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Imported file selection

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| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| Alkali Seep <i>Alkali Seep</i> | CTT45320CA | None | None | G3 | S2.1 | |
| American badger <i>Taxidea taxus</i> | AMAJF04010 | None | None | G5 | S3 | SSC |
| American manna grass <i>Glyceria grandis</i> | PMPOA2Y080 | None | None | G5 | S3 | 2B.3 |
| American peregrine falcon <i>Falco peregrinus anatum</i> | ABNKD06071 | Delisted | Delisted | G4T4 | S3S4 | FP |
| American saw-wort <i>Saussurea americana</i> | PDAST8B020 | None | None | G5 | S1 | 2B.2 |
| angel's hair lichen <i>Ramalina thrausta</i> | NLLEC3S340 | None | None | G5 | S2? | 2B.1 |
| Applegate stonecrop <i>Sedum oblancheolatum</i> | PDCRA0A0T0 | None | None | G3 | S1 | 1B.1 |
| Baker's globe mallow <i>Iliamna bakeri</i> | PDMAL0K010 | None | None | G4 | S3 | 4.2 |
| bald eagle <i>Haliaeetus leucocephalus</i> | ABNKC10010 | Delisted | Endangered | G5 | S3 | FP |
| Bald Mountain milk-vetch <i>Astragalus umbraticus</i> | PDFAB0F990 | None | None | G3 | S2 | 2B.3 |
| bensoniella <i>Bensoniella oregona</i> | PDSAX02010 | None | Rare | G3 | S2 | 1B.1 |
| Big Bar hesperian <i>Vespericola pressleyi</i> | IMGASA4170 | None | None | G1 | S1 | |
| black swift <i>Cypseloides niger</i> | ABNUA01010 | None | None | G4 | S2 | SSC |
| black-crowned night heron <i>Nycticorax nycticorax</i> | ABNGA11010 | None | None | G5 | S4 | |
| Blue Creek stonecrop <i>Sedum citrinum</i> | PDCRA0A200 | None | None | G2 | S2 | 1B.2 |
| blushing wild buckwheat <i>Eriogonum ursinum var. erubescens</i> | PDPGN08632 | None | None | G3G4T3 | S3 | 1B.3 |
| Briggs' leptonetid spider <i>Calileptoneta briggsi</i> | ILARAU6010 | None | None | G1 | S1 | |
| bristle-stalked sedge <i>Carex leptalea</i> | PMCYP037E0 | None | None | G5 | S1 | 2B.2 |
| brook pocket moss <i>Fissidens aphelotaxifolius</i> | NBMUS2W290 | None | None | G3G4 | S1 | 2B.2 |
| brownish beaked-rush <i>Rhynchospora capitellata</i> | PMCYP0N080 | None | None | G5 | S1 | 2B.2 |



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 |
|--|--------------|---------------------|--------------|-------------|------------|--------------------------------|
| bunchberry <i>Cornus canadensis</i> | PDCOR01040 | None | None | G5 | S2 | 2B.2 |
| buttercup-leaf suksdorfia <i>Hemieva ranunculifolia</i> | PDSAX0W010 | None | None | G5 | S2 | 2B.2 |
| buxbaumia moss <i>Buxbaumia viridis</i> | NBMUS1B040 | None | None | G4G5 | S1 | 2B.2 |
| California globe mallow <i>Iliamna latibracteata</i> | PDMAL0K040 | None | None | G2G3 | S2 | 1B.2 |
| California wolverine <i>Gulo gulo</i> | AMAJF03010 | Proposed Threatened | Threatened | G4 | S1 | FP |
| Canyon Creek stonecrop <i>Sedum obtusatum</i> ssp. <i>paradisum</i> | PDCRA0A0U3 | None | None | G4G5T3 | S3 | 1B.3 |
| Cascade alpine campion <i>Silene suksdorfii</i> | PDCAR0U1W0 | None | None | G4 | S3 | 2B.3 |
| Cascade grass-of-Parnassus <i>Parnassia cirrata</i> var. <i>intermedia</i> | PDSAX0P044 | None | None | G5T4 | S3 | 2B.2 |
| Cascade stonecrop <i>Sedum divergens</i> | PDCRA0A0B0 | None | None | G5? | S2 | 2B.3 |
| Cascades frog <i>Rana cascadae</i> | AAABH01060 | None | None | G3G4 | S3 | SSC |
| chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha</i> | AFCHA0205A | Threatened | Threatened | G5 | S1 | |
| chinook salmon - upper Klamath and Trinity Rivers ESU. <i>Oncorhynchus tshawytscha</i> | AFCHA02056 | None | None | G5 | S1S2 | SSC |
| coast checkerbloom <i>Sidalcea oregana</i> ssp. <i>eximia</i> | PDMAL110K9 | None | None | G5T1 | S1 | 1B.2 |
| coast cutthroat trout <i>Oncorhynchus clarkii clarkii</i> | AFCHA0208A | None | None | G4T4 | S3 | SSC |
| coast fawn lily <i>Erythronium revolutum</i> | PMLIL0U0F0 | None | None | G4G5 | S3 | 2B.2 |
| Coast Range lomatium <i>Lomatium martindalei</i> | PDAP1B140 | None | None | G5 | S2 | 2B.3 |
| Columbia yellow cress <i>Rorippa columbiae</i> | PDBRA27060 | None | None | G3 | S1 | 1B.2 |
| crested potentilla <i>Potentilla cristae</i> | PDROS1B2F0 | None | None | G2 | S2 | 1B.3 |
| crested sideband <i>Monadenia cristulata</i> | IMGASC7120 | None | None | G1G2 | S1S2 | |
| Darlingtonia Seep <i>Darlingtonia Seep</i> | CTT51120CA | None | None | G4 | S3.2 | |
| Del Norte salamander <i>Plethodon elongatus</i> | AAAAD12050 | None | None | G4 | S3 | WL |



