



July 26, 2017

## REQUEST FOR BID

### FOREST HEALTH AND WATERSHED IMPROVEMENT THROUGH NOXIOUS WEED MANAGEMENT PROJECT- SEED COLLECTION SERVICES

Services to encompass all labor, materials, equipment, facilities, and incidentals required to:

- Collect and process seeds from various native plant species from the US Forest Service Tahoe National Forest, Truckee Ranger District
- Provide seed materials to be used in infill plantings from 2017 to 2019 and store materials for use in those respective years

The Contractor shall have demonstrated experience in plant ecology, botany, and seed collection and processing. The team must be willing to work with the Truckee River Watershed Council (TRWC) – project lead, the US Forest Service Tahoe National Forest, and the California Department of Fish and Wildlife.

## DEADLINE

Proposals must be received electronically (.pdf format) by 5:00PM on August 11, 2017.

## SUBMISSION

Submit proposals electronically (.pdf format) to: [mfreitas@truckeeriverwc.org](mailto:mfreitas@truckeeriverwc.org).

## REQUESTS FOR ADDITIONAL INFORMATION

Please direct all questions to Matt Freitas, [mfreitas@truckeeriverwc.org](mailto:mfreitas@truckeeriverwc.org), (530)550-8760 x6#. If formal responses are needed, these will be published in our e-newsletter and posted to [www.truckeeriverwc.org](http://www.truckeeriverwc.org) in the "News" section. Please sign up for the e-newsletter and/or check the website for updates.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwc.org](http://www.truckeeriverwc.org)

## TIMELINE

Activity	Completion Date
Bids Due	Aug 11, 2017
Interviews	Aug 15, 2017
Scope of Work and Contracting	Aug 16-18, 2017
Seed collection	June-Sept 2017, 2018, 2019
Annual delivery of seed mixes	Before Sept 30
Quarterly Progress Reports & Invoices	Mar 25, June 25, Sept 25, Dec 15

## INTRODUCTION AND BACKGROUND

### Location

The work requested here is to be completed in the Tahoe National Forest, Truckee Ranger District.

### The Forest Health and Watershed Improvement through Noxious Weed Management Project.

The goal of this project is to manage and prevent the spread of noxious weeds. It is collaboration between the TRWC, Tahoe National Forest (TNF), and California Department of Fish and Wildlife (CDFW). It provides repeated cycles of weed surveys, treatment, and native plant seeding from 2017 to 2019 on TNF and CDFW lands.

## WORK TO BE COMPLETED

### Task 1:

#### 1.1: Project Launch Meeting

At the onset of the project, meet with TRWC and TNF to discuss collection requirements, project schedule, and logistics.

#### 1.2: Native Seed Collection

Collect native grass, forb, and shrub seeds from within the TNF Truckee Ranger District to be used in revegetation efforts in 2017, 2018, and 2019. Species and quantities included in Appendix A.

Seed may be provided from pre-collected stock for 2017 provided it meets the below specifications.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwc.org](http://www.truckeeriverwc.org)

All seed collected or provided for this contract must originate from native genetically appropriate species. All seed materials shall be from local genetic stock originating from within the Truckee Ranger District; or from similar montane vegetation with similar soils and climate within 1,500 feet of the project site elevation (5900 feet), and originating east of the Sierra Nevada crest.

Seeds will be collected during the months of June, July, August, and September of 2017, 2018, and 2019 when seeds are ready for harvest.

Contractor shall not collect any seeds from species on TNF Threatened, Endangered and Forest Service Sensitive Botanical Species 2016 (Appendix B), Invasive Plants of Management Concern 2017 (Appendix C), or Watch List of Botanical Species and Communities 2017 (Appendix D).

Contractor shall not collect seed materials in areas with known non-native invasive plant species populations. Additionally, Contractor shall not collect any seed materials along Davies Creek between Sardine Valley and Stampede Reservoir due to a recent infestation of *Phalaris arundinacea*.

Acknowledging that seed production is based on highly variable environmental conditions this contract details a list of ordered or target species. If due to variable environmental conditions some species are not available the contractor must coordinate and negotiate with the TRWC a list and quantity of acceptable substitutions.

All seed weights ordered here and reported by the contractor must be in Pure Live Seed (PLS) quantities.

