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COUNTRY CLUB HEIGHTS EROSION CONTROL PROJECT
EIP PROJECT #01.01.01.0021
BOTANICAL BASELINE REPORT

Prepared For:
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1.0 INTRODUCTION

The purpose of this document is to conduct an initial baseline assessment for botanical resources that satisfies the U.S. Fish and Wildlife Service (USFWS), Tahoe Regional Planning Agency (TRPA), California Department of Fish and Wildlife (CDFW), and the California Native Plant Society (CNPS) requirements to determine potential project effects on botanical special status species. Furthermore, the Botanical Baseline Assessment will provide the Project proponent with relevant resources as they pertain to special status plant species and communities within the Project area, as well as guide the decision making process during Project design. This Assessment summarizes the literature review and research findings, field assessment data, and potential impacts to the special status species in the Lake Tahoe Basin within and adjacent to the Project area. For the purposes of this Assessment, the term special status species encompasses those designated as federally threatened and endangered species by the USFWS; those designated as state endangered, threatened, or rare by the State of California; and TRPA special interest species.

A Biological Assessment (BA) is required for the entire Project area for federally listed threatened, endangered, or proposed species and is prepared and issued by the federal lead agency, which in this circumstance is the USFS-LTBMU. The BA will be provided to the Project proponent and/or its contractor for inclusion into the National Environmental Policy Act (NEPA) document as well as other environmental documents once completed. A Biological Evaluation (BE), which evaluates Forest Service Regional 5 Sensitive Species, is required if improvements are proposed on USFS land. Both the BA and BE are prepared and issued by the USFS, and will be provided to the Project proponent and/or its contractor for inclusion into the National Environmental Policy Act (NEPA) document as well as other environmental documents. The USFS is conducting separate surveys in addition to the surveys conducted as part of the current effort. Because the USFS is conducting their own investigation and reporting of LTBMU special status species on applicable USFS land, LTBMU special status species will not be evaluated in this report.

2.0 BACKGROUND

In 1997, TRPA developed a Basin-wide Environmental Improvement Program (EIP) that defined various projects which, once implemented, would assist in attaining and maintaining TRPA Environmental Threshold Carrying Capacities (ETCC) as well as meet other federal and state environmental goals. TRPA has established thresholds for air quality, water quality, soil conservation, vegetation, noise, scenic resources, recreation, fisheries, and wildlife to address public health and safety of residents and visitors as well as the scenic, recreation, education, scientific, and natural values of the Lake Tahoe Basin. The Country Club Heights Erosion Control Project (Country Club Heights ECP) is defined in the TRPA EIP as Project #01.01.01.0021. The Country Club Heights ECP boundary encompasses County rights of way and parcels owned by the California Tahoe Conservancy (CTC), USFS-LTBMU, El Dorado County (County), and private individuals.

The Project area is characterized by predominantly urban development intermixed with fragmented Jeffrey pine forest. This area produces concentrated stormwater runoff that flows from County rights of way to pervious naturally vegetated land and ultimately the Upper Truckee River. Because the Project area is connected to Lake Tahoe through Meyers Creek and the Upper Truckee River, there is potential for fine sediments produced in the residential area to deposit into Lake Tahoe. Current sediment sources within Project area include residential use and vehicular traffic; road sand/cinder accumulation from local and collector roadways; and eroding cut slopes, drainages, and roadside ditches throughout the Project area.

Project improvements may include infiltrating and/or treating of stormwater from County rights of way, stabilizing eroding cut slopes with vegetation and/or rock protection, stabilizing existing drainages with rock and/or bio-engineering techniques (where feasible), and disconnecting existing storm drain conveyance systems from directly discharging into the Upper Truckee River. Sediment trapping devices and infiltration basins (on publicly owned parcels) will be used to capture stormwater and road abrasives, and treat pollutants to reduce the overall stormwater volume discharging to the Upper Truckee River.

The overall goal of the Project is to design and implement erosion control and water quality improvement measures that will reduce the discharge of sediment and pollutants to Lake Tahoe from County administered rights of way in the Country Club Heights ECP. Furthermore, it will assist the County in achieving goals associated with the EIP. The County will perform this Project in general agreement with the guidelines of the CTC Grants Program (CTC 2004), including the Preferred Design Approach.

2.1 Project Location

The Project area is located in the El Dorado County, California. The Project is located in Sections 20, 21, 28, and 29 in Township 12 North and Range 18 East of the Mt. Diablo Meridian which may be found on the following U.S. Geological Survey 7.5 minute quadrangle maps: *Echo Lake*; *Freel Peak;* and *South Lake Tahoe* in El Dorado County, California. It is within a TRPA Priority Two Watershed (Upper Truckee River).

The Country Club Heights ECP is located between Highway 50 and Pioneer Trail (**Figure 1**). The Project area is primarily a residential neighborhood with gradual elevation gain from west

to east. The Project area covers approximately 269 acres; however, the survey area is approximately 67 acres.