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 |
|--|--------------|---------------------|----------------------|-------------|------------|--------------------------------|
| downy sideband <i>Monadenia callipeplus</i> | IMGASC7110 | None | None | G1G2 | S1S2 | |
| Dudley's rush <i>Juncus dudleyi</i> | PMJUN01390 | None | None | G5 | S1 | 2B.3 |
| elongate copper moss <i>Mielichhoferia elongata</i> | NBMUS4Q022 | None | None | G5 | S4 | 4.3 |
| Engelmann spruce <i>Picea engelmannii</i> | PGPIN03030 | None | None | G5 | S2 | 2B.2 |
| English Peak greenbrier <i>Smilax jamesii</i> | PMSMI010D0 | None | None | G3G4 | S3S4 | 4.2 |
| fisher - West Coast DPS <i>Pekania pennanti</i> | AMAJF01021 | Proposed Threatened | Candidate Threatened | G5T2T3Q | S2S3 | SSC |
| flagella-like atractyllocarpus <i>Campylopodiella stenocarpa</i> | NBMUS84010 | None | None | G5 | S1? | 2B.2 |
| foothill yellow-legged frog <i>Rana boylei</i> | AAABH01050 | None | Candidate Threatened | G3 | S3 | SSC |
| Franklin's bumble bee <i>Bombus franklini</i> | IIHYM24010 | None | None | G1 | S1 | |
| fringed myotis <i>Myotis thysanodes</i> | AMACC01090 | None | None | G4 | S3 | |
| Gasquet rose <i>Rosa gymnocarpa</i> var. <i>serpentina</i> | PDROS1J1V1 | None | None | G5T3T4 | S2 | 1B.3 |
| ghost-pipe <i>Monotropa uniflora</i> | PDMON03030 | None | None | G5 | S2 | 2B.2 |
| giant fawn lily <i>Erythronium oregonum</i> | PMLIL0U0C0 | None | None | G4G5 | S2 | 2B.2 |
| golden alpine draba <i>Draba aureola</i> | PDBRA110F0 | None | None | G4 | S2 | 1B.3 |
| golden eagle <i>Aquila chrysaetos</i> | ABNKC22010 | None | None | G5 | S3 | FP |
| great blue heron <i>Ardea herodias</i> | ABNGA04010 | None | None | G5 | S4 | |
| great burnet <i>Sanguisorba officinalis</i> | PDROS1L060 | None | None | G5? | S2 | 2B.2 |
| hairy marsh hedge-nettle <i>Stachys pilosa</i> | PDLAM1X1A0 | None | None | G5 | S3 | 2B.3 |
| Heckner's lewisia <i>Lewisia cotyledon</i> var. <i>heckneri</i> | PDPOR04052 | None | None | G4T3 | S3 | 1B.2 |
| Henderson's fawn lily <i>Erythronium hendersonii</i> | PMLIL0U070 | None | None | G4 | S2 | 2B.3 |
| Henderson's triteleia <i>Triteleia hendersonii</i> | PMLIL21070 | None | None | G4 | S1 | 2B.2 |