### **1.3: Seed processing, delivery, and storage**

Seed collected will be cleaned to industry standards including removing inert material and non-target species. Cleaned seed will be sent to an approved and certified seed testing lab to test for non-target seed species and viability, then delivered to the TRWC. Reporting / documentation reports will be required within one month following collections and following delivery of seed.

Processed or provided seed material shall be delivered to TRWC before September 30 annually in 2017, 2018, and 2019. Approximately 1/3 of the total and individual species quantities shall be provided annually. The remainder of the material shall be stored by the Contractor in appropriate conditions to prevent molding and seed predation and maintain seed viability.

### **BIDFORMAT**

Bids must be less than 10 pages. Concise writing and graphics are greatly appreciated.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwc.org](http://www.truckeeriverwc.org)

## Detailed Work Plan & Schedule

Objectives: Identify and discuss briefly the specific objectives you will achieve through the conduct of the services within the project, as defined and specified above.

Scope: Define specifically the scope of services to be provided to complete the above described analyses and design. The consultant may elect to suggest modifications to the scope above. Include estimated time schedule of the major tasks to be accomplished.

Detailed Work Approach: Discuss in detail each of the activities you will conduct to achieve the scope and objectives defined and identified above. Please specifically address work components outlined above and elaborate as needed. Include a timeline or schedule. Modifications to the components listed in the work statement can be included. Technical merit and details of work proposed will be heavily weighted in proposal evaluation.

## Cost Estimate

Cost estimate should be separated by year (i.e. 2017, 2018, and 2019 costs).

Personnel Costs: Itemize by task to show the following (include subcontractors):

- Name and title
- Estimated hours per staff person, per task: *Note: it is acceptable to include a range of hours for selected tasks.*
- Rate per hour
- Total cost per task: *Note: it is acceptable for total cost per task to be a range*

Support costs: supplies, printing, postage, etc.

Transportation: Travel expenses directly related to the contract services. Mileage must be charged at the current IRS rate.

Other costs: Show costs and expenses that do not fall within the other categories.

General overhead and administrative charges not allowed. This will be enforced.

Please note that there shall be no charges for seed sourced on TNF land as it is for use in a USFS project. Unless providing pre-collected seed (sourced from outside National Forest lands), charges should be limited to personnel, support, transportation, or other allowable categories as listed above.

## Qualifications and References

Include experience plant ecology, botany, and seed collection and processing; list at three (3) specific projects which demonstrate this experience.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwvc.org](http://www.truckeeriverwvc.org)

Include a duty statement and resume of each key person to be assigned to the project, by name and title, with experience in pertinent fields. If subcontractors will be used, include a description of those persons or firms including a description of their qualifications.

Provide a minimum of three references for similar projects, with name and phone number.

Provide documentation of appropriate seed storage facilities.

## **CONTRACT TERMS AND AGREEMENT**

Once a contractor is selected, TRWC will negotiate a satisfactory contract and reasonable fee for the services needed. In the event a satisfactory agreement cannot be negotiated with the top ranked qualified firm, the negotiations shall be terminated with the firm and the negotiations continued with the remaining qualified firms in order of their ranking.

When the contract is awarded, these terms will apply.

### **Payments**

Progress payments for services performed shall be made in arrears upon receipt and approval of contractor's detailed invoices indicating costs and obligations incurred and services rendered to date. Payments will be made quarterly.

### **Changes in Personnel**

Contractor's key personnel as indicated in contractor's response to this RFP may not be substituted without the written consent of the TRWC Project Manager. This will be monitored and enforced by TRWC.

### **Termination for Convenience**

TRWC may, at its option, terminate the contract at any time upon thirty (30) day written notice to contractor. Contractor may submit written request to terminate only if TRWC should substantially fail to perform its responsibilities as provided in the contract. If terminated, contractor will be compensated for costs incurred up to the time of the termination notice for work satisfactorily completed. In no event shall payment of such costs exceed the contract price.

### **Unique Billing of Work**

All work produced for the project will be original for TRWC, and will not have been billed to other clients previously. Work produced under the contract with TRWC will be billed only to the contract with TRWC and not to other clients or funders.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwc.org](http://www.truckeeriverwc.org)

## Liability Insurance

Contractor shall provide before entering the premises and shall maintain in force during the term of this contract the following liability insurance:

- General Liability
- Motor Vehicle Liability

Each policy of liability insurance described above shall be in an amount of not less than one million dollars (\$1,000,000) per occurrence for bodily injury and property damages combined.