Two plan area statements (PAS) present general land use zoning information for the Project area. PAS are considered land use and zoning guidance documents for both the TRPA and the County. The majority of the Project area is included within PAS 120 Tahoe Paradise Meadowvale, while a small portion of the northwest section of the Project Area is part of PAS 119, Country Club Meadow (TRPA 2002a & 2002b). Land use in the majority of the Project area is primarily characterized as single family residential. The area is 30 percent built out with 15 percent of the land covered and 25 percent disturbed. Additional planning considerations mentioned in the PAS documents note "steep and high cutbanks now protected by gunnite may start to erode within the next 20 years (TRPA 2002a)" in PAS 120 Tahoe Paradise Meadowvale, and that "most of the homes and other developed facilities are located within stream environment (TRPA 2002b)" of PAS 119, Country Club Meadows.

3.0 RECORDS AND INFORMATION SEARCHES

A literature and database review was conducted to identify existing botanical information within and adjacent to the Project area. This review assisted with the determinations contained in this document. All of the references utilized for this Assessment are listed in Section 9.0. The most relevant searches, reviews, and requests are listed below.

Agency/Entity	Date	Information Received
USFWS	9/27/2016	• Federally Protected Species List for threatened, endangered, candidate, de-listed, and special concern species (USFWS 2016)
USDA	8/19/2016	• CALVEG GIS layers (USDA 2009a)
California Department of Fish and Wildlife (CDFW)	8/19/2016	• California Natural Diversity Database (CNDDB 2016) • State of California Endangered, Threatened, and Rare Plants of California List (CDFW 2016)
California Native Plant Society (CNPS)	9/26/2016	• Inventory of Rare and Endangered Plants of California (CNPS 2016)
TRPA	8/19/2016	• TRPA Threshold Evaluation Report (TRPA 2011) • TRPA Code of Ordinances (TRPA 2015)

4.0 FIELD ASSESSMENT AND SURVEYS

This section includes a summary of field assessments and survey information collected during site investigations. Surveys were conducted by NCE biologists on August 22, 2016. The methods used for the NCE botanical survey were similar to the CNPS methodology. These methods include conducting walking transect surveys across the extended Project area to identify plant communities and habitat types that may support special status species. In addition, the survey focused on plant identification to a level that allowed for the determination of rarity and listing status. During field surveys, the phenology of vegetation on site was appropriate for identification of special status species. Therefore, the timing was appropriate for presence/absence surveys of the special status plant species assessed during the evaluation. County rights of way, areas immediately adjacent to the rights of way that displayed habitat potential, and indicated lots in **Figure 1** were surveyed. No special status plant species were found during field surveys. Additionally, no historical observations or detections of special status species were found within 0.5 miles of the Project boundary (Project vicinity) during background information research (**Figure 3**).

The mapped Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) Alliances were found to be consistent with the Project location, density, and size; however, this area is predominantly residential and does not reflect characteristics associated with these vegetation alliances in most locations in the Project area. Common disturbances include altered and non-native landscapes, litter, domestic pets, humans, and vehicular traffic.

5.0 ASSESSMENT OF HABITAT TYPES

Vegetation types were initially identified with the CALVEG GIS data (USDA 2009a) and then verified based on the NCE reconnaissance field survey. Vegetation types found in and/or adjacent to the Project area are typical of those found in the Lake Tahoe Basin. The Project area is composed mainly of Jeffrey pine forest that is fragmented by urban land classification and pockets of perennial grasslands (**Figure 2**). Unless otherwise noted, the descriptions below are taken from the USFS North Sierran Ecological Province Vegetation Descriptions (USDA 2008). It should be noted that vegetation community data presented **Figure 2** are intended for planning purposes at a scale of 1:24,000; therefore, although this figure is a useful tool to determine the general location and types of vegetation communities found within the Project area, data cannot be interpreted on a parcel basis at this scale.

Jeffrey Pine Alliance (CALVEG Code JP)
The Jeffrey pine alliance can be found in eastside northern Sierra Nevada habitats up to an elevation of about 7,300 feet. This alliance grows in xeric micro-environments on granitic outcrops or on glaciated soils such as tills and outwash deposits. It is prominent in the Sierra Valley and Carson Range Subsections on the east side of the range. This forest is tall and open, and is dominated by Jeffrey pine (*Pinus jeffreyi*) with a sparse understory of chaparral or sagebrush shrubs and young trees. The understory may include white fir (*Abies concolor*), greenleaf manzanita (*Arctostaphylos patula*), mountain whitethorn (*Ceanothus cordulatus*), wax currant (*Ribes cereum*), and mountain sagebrush (*Artemisia tridentata* ssp. *vaseyana*). Lodgepole pine (*Pinus contorta* ssp. *murrayana*) can be found in areas that collect more moisture (Holland 1986). This alliance is mapped throughout the Project area.