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|--|--------------|----------------|----------------------|-------------|------------|--------------------------------|
| hoary bat <i>Lasiurus cinereus</i> | AMACC05030 | None | None | G5 | S4 | |
| Holzinger's orthotrichum moss <i>Orthotrichum holzingeri</i> | NBMUS560E0 | None | None | G3 | S2 | 1B.3 |
| hooded lancetooth <i>Ancotrema voyanum</i> | IMGAS36130 | None | None | G1G2 | S1S2 | |
| horned butterwort <i>Pinguicula macroceras</i> | PDLNT01040 | None | None | G4 | S2 | 2B.2 |
| Howell's alkali grass <i>Puccinellia howellii</i> | PMPOA531A0 | None | None | G1 | S1 | 1B.1 |
| Howell's fawn lily <i>Erythronium howellii</i> | PMLIL0U080 | None | None | G3G4 | S2 | 1B.3 |
| Howell's montia <i>Montia howellii</i> | PDPOR05070 | None | None | G3G4 | S2 | 2B.2 |
| Howell's sandwort <i>Sabulina howellii</i> | PDCAR0G0F0 | None | None | G4 | S3 | 1B.3 |
| Howell's tauschia <i>Tauschia howellii</i> | PDAPI27050 | None | None | G2G3 | S2S3 | 1B.3 |
| Howell's violet <i>Viola howellii</i> | PDVIO040U0 | None | None | G4 | S1 | 2B.2 |
| Humboldt marten <i>Martes caurina humboldtensis</i> | AMAJF01012 | None | Candidate Endangered | G5T1 | S1 | SSC |
| Indian Valley brodiaea <i>Brodiaea rosea</i> | PMLIL0C032 | None | Endangered | G2 | S2 | 1B.1 |
| Jaynes Canyon buckwheat <i>Eriogonum diclinum</i> | PDPGN081S0 | None | None | G3 | S3 | 2B.3 |
| Jepson's dodder <i>Cuscuta jepsonii</i> | PDCUS011T0 | None | None | GH | SH | 1B.2 |
| Jepson's horkelia <i>Horkelia daucifolia</i> var. <i>indicta</i> | PDROS0W053 | None | None | G4T1 | S1 | 1B.1 |
| Karok hesperian <i>Vespericola karokorum</i> | IMGASA4040 | None | None | G2 | S2 | |
| Klamath gentian <i>Gentiana plurisetosa</i> | PDGEN060V0 | None | None | G2G3 | S2 | 1B.3 |
| Klamath manzanita <i>Arctostaphylos klamathensis</i> | PDERI041R0 | None | None | G3? | S3? | 1B.2 |
| Klamath Mountain buckwheat <i>Eriogonum hirtellum</i> | PDPGN082T0 | None | None | G2G3 | S2S3 | 1B.3 |
| Klamath Mountain catchfly <i>Silene salmonacea</i> | PDCAR0U2D0 | None | None | G3 | S3 | 1B.2 |
| Klamath/No Coast Spring Run Chinook/Summer Steelhead Stream <i>Klamath/No Coast Spring Run Chinook/Summer Steelhead Stream</i> | CARB2333CA | None | None | GNR | SNR | |



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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| Klamath/North Coast Fall/Winter Run Chinook Salmon River <i>Klamath/North Coast Fall/Winter Run Chinook Salmon River</i> | CARB2332CA | None | None | GNR | SNR | |
| Klamath/North Coast Interior Headwater Fishless Stream <i>Klamath/North Coast Interior Headwater Fishless Stream</i> | CARB2220CA | None | None | GNR | SNR | |
| Klamath/North Coast Rainbow Trout Stream <i>Klamath/North Coast Rainbow Trout Stream</i> | CARB2312CA | None | None | GNR | SNR | |
| Koehler's stipitate rockcress <i>Boechera koehleri</i> | PDBRA060Z0 | None | None | G3 | S2S3 | 1B.3 |
| Konocti manzanita <i>Arctostaphylos manzanita ssp. elegans</i> | PDERI04271 | None | None | G5T3 | S3 | 1B.3 |
| leafy-stemmed mitrewort <i>Mitellastrum caulescens</i> | PDSAX0N020 | None | None | G5 | S4 | 4.2 |
| Leech's chaetarthrian water scavenger beetle <i>Chaetarthria leechi</i> | IICOL5T010 | None | None | G1? | S1? | |
| little hulsea <i>Hulsea nana</i> | PDAST4Z060 | None | None | G4 | S3 | 2B.3 |
| little-leaved huckleberry <i>Vaccinium scoparium</i> | PDERI180Y0 | None | None | G5 | S3 | 2B.2 |
| long-eared myotis <i>Myotis evotis</i> | AMACC01070 | None | None | G5 | S3 | |
| long-legged myotis <i>Myotis volans</i> | AMACC01110 | None | None | G5 | S3 | |
| Lyall's tonestus <i>Tonestus lyallii</i> | PDASTE0050 | None | None | G5 | S1 | 2B.3 |
| Mad River fleabane daisy <i>Erigeron maniopotamicus</i> | PDASTE1050 | None | None | G2? | S2? | 1B.2 |
| maple-leaved checkerbloom <i>Sidalcea malachroides</i> | PDMAL110E0 | None | None | G3 | S3 | 4.2 |
| Marble Mountain campion <i>Silene marmorensis</i> | PDCAR0U0Z0 | None | None | G2 | S2 | 1B.2 |
| marbled murrelet <i>Brachyramphus marmoratus</i> | ABNNN06010 | Threatened | Endangered | G3G4 | S1 | |
| marbled wild-ginger <i>Asarum marmoratum</i> | PDARI02070 | None | None | G4? | S2 | 2B.3 |
| McDonald's rockcress <i>Arabis mcdonaldiana</i> | PDBRA06150 | Endangered | Endangered | G3 | S3 | 1B.1 |
| Methuselah's beard lichen <i>Usnea longissima</i> | NLLEC5P420 | None | None | G4 | S4 | 4.2 |
| Mingan moonwort <i>Botrychium minganense</i> | PPOPH010R0 | None | None | G4G5 | S3 | 2B.2 |