## Quarterly Progress Reports

Contractor to provide quarterly progress reports and meet with TRWC representatives upon reasonable notice to allow TRWC to determine if the contract is on the right track, whether the project is on schedule, provide communication of interim findings, and afford occasions for airing difficulties or special problems encountered so that remedies can be developed. All reports will be in Microsoft Word or Adobe pdf format. Data shall be provided in Microsoft Excel files as appropriate.

Quarterly Invoicing will include detail of task, delineated staff by name, hours, rate, total for the period, and remaining amount. Reports will be submitted in Microsoft Word/Excel or Adobe.

**530.550.8760**

P.O. Box 8568

Truckee, CA 96162

[www.truckeeriverwc.org](http://www.truckeeriverwc.org)

Appendix A: Species and total quantities to be collected

	Species name	Common name	Total quantity PLS
Dry mix	<i>Purshia tridentata</i>	bitterbrush	75
	<i>Elymus elymoides</i>	bottlebrush squirreltail	150
	<i>Artemisia tridentata ssp. vaseyana</i>	mountain big sagebrush	30
Wet mix	<i>Hordeum brachyantherum</i>	meadow barley	37.5
	<i>Penstemon rydbergii</i>	meadow penstemon	7.5
	<i>Deschampsia cespitosa</i>	tufted hairgrass	15
	<i>Carex nebrascensis</i>	Nebraska sedge	15
	<i>Juncus balticus</i>	Baltic rush	15
<b>Total:</b>			<b>345</b>

TAHOE NATIONAL FOREST  
Threatened, Endangered and Forest Service Sensitive Botanical Species  
2016