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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| Morrison bumble bee <i>Bombus morrisoni</i> | IIHYM24460 | None | None | G4G5 | S1S2 | |
| Mt. Eddy draba <i>Draba carnosula</i> | PDBRA112T0 | None | None | G2 | S2 | 1B.3 |
| Mt. Shasta sky pilot <i>Polemonium pulcherrimum</i> var. <i>shastense</i> | PDPLM0E0J4 | None | None | G5T2 | S2 | 1B.2 |
| Mt. Tedoc leptosiphon <i>Leptosiphon nuttallii</i> ssp. <i>howellii</i> | PDPLM090V4 | None | None | G5T2 | S2 | 1B.3 |
| Natural Bridge megomphix <i>Megomphix californicus</i> | IMGASB2010 | None | None | G1G2 | S1S2 | |
| Niles' harmonia <i>Harmonia doris-nilesiae</i> | PDAST650L0 | None | None | G2G3 | S2S3 | 1B.1 |
| North American porcupine <i>Erethizon dorsatum</i> | AMAFJ01010 | None | None | G5 | S3 | |
| northern clarkia <i>Clarkia borealis</i> ssp. <i>borealis</i> | PDONA05062 | None | None | G3T3 | S3 | 1B.3 |
| northern clustered sedge <i>Carex arcta</i> | PMCYP030X0 | None | None | G5 | S1 | 2B.2 |
| northern goshawk <i>Accipiter gentilis</i> | ABNKC12060 | None | None | G5 | S3 | SSC |
| northern meadow sedge <i>Carex praticola</i> | PMCYP03B20 | None | None | G5 | S2 | 2B.2 |
| northern microseris <i>Microseris borealis</i> | PDAST6E030 | None | None | G5 | S1 | 2B.1 |
| northern red-legged frog <i>Rana aurora</i> | AAABH01021 | None | None | G4 | S3 | SSC |
| obscure bumble bee <i>Bombus caliginosus</i> | IIHYM24380 | None | None | G4? | S1S2 | |
| obtuse starwort <i>Stellaria obtusa</i> | PDCAR0X0U0 | None | None | G5 | S4 | 4.3 |
| Oregon fireweed <i>Epilobium oreganum</i> | PDONA060P0 | None | None | G2 | S2 | 1B.2 |
| Oregon goldthread <i>Coptis laciniata</i> | PDRAN0A020 | None | None | G4 | S3 | 4.2 |
| Oregon lungwort <i>Mertensia bella</i> | PDBOR0N040 | None | None | G4 | S1 | 2B.2 |
| Oregon sedge <i>Carex halliana</i> | PMCYP035M0 | None | None | G4 | S2 | 2B.3 |
| Oregon shoulderband <i>Helminthoglypta hertleini</i> | IMGASC2280 | None | None | G1 | S1S2 | |
| Oregon snowshoe hare <i>Lepus americanus klamathensis</i> | AMAEB03011 | None | None | G5T3T4Q | S2 | SSC |



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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| osprey <i>Pandion haliaetus</i> | ABNKC01010 | None | None | G5 | S4 | WL |
| oval-leaved viburnum <i>Viburnum ellipticum</i> | PDCPR07080 | None | None | G4G5 | S3? | 2B.3 |
| Pacific fuzzwort <i>Ptilidium californicum</i> | NBHEP2U010 | None | None | G4G5 | S3S4 | 4.3 |
| Pacific gilia <i>Gilia capitata ssp. pacifica</i> | PDPLM040B6 | None | None | G5T3 | S2 | 1B.2 |
| Pacific marten <i>Martes caurina</i> | AMAJF01030 | None | None | G5 | S3 | |
| Pacific silver fir <i>Abies amabilis</i> | PGPIN01010 | None | None | G5 | S2 | 2B.3 |
| Pacific tailed frog <i>Ascaphus truei</i> | AAABA01010 | None | None | G4 | S3S4 | SSC |
| pale yellow stonecrop <i>Sedum laxum ssp. flavidum</i> | PDCRA0A0L2 | None | None | G5T4Q | S4 | 4.3 |
| pallid bat <i>Antrozous pallidus</i> | AMACC10010 | None | None | G5 | S3 | SSC |
| Pickering's ivesia <i>Ivesia pickeringii</i> | PDROS0X0D0 | None | None | G2 | S2 | 1B.2 |
| pink-margined monkeyflower <i>Erythranthe trinitensis</i> | PDPHR01070 | None | None | G3 | S3 | 1B.3 |
| porcupine sedge <i>Carex hystericina</i> | PMCYP036D0 | None | None | G5 | S1 | 2B.1 |
| rattlesnake fern <i>Botrypus virginianus</i> | PPOPH010H0 | None | None | G5 | S2 | 2B.2 |
| Regel's rush <i>Juncus regelii</i> | PMJUN012D0 | None | None | G4 | S1 | 2B.3 |
| Robbins' pondweed <i>Potamogeton robbinsii</i> | PM POT030Z0 | None | None | G5 | S3 | 2B.3 |
| robust false lupine <i>Thermopsis robusta</i> | PDFAB3Z0D0 | None | None | G2 | S2 | 1B.2 |
| Rolle's rockcress <i>Boechera rollei</i> | PDBRA064H0 | None | None | G1 | S1 | 1B.1 |
| ruffed grouse <i>Bonasa umbellus</i> | ABNLC11010 | None | None | G5 | S3S4 | WL |
| running-pine <i>Lycopodium clavatum</i> | PPLYC01080 | None | None | G5 | S3 | 4.1 |
| Sawyer's pussy-toes <i>Antennaria sawyeri</i> | PDAST0H1S0 | None | None | G1 | S1 | 1B.2 |
| scabrid alpine tarplant <i>Anisocarpus scabridus</i> | PDASTDU020 | None | None | G3 | S3 | 1B.3 |



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|---|--------------|----------------|--------------|-------------|------------|--------------------------------|
| scalloped moonwort <i>Botrychium crenulatum</i> | PPOPH010L0 | None | None | G4 | S3 | 2B.2 |
| Scott Bar salamander <i>Plethodon asupak</i> | AAAAD12560 | None | Threatened | G1G2 | S1S2 | |
| Scott Mountain bedstraw <i>Galium serpicum ssp. scotticum</i> | PDRUB0N1Y6 | None | None | G4G5T2 | S2 | 1B.2 |
| Scott Mountain howellanthus <i>Howellanthus dalesianus</i> | PDHYD0C140 | None | None | G3 | S3 | 4.3 |
| Scott Mountain sandwort <i>Sabulina stolonifera</i> | PDCAR0G110 | None | None | G2 | S2 | 1B.3 |
| Scott Mountains fawn lily <i>Erythronium citrinum var. roderickii</i> | PMLIL0U042 | None | None | G4T3 | S3 | 1B.3 |
| Scott Valley phacelia <i>Phacelia greenei</i> | PDHYD0C1V0 | None | None | G2 | S2 | 1B.2 |
| seacoast ragwort <i>Packera bolanderi var. bolanderi</i> | PDAST8H0H1 | None | None | G4T4 | S2S3 | 2B.2 |
| seaside bittercress <i>Cardamine angulata</i> | PDBRA0K010 | None | None | G5 | S1 | 2B.1 |
| serpentine rockcress <i>Boechera serpicola</i> | PDBRA01110 | None | None | G1 | S1 | 1B.2 |
| serpentine sedge <i>Carex serpicola</i> | PMCYP03KM0 | None | None | G4 | S3 | 2B.3 |
| Shasta chaenactis <i>Chaenactis suffrutescens</i> | PDAST200H0 | None | None | G3 | S3 | 1B.3 |
| Shasta salamander <i>Hydromantes shastae</i> | AAAAD09030 | None | Threatened | G1G2 | S3 | |
| showy raillardella <i>Raillardella pringlei</i> | PDAST7X030 | None | None | G2G3 | S2S3 | 1B.2 |
| Sierra Nevada red fox <i>Vulpes vulpes necator</i> | AMAJA03012 | Candidate | Threatened | G5T1T2 | S1 | |
| silky balsamroot <i>Balsamorhiza sericea</i> | PDAST110C0 | None | None | G4Q | S3 | 1B.3 |
| silver-haired bat <i>Lasionycteris noctivagans</i> | AMACC02010 | None | None | G5 | S3S4 | |
| Siskiyou bells <i>Prosartes parvifolia</i> | PMLIL0R014 | None | None | G2 | S1S2 | 1B.2 |
| Siskiyou checkerbloom <i>Sidalcea malviflora ssp. patula</i> | PDMAL110F9 | None | None | G5T2 | S2 | 1B.2 |
| Siskiyou fireweed <i>Epilobium siskiyouense</i> | PDONA06100 | None | None | G3 | S3 | 1B.3 |
| Siskiyou ground beetle <i>Nebria gebleri siskiyouensis</i> | IICOL6L091 | None | None | G4G5T4 | S1S2 | |