Species	Common name	Legal status	CRPR	Suitable habitat characteristics	Known on TNF
<i>Ivesia webberi</i>	Webber's ivesia	FT	1B.1	4,500-6,500ft; east of Sierra crest; Lassen – Sierra counties; flats, benches, terraces or alluvial fans; well-developed, vernal moist, clayey soils with a very cobbled surface.	Nearest occurrences are in Dog Valley and Sierra Valley, Sierra County, California.
<i>Packera layneae</i>	Layne's butterweed	FT	1B.2	650-3,600ft; Tuolumne - Nevada counties; ultramafic soils (gabbro & serpentinite); chaparral, conifer forest or woodland edges/openings	X
<i>Astragalus lemmonii</i>	Lemmon's milkvetch	FSS	1B.2	4,000-7,000ft in CA; east of Sierra crest; lakeshores, meadows & seeps among Great Basin scrub	Historic record near Loyaltan, Sierra County
<i>Astragalus pulsiferae</i> var. <i>coronensis</i>	Modoc Plateau milkvetch	FSS	4.2	4,400-6,200ft; east of Sierra crest; Modoc – Plumas counties; Sandy or gravelly soils, often with juniper, pine or sagebrush	Nearest occurrence is Genesee Valley, Plumas County
<i>Astragalus webberi</i>	Webber's milkvetch	FSS	1B.2	2,400-4,100ft; east of Sierra crest; known only from Plumas County; dry forest openings/edges & semi-disturbed areas	Historic record in Sierra Valley, Sierra County
<i>Boechera rigidissima</i> ( <i>Arabis rigidissima</i> var. <i>demota</i> )	Galena Creek rock cress	FSS	1B.3	Above 7,500ft; east of Sierra crest; known only in Placer County, California and Washoe County, Nevada; mesic areas (sometimes rocky) at red fir forest to aspen/meadow transitions.	Nearest occurrence is Martis Peak, Placer County
<i>Botrychium ascendens</i>	upswept moonwort	FSS	2B.3	Above 4,000ft (gen 5,000-7,500ft on TNF); wet habitats (riparian, seeps, meadows, etc.)	X
<i>Botrychium crenulatum</i>	scalloped moonwort	FSS	2B.2	Above 4,000ft (gen 5,000-7,500ft on TNF); wet habitats (riparian, seeps, meadows, etc.)	X
<i>Botrychium lunaria</i>	common moonwort	FSS	2B.3	Above 6,000ft in CA; wet habitats (riparian, seeps, meadows, etc.)	Historic record at Sagehen Creek, Nevada County
<i>Botrychium minganense</i>	Mingan's moonwort	FSS	2B.2	Above 4,000ft (gen 5,000-7,500ft on TNF); wet habitats (riparian, seeps, meadows, etc.)	X
<i>Botrychium montanum</i>	western goblin	FSS	2B.1	Above 4,000ft in CA; wet habitats (riparian, seeps, meadows, etc.)	Nearest occurrence is Randolph Hill, Sierra County
<i>Bruchia bolanderi</i>	Bolander's bruchia	FSS	4.2	Above 5,000ft in CA; montane meadows, stream banks, drying lake beds; on bare, semi-disturbed wet soils where competition is minimal	X
<i>Cudonia monticola</i>	large cudonia	FSS	--	No elevation restriction; in duff; usually within old-growth conifer forests	X
<i>Cypripedium fasciculatum</i>	clustered lady's slipper	FSS	4.2	Below 6,000ft on TNF; mesic, mid- to late- succession conifer or conifer-hardwood forests; north aspects; sometimes found with yew	X
<i>Cypripedium montanum</i>	mountain lady's slipper	FSS	4.2	1,500-6,500ft in CA; mesic to wet, mid- to late- succession conifer or conifer-hardwood forests; north aspects; often found under montane dogwood	Nearest occurrence is Quincy, Plumas County
<i>Dendrocollybia racemosa</i>	branched collybia	FSS	--	No elevation restriction; on decayed fungi or occasionally in duff; usually within old growth conifer or conifer-hardwood forests	X
<i>Erigeron miser</i>	starved daisy	FSS	1B.3	6,200-8,500ft; known only from Placer & Nevada counties; gravelly soils in crevices of near-vertical granite cliffs/faces	X
<i>Eriogonum umbellatum</i> var. <i>torreyanum</i>	Donner Pass buckwheat	FSS	1B.2	Above 6,800ft on TNF; dry, unstable, gravelly or stony soils; often on harsh exposures (e.g. ridge tops, steep slopes)	X
<i>Fritillaria eastwoodiae</i>	Butte County fritillary	FSS	3.2	Below 4,900ft; full to partial sun; chaparral, woodland & conifer forest	X
<i>Helodium blandowii</i>	Blandow's bog-moss	FSS	2B.3	Above 6,100ft in CA; usually found in bogs & fens, but sometimes seeps, wet meadows & under willows in riparian	Nearest occurrence is Tahoe Meadows, Washoe County