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|---|--------------|----------------|----------------------|-------------|------------|--------------------------------|
| Siskiyou Mountains salamander <i>Plethodon stormi</i> | AAAAD12180 | None | Threatened | G2G3 | S1S2 | |
| Siskiyou paintbrush <i>Castilleja elata</i> | PDSCR0D213 | None | None | G3 | S2S3 | 2B.2 |
| Siskiyou phacelia <i>Phacelia leonis</i> | PDHYD0C2N0 | None | None | G3 | S2? | 1B.3 |
| slender silver moss <i>Anomobryum julaceum</i> | NBMUS80010 | None | None | G5? | S2 | 4.2 |
| small groundcone <i>Kopsiopsis hookeri</i> | PDORO01010 | None | None | G4? | S1S2 | 2B.3 |
| small-flowered calycadenia <i>Calycadenia micrantha</i> | PDAST1P0C0 | None | None | G2 | S2 | 1B.2 |
| snow dwarf bramble <i>Rubus nivalis</i> | PDROS1K4S0 | None | None | G4? | S1 | 2B.3 |
| Sonoma tree vole <i>Arborimus pomo</i> | AMAFF23030 | None | None | G3 | S3 | SSC |
| South Fork Mountain lupine <i>Lupinus elmeri</i> | PDFAB2B1G0 | None | None | G2 | S2 | 1B.2 |
| southern long-toed salamander <i>Ambystoma macrodactylum sigillatum</i> | AAAAA01085 | None | None | G5T4 | S3 | SSC |
| southern torrent salamander <i>Rhyacotriton variegatus</i> | AAAAJ01020 | None | None | G3G4 | S2S3 | SSC |
| Stebbins' harmonia <i>Harmonia stebbinsii</i> | PDAST650K0 | None | None | G2 | S2 | 1B.2 |
| steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> | AFCHA0209K | Threatened | None | G5T2Q | S2 | |
| subalpine fir <i>Abies lasiocarpa</i> var. <i>lasiocarpa</i> | PGPIN01072 | None | None | G5T5 | S3 | 2B.3 |
| Suckley's cuckoo bumble bee <i>Bombus suckleyi</i> | IIHYM24350 | None | None | GU | S1 | |
| summer-run steelhead trout <i>Oncorhynchus mykiss irideus</i> | AFCHA0213B | None | None | G5T4Q | S2 | SSC |
| Tehama chaparral <i>Trilobopsis tehamana</i> | IMGASA2040 | None | None | G1 | S1 | |
| The Lassics lupine <i>Lupinus constancei</i> | PDFAB2B490 | None | Candidate Endangered | G1 | S1 | 1B.2 |
| The Lassics sandwort <i>Sabulina decumbens</i> | PDCAR0G0Y0 | None | None | G1 | S1 | 1B.2 |
| thread-leaved beardtongue <i>Penstemon filiformis</i> | PDSCR1L2A0 | None | None | G3 | S3 | 1B.3 |
| Townsend's big-eared bat <i>Corynorhinus townsendii</i> | AMACC08010 | None | None | G3G4 | S2 | SSC |



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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| Tracy's beardtongue <i>Penstemon tracyi</i> | PDSCR1L6A0 | None | None | G2 | S2 | 1B.3 |
| Tracy's eriastrum <i>Eriastrum tracyi</i> | PDPLM030C0 | None | Rare | G3Q | S3 | 3.2 |
| Tracy's sanicle <i>Sanicula tracyi</i> | PDAP11Z0K0 | None | None | G4 | S4 | 4.2 |
| Trinity Alps ground beetle <i>Nebria sahlbergii triad</i> | IICOL6L081 | None | None | G1T1 | S1 | |
| Trinity bristle snail <i>Monadenia infumata setosa</i> | IMGASC7080 | None | Threatened | G2T2 | S2 | |
| Trinity buckwheat <i>Eriogonum alpinum</i> | PDPGN08060 | None | Endangered | G2 | S2 | 1B.2 |
| Trinity Mountains rockcress <i>Arabis rigidissima var. rigidissima</i> | PDBRA061R2 | None | None | G3T3 | S3 | 1B.3 |
| Trinity River jewelflower <i>Streptanthus ob lanceolatus</i> | PDBRA2G500 | None | None | G1 | S1 | 1B.2 |
| Trinity shoulderband <i>Helminthoglypta talmadgei</i> | IMGASC2630 | None | None | G2 | S2 | |
| Trinity Spot <i>Punctum hannah</i> | IMGAS47080 | None | None | G1G2 | S1S2 | |
| tundra thread moss <i>Pohlia tundrae</i> | NBMUS5S1B0 | None | None | G3 | S3 | 2B.3 |
| two-flowered pea <i>Lathyrus biflorus</i> | PDFAB25180 | None | None | G1 | S1 | 1B.1 |
| Umpqua green-gentian <i>Frasera umpquaensis</i> | PDGEN050F0 | None | None | G3Q | S1 | 2B.2 |
| Upland Douglas Fir Forest <i>Upland Douglas Fir Forest</i> | CTT82420CA | None | None | G4 | S3.1 | |
| Waldo daisy <i>Erigeron bloomeri var. nudatus</i> | PDAST3M0M2 | None | None | G5T4 | S3 | 2B.3 |
| Waldo rockcress <i>Arabis aculeolata</i> | PDBRA06010 | None | None | G4 | S2 | 2B.2 |
| water bulrush <i>Schoenoplectus subterminalis</i> | PMCYP0Q1G0 | None | None | G4G5 | S3 | 2B.3 |
| Wawona riffle beetle <i>Atractelmis wawona</i> | IICOL58010 | None | None | G1G3 | S1S2 | |
| wayside aster <i>Eucephalus vialis</i> | PDASTEC0A0 | None | None | G3 | S1 | 1B.2 |
| western bumble bee <i>Bombus occidentalis</i> | IIHYM24250 | None | None | G2G3 | S1 | |
| western goblin <i>Botrychium montanum</i> | PPOPH010K0 | None | None | G3 | S2 | 2B.1 |