Species	Common name	Legal status	CRPR	Suitable habitat characteristics	Known on TNF
<i>Ivesia aperta</i> <i>var. aperta</i>	Sierra Valley ivesia	FSS	1B.2	5,000-6,000ft on TNF; east of Sierra crest; known only from Sierra & Dog Valleys; meadow edges, ephemeral stream channels, vernal wet flats & gentle, rocky slopes near springs	X
<i>Ivesia aperta</i> <i>var. canina</i>	Dog Valley ivesia	FSS	1B.1	5,000-6,000ft; east of Sierra crest; known only from Dog Valley; meadow edges, ephemeral stream channels, vernal wet flats & gentle, rocky slopes near springs	Nearest occurrence is Dog Valley, Sierra County
<i>Ivesia sericoleuca</i>	Plumas ivesia	FSS	1B.2	5,000-6,500ft on TNF; east of Sierra Crest; Plumas – Placer counties; vernal wet meadows & alkali flats	X
<i>Juncus luciensis</i>	Santa Lucia dwarf-rush	FSS	1B.2	(925-)4,500-6,300ft (occurrences below 4,500ft only on south CA coast); known only from south CA coast, Modoc Plateau & east Nevada County; wet, sandy soils of seeps, meadows, vernal pools, streams, & roadsides	Nearest occurrence is Martis Valley, Nevada County
<i>Lewisia cantelovii</i>	Cantelow's lewisia	FSS	1B.2	1,000-4,500ft; known only from Yuba River drainage; wet rock cliffs & outcrops; usually with moss or club moss	X
<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	Hutchinson's lewisia	FSS	3.2	4800-7,000ft on TNF; ridgetops or relatively flat open areas; generally full sun; gravelly soils	X
<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	Kellogg's lewisia	FSS	3.2	Above 6,500ft on TNF; ridgetops or relatively flat open areas; generally full sun; gravelly or sandy soils	X
<i>Lewisia longipetala</i>	long-petaled lewisia	FSS	1B.3	Above 8,300ft on TNF; El Dorado – Nevada counties; north-facing slopes and ridge tops often found in wet soils near margins of persistent snow banks	X
<i>Lewisia serrata</i>	saw-toothed lewisia	FSS	1B.1	3,000-5,000ft; known only from American River drainage; wet rock cliffs & outcrops; usually with moss	X
<i>Meesia uliginosa</i>	broad-nerved hump-moss	FSS	2B.2	Above 6,000ft on TNF; usually found in bogs or fens, but also very wet meadows	X
<i>Mielichhoferia elongata</i>	elongate copper-moss	FSS	2B.2	Below 3,500ft; soils with copper or heavy metals; moist to wet rock cliffs/outcrops	Nearest occurrence is Shady Creek, Nevada County
<i>Monardella follettii</i>	Follett's monardella	FSS	1B.2	2,500-5,600ft; known only from Plumas County; serpentine soils; partial to full sun; conifer forest edges/openings	Nearest occurrence is Meadow Valley, Plumas County
<i>Peltigera gowardii</i>	Goward's waterfan	FSS	4.2	1,150-7,000ft in CA; cold, clear, unpolluted streams; often found on rocks in cascades	Nearest occurrence is Bushy Creek, Yuba County
<i>Penstemon personatus</i>	closed-throated beardtongue	FSS	1B.2	4,500-6,500ft; Plumas – north Nevada County; partial sun; north aspects; conifer forest edges/openings	X
<i>Phacelia stebbinsii</i>	Stebbins phacelia	FSS	1B.2	2,000-6,700ft; known only in Rubicon & American River drainages partial to full sun; generally in rocky openings/outcrops, but also woodland or conifer forest edges/openings	X
<i>Phaeocollybia olivacea</i>	olive phaeocollybia	FSS	--	No elevation restriction; Yuba County & north; on roots of Pinaceae & Fagaceae; usually within old growth conifer or conifer-hardwood forests	X
<i>Pinus albicaulis</i>	whitebark pine	FSS, C	--	Above 6,500ft on TNF; subalpine & at timberline on rocky, well-drained soils	X
<i>Poa sierrae</i>	Sierra bluegrass	FSS	1B.3	1,000-5,500ft; shady moist slopes; conifer forest edges/openings	X
<i>Pyrrocoma lucida</i>	sticky pyrrocoma	FSS	1B.2	4,500-6,000ft on TNF; east of Sierra crest; known only from Plumas & Sierra Counties; vernal wet meadows & alkali flats	X
<i>Sowerbyella rhenana</i>	stalked orange peel-fungus	FSS	--	No elevation restriction; in duff; wet mossy areas; usually within old growth conifer forests	X
<i>Tauschia howellii</i>	Howell's tauschia	FSS	1B.3	5,500-8,500ft in CA; xeric ridge summits & slopes; decomposed granite gravel or sand; red fir & subalpine forest edges/openings	X

Botanical species includes vascular and non-vascular plants, lichen, and fungi.

**Legal status:** C—Candidate for federal listing under the Endangered Species Act (ESA); FE—federally listed as endangered under ESA; FSS—Forest Service Sensitive (Regional Forester's Sensitive Species List, Region 5); FT—federally listed as threatened under ESA

**CRPR:** California Rare Plant Rank (CRPA) was developed and is maintained by the California Native Plant Society (CNPS) to define and categorize rarity and degrees of concern in California Flora. 1A—plants presumed extirpated in California and either rare or extinct elsewhere; 1B—plants rare, threatened or endangered in California and elsewhere; 2A—plants presumed extirpated in California, but common elsewhere; 2B—plants rare, threatened, or endangered in California, but common elsewhere; 3—plants about which more information is needed; 4—plants of limited distribution.