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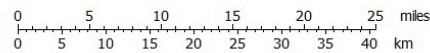
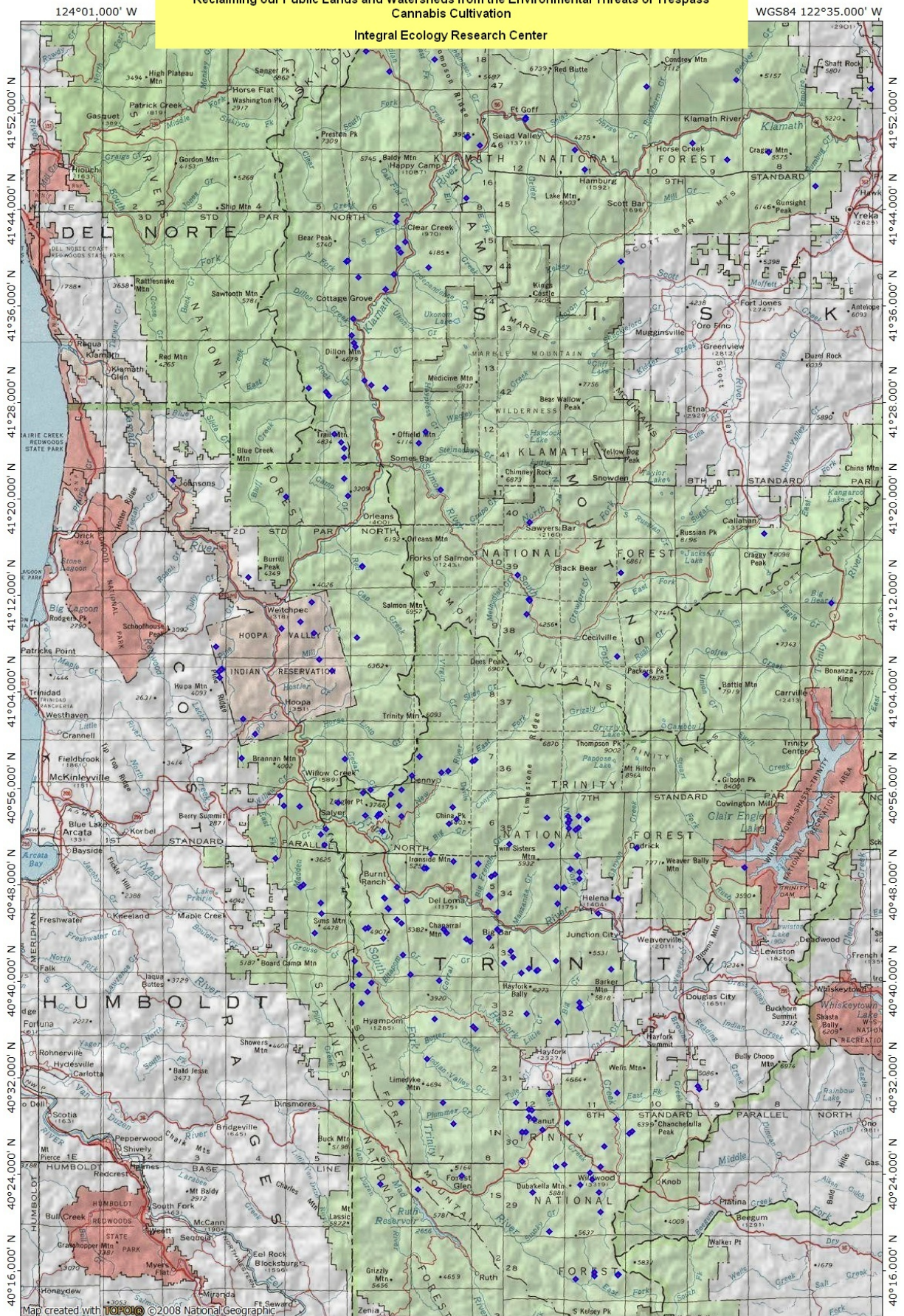


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|--|--------------|----------------|--------------|-------------|------------|--------------------------------|
| western mastiff bat <i>Eumops perotis californicus</i> | AMACD02011 | None | None | G5T4 | S3S4 | SSC |
| western pearlshell <i>Margaritifera falcata</i> | IMBIV27020 | None | None | G4G5 | S1S2 | |
| western pond turtle <i>Emys marmorata</i> | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| white beaked-rush <i>Rhynchospora alba</i> | PMCYP0N010 | None | None | G5 | S2 | 2B.2 |
| white-flowered rein orchid <i>Piperia candida</i> | PMORC1X050 | None | None | G3 | S3 | 1B.2 |
| Wilkin's harebell <i>Campanula wilkinsiana</i> | PDCAM020Z0 | None | None | G2 | S2 | 1B.2 |
| Wolf's evening-primrose <i>Oenothera wolfii</i> | PDONA0C1K0 | None | None | G2 | S1 | 1B.1 |
| woolly balsamroot <i>Balsamorhiza lanata</i> | PDAST11047 | None | None | G3 | S3 | 1B.2 |
| woolly meadowfoam <i>Limnanthes floccosa ssp. floccosa</i> | PDLIM02043 | None | None | G4T4 | S3 | 4.2 |
| yellow willowherb <i>Epilobium luteum</i> | PDONA060H0 | None | None | G5 | S1 | 2B.3 |
| yellow-based sideband <i>Monadenia infumata ochromphalus</i> | IMGASC7051 | None | None | G2T1 | S1 | |
| Yolla Bolly Mtns. bird's-foot trefoil <i>Hosackia yollabollensis</i> | PDFAB2A1F0 | None | None | G2 | S2 | 1B.2 |
| Yuma myotis <i>Myotis yumanensis</i> | AMACC01020 | None | None | G5 | S4 | |
| northern spotted owl <i>Strix occidentalis caurina</i> | ABNSB12011 | Threatened | Candidate | G3T3 | S2S3 | SC |

Record Count: 222

Reclaiming our Public Lands and Watersheds from the Environmental Threats of Trespass
Cannabis Cultivation

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Trespass Cannabis Grow
Sites 2010-2016

TNT/MN
14½°
06/20/17

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