Tahoe National Forest  
**Invasive Plants of Management Concern**  
 2017

Scientific Name	Common Name	C DFA	Cal-IPC	Known on TNF?	Map	Treat ARR YRRD	Treat TKRD SVRD
<i>Acroptilon repens</i>	Russian knapweed	B	Moderate	Yes	X	X	X
<i>Aegilops triuncialis</i>	barbed goatgrass	not rated	High	Yes	X	X	X
<i>Ailanthus altissima</i>	tree-of-heaven	Not rated	Moderate	Yes	X	X	X
<i>Arundo donax</i>	giant reed	B	High	No	X	N/A	N/A
<i>Bromus tectorum</i>	cheatgrass	Not rated	High	Yes	O	O	O
<i>Berteroa incana</i>	hoary alyssum	Q	N/A	Yes	X	X	X
<i>Carduus nutans</i>	musk thistle	A	Moderate	Yes	X	X	X
<i>Carduus pyconocephalus</i>	Italian thistle	C	Moderate	Yes	X	X	X
<i>Centaurea diffusa</i>	diffuse knapweed	A	Moderate	Yes	X	X	X
<i>Centaurea melitensis</i>	Maltese starthistle	C	Moderate	No	X	N/A	N/A
<i>Centaurea solstitialis</i>	yellow starthistle	C	High	Yes	X	X	X
<i>Centaurea stoebe</i>	spotted knapweed	A	High	Yes	X	X	X
<i>Chondrilla juncea</i>	skeletonweed	A	Moderate	Yes	X	O	O
<i>Cirsium arvense</i>	Canada thistle	B	Moderate	Yes	X	X	X
<i>Cortaderia selloana</i>	pampasgrass	Not rated	High	No	X	N/A	N/A
<i>Cytisus scoparius</i>	scotchbroom	C	High	Yes	X	O	X
<i>Dittrichia graveolens</i>	stinkwort	Not rated	Moderate	No	X	N/A	N/A
<i>Elymus caput-medusae</i>	medusahead	C	High	Yes	X	O	X
<i>Euphorbia oblongata</i>	oblong spurge	B	Limited	No	X	N/A	N/A
<i>Foeniculum vulgare</i>	fennel	Not rated	High	Yes	X	X	X
<i>Genista monspessulana</i>	French broom	C	High	Yes	X	X	X
<i>Hydrilla verticillata</i>	hydrilla	A	High	Yes	X	O	O
<i>Isatis tinctoria</i>	dyer's woad	B	Moderate	No	X	X	X
<i>Lepidium chalepensis</i>	lenspod whitetop	B	Moderate	No	X	X	X
<i>Lepidium draba</i>	whitetop	B	Moderate	No	X	N/A	N/A
<i>Lepidium latifolium</i>	tall whitetop	B	High	Yes	X	O	X
<i>Linaria dalmatica</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	A	Moderate	Yes	X	X	X
<i>Lythrum salicaria</i>	purple loosestrife	B	High	No	X	N/A	N/A
<i>Myriophyllum spicatum</i>	Eurasian water milfoil	C	High	Yes	O	O	O
<i>Onopordum acanthium</i>	Scotch thistle	A	High	Yes	X	X	X
<i>Phalaris arundinacea</i>	reed canary grass	Not rated	High	Yes	X	O	)
<i>Rubus armeniacus</i>	Himalayan blackberry	Not rated	High	Yes	O	O	O
<i>Spartium junceum</i>	Spanish broom	C	High	Yes	X	X	X
<i>Ulex europaeus</i>	gorse	B	High	No	X	N/A	N/A

**C DFA:** California Department of Food and Agriculture Noxious Weed List (<http://www.cdfa.ca.gov/phpps/ipc/>). A--Eradication or containment is required at the state or county level. B--Eradication or containment is at the discretion of the County Agricultural Commissioner. C--Require eradication or containment only when found in a nursery or at the discretion of the County Agricultural Commissioner. Q--Require temporary "A" action pending determination of a permanent rating.  
**Cal-IPC:** California Invasive Plant Council Online Invasive Plant Inventory (2006) (<http://www.cal-ipc.org/ip/inventory/weedlist.php>). High—Species having severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Moderate—Species having substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Limited—Species that are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Alert—Species with significant potential for invading new ecosystems.

**Map & Treat:** X—required; O—map and/or treatment is condition-dependent, usually limited to areas where ground-disturbing activities are proposed (check with district botanist on a per-species, per-project basis); N/A—not known on TNF, so no treatment method yet designated. Other non-native species found on TNF are not mapped or treated; however, infestations of species not previously known on TNF should be reported to district botanist or forest invasive species coordinator.

TAHOE NATIONAL FOREST  
Watch List of Botanical Species & Communities, 2017

Species / Community	Common name	CRPR	Habitat
<i>Allium jepsonii</i>	Jepson's onion	1B.2	900-4,400', foothill woodland, lower montane coniferous forest, serpentine or volcanic soils
<i>Allium sanbornii</i> var. <i>congdonii</i>	Congdon's onion	4.3	1,000-5,000', serpentine soils
<i>Allium sanbornii</i> var. <i>sanbornii</i>	Sanborn's onion	4.2	1,000-5,000', serpentine soils
<i>Arctostaphylos mewukka</i> ssp. <i>truei</i>	True's manzanita	4.2	2,500-6,000', chaparral and lower montane coniferous forest
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	1B.2	1,500 to 3,500', chaparral/closed-cone pine forest
<i>Calochortus clavatus</i> var. <i>avius</i>	clubhair mariposa lily	1B.2	3,000-5,800', forest edges (ARRD), lava cap
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	1B.3	1640-3875', serpentine/gabbro soils
<i>Cardamine pachystigma</i> var. <i>dissectifolia</i>	serpentine bittercress	3	Openings below 6,900'
<i>Carex davyi</i>	Davy's sedge	1B.3	4,800-10,600', subalpine/red fir forest
<i>Carex lasiocarpa</i>	woolly fruit sedge	2.3	1,900-6,900', fens, wet areas
<i>Carex limosa</i>	mud sedge	2.2	4,000-8,700', fens, wet areas
<i>Carex praticola</i>	meadow sedge	2.2	1,600-10,500', meadows/wet areas
<i>Carex sheldonii</i>	Sheldon's sedge	2.2	4,000-5,000', wet areas
<i>Ceanothus arcuatus</i>	Arching ceanothus	None	1,900', 7,025', serpentine soils
<i>Chlorogalum grandiflorum</i>	red hills soaproot	1B.2	800-4,100', serpentine soils
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandege's clarkia	4.2	<3,100', forest edges/openings
<i>Clarkia mildrediae</i> ssp. <i>lutescens</i>	Mildred's clarkia	4.2	<5,750', woodland/forest edges
<i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>	Mildred's clarkia	1B.3	800-5,650', woodland/forest edges
<i>Claytonia megarhiza</i>	alpine springbeauty	2.3	Above 8,000', talus/rock crevices
<i>Corallorhiza trifida</i>	yellow coralroot	2.1	4,450-5,750', wet areas
<i>Darlingtonia californica</i>	California pitcherplant	4.2	Below 8,500', wetlands/riparian
<i>Drosera angelica</i>	English sundew	2.3	Below 7,000', wetlands/riparian
<i>Epilobium howellii</i>	Yuba Pass willowherb	4.3	6,000-9,000', wetlands/riparian
<i>Epilobium luteum</i>	yellow willowherb	2.3	4,900-5,600', wetland areas
<i>Erigeron petrophyllus</i> var. <i>sierrensis</i>	northern Sierra daisy	4.3	900-5,700', serpentine soils
<i>Eriogonum umbellatum</i> var. <i>ahartii</i>	Ahart's buckwheat	1B.2	Below 6,600', serpentine soils
<i>Eremogone cliftonii</i>	Clifton's eremogone	1B.3	1,490-5,850', opening in chaparral, montane coniferous forest
<i>Glyceria grandis</i>	American mannagrass	2.3	Below 6,890', riparian/wetland
<i>Hemieva ranunculifolia</i>	buttercup-leaf suksdorfia	2.2	4,900', 8,200', riparian/wetland
<i>Horkelia parryi</i>	Parry's horkelia	1B.2	Below 3,400' openings/edges
<i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	Humboldt lily	4.2	1,500-4,200', forest edges/openings
<i>Lycopus uniflorus</i>	northern bugleweed	4.3	Below 6,600', wetland/riparian
<i>Meesia longiseta</i>	meesia moss	None	All elevations, wetland/riparian areas
<i>Meesia triquetra</i>	meesia moss	4.2	4,200-9,700', primarily fens
<i>Micranthes howellii</i>	Howell's saxifrage	4.3	Below 3,000', wetland/riparian areas
<i>Mimulus glaucescens</i>	shieldbract monkeyflower	4.3	Below 4,100', forest edges/openings
<i>Mimulus laciniatus</i>	cutleaf monkeyflower	4.3	3,300-8,700', seeps in granite
<i>Oreostemma elatum</i>	Plumas alpine aster	1B.2	3,200-6,700', wetland/riparian areas
<i>Packera eurycephala</i> var. <i>lewisrosei</i>	Lewis' groundsel	1B.2	900-6,200', serpentine soils

Species / Community	Common name	CRPR	Habitat
<i>Penstemon sudans</i>	Susanville beardtongue	1B.3	3,900-8,000', edges/openings
<i>Perideridia bacigalupi</i>	Mother Lode yampah	4.2	1,400-3,400', serpentine soils
<i>Piperia colemanii</i>	Coleman's piperia	4.3	3,900-7,600', coniferous forest
<i>Potamogeton praelongus</i>	whitestem pondweed	2.3	5,900-9,850, wetlands
<i>Pseudostellaria sierrae</i>	pseudostellaria	4.2	4,000-7,200', forest edges/openings
<i>Rhamnus alnifolia</i>	alderleaf buckthorn	2.2	4,500-7,000', wetland/riparian areas
<i>Rhynchospora alba</i>	white beaksedge	2B.2	150-6,700, wetlands/riparian areas
<i>Rhynchospora capitellata</i>	brownish beaksedge	2B.2	150-6,600 wetlands/riparian areas
<i>Sanicula tracyi</i>	Tracy's blacksnakeroot	4.2	300-5,200', openings/edges
<i>Schoenoplectus subterminalis</i>	swaying bulrush	2.3	2,400-7,400', wetlands
<i>Scutellaria galericulata</i>	marsh skullcap	2.2	4,000-7,000', streambanks
<i>Sidalcea gigantea</i>	giant checkerbloom	4.3	2,100-6,400', wetland/riparian areas
<i>Sedum albomarginatum</i>	Feather River stonecrop	1B.2	850-6,400', riparian/river canyons
<i>Silene occidentalis</i> ssp. <i>longistipitata</i>	western catchfly	1B.2	3,200-6,600', forest edges/openings
<i>Silene occidentalis</i> ssp. <i>occidentalis</i>	western catchfly	4.3	4,000-6,900', forest edges/openings
<i>Sphagnum</i> species	peat moss	None	All elevations, fens/ peatlands
<i>Stachys pilosa</i>	hairy hedgenettle	2B.3	3,900-5,850', wetland/riparian areas
<i>Stellaria obtusa</i>	Rocky Mountain checkweed	4.3	5,200-6,600', forest edges/openings
<i>Stuckenia filiformis</i>	fineleaf pondweed	2.2	980-7,055', wetlands
<i>Tonestus eximius</i>	Lake Tahoe serpentweed	4.3	8,000-10,000', granitic areas
<i>Utricularia minor</i>	lesser bladderwort	4.2	Above 1,500', shallow water
<i>Veronica cusickii</i>	Cusick's speedwell	4.3	Above 6,500', moist soils
Special aquatic features (SNFPA)	Fens	None	All elevations on the TNF, wet areas

TNF maintains a watch list of botanical species that are of conservation concern, but have not been designated as Sensitive by the Regional Forester. This list includes species that are newly described; locally rare; range extensions or disjunct populations; species of specific public interest; or species with too little information to determine their appropriate status. Survey for and document occurrences of Watch List spp.; do not include in Biological Evaluation.

**CRPR:** California Rare Plant Rank (CRPA) was developed and is maintained by the California Native Plant Society (CNPS) to define and categorize rarity and degrees of concern in California Flora. 1A—plants presumed extirpated in California and either rare or extinct elsewhere; 1B—plants rare, threatened or endangered in California and elsewhere; 2A—plants presumed extirpated in California, but common elsewhere; 2B—plants rare, threatened, or endangered in California, but common elsewhere; 3—plants about which more information is needed; 4—plants of limited distribution.

**SNFPA:** Sierra Nevada Forest Plan Amendment (2004) provides protection for special aquatic features, including fens.