Perennial Grasslands (CALVEG Code HM)
Perennial grasslands have been mapped sparsely in fourteen subsections of the Sierran zone at elevations between 2000 – 9400 ft (610 – 2867 m). This type is a form of dry to moist grassland in which it is difficult to determine species composition without detailed onsite surveys. Some of these areas are currently being used for livestock pasture and are a mix of perennial and annual grasses and legumes that vary according to management practices. Perennial bunchgrasses introduced from Eurasia such as desert, tall, and intermediate wheatgrasses (*Agropyron desertorum, Elytrigia pontica, Elytrigia intermedia*), in addition to tall fescue (*Festuca arundinacea*), clover (*Trifolium* spp.), needlegrass (*Achnatherum* spp.), squirreltail (*Elymus elymoides*), rock cress (*Arabis* spp.), monardella (*Monardella* spp.), buckwheat (*Eriogonum* spp.), cheatgrass (*Bromus tectorum*) and others generally found in northern California may be included in the mixture. Mules-ears (*Wyethia mollis*) are a typical associate towards the east. This Alliance is often associated with moist openings in Red Fir (*Abies magnifica*) forests.

Urban or Developed (CALVEG Code UB)
The urban or developed category applies to landscapes that are dominated by urban structures, residential units, or other developed land use elements such as highways or city parks. Areas mapped as urban or developed exist throughout the Project area, but are primarily located along the roads and southern commercial corridor. Furthermore, the entire Project area can be described as a mix of forested vegetation within urban development.

6.0 SPECIAL STATUS SPECIES

This Assessment considers the potential effects of the proposed Project on species protected under the USFWS, State of California, and TRPA that may occur in or adjacent to the Project area. These species are presented in **Table 1**, which includes the name, regulatory status, habitat requirements, identification period, potential for occurrence in the Project area, and survey results. This analysis was based on the literature and database reviews and the field surveys.

Although LTBMU special status species are not evaluated in this report, USFS modeled habitat data is included on **Figure 3** as this information is useful in analyzing the Project area for similar special-status species. There are six recorded USFS modeled habitats within the Project vicinity: *Peltigera hydrothyria*, *Lewisia kelloggii*, *Botrychium* spp., *Epilobium howelii*, *Bruchia bolanderi*, *Meesia blandowii and Helodium blandowii.* These species were not observed on surveyed parcels and their probability for occurrence ranges from unlikely to potential. Please refer to **Figure 3** for a visual reference and **Table 1** for more details. It is not likely the Project will have a negative effect on special status species with similar modeled habitat as this area has been impacted by urbanization and disturbance.

7.0 SUMMARY

The Project area represents a typical residential environment found within the Lake Tahoe Basin. The Project area covers approximately 269 acres while the survey area was approximately 67 acres. Dominant vegetation is primarily Jeffrey pine with a heavy urban influence. The Upper Truckee River and its associated SEZ run along the project's north-western boundary.

No special status species were encountered in the Project area during the botanical field surveys and no recorded occurrences of special status plant species occurrences were found during database research.

The USFS is conducting separate surveys that concentrate on USFS-LTBMU species and USFS land. The USFS findings and recommended actions will be provided to the County and any mitigation measures will be followed to meet USFS standards.

To mitigate for potential temporary impacts due to construction, TRPA approved BMPs will be in place and maintained for the duration of construction to ensure impacts are minimized and/or eliminated. No special conditions outside of TRPA approved vegetation protection BMPs are recommended at this time. The goal of the Country Club Heights ECP is to minimize erosion and improve the quality of stormwater discharged from the County rights of way. The Project will not change the use of the site or surrounding area, and will provide benefits to the natural environment through the proposed improvements. After the Project is completed, less sediment will enter Upper Truckee River from the Project area, thereby improving water quality in Lake Tahoe and special status species habitat.

8.0 REFERENCES

California Department of Fish and Wildlife (CDFW). (2000). Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Revised November 24, 2009. California Natural Resources Agency. Sacramento, CA.

CDFW. (2016). "State of California Endangered, Threatened, and Rare Plants of California List." Revised July 2016. Retrieved 9/26/2016. State of California Resources Agency. Sacramento, CA.

California Native Plant Society (CNPS). (2016). Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org, Retrieved on 9/26/2016.

California Natural Diversity Database (CNDDB). (2016). California Department of Fish and Wildlife, Commercial Version 5.45.13.

California Tahoe Conservancy. (2004). Soil Erosion Control Grants Program, Program Announcement and Guidelines.

Hickman, J. C. (1993). *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley, CA.

Holland, R. F. (1986). *Preliminary Descriptions of the Terrestrial Natural Communities of California.* California Department of Fish and Wildlife. Sacramento, CA.

Sawyer, John O. and Todd Keeler-Wolf. (2009). *A Manual of California Vegetation* Second Edition. California Native Plant Society. Sacramento, CA.

TRPA. (2002a). "Plan Area Statement 120 Tahoe Paradise." Tahoe Regional Planning Agency, Retrieved on 8/10/2016. Stateline, NV.

TRPA. (2002b). "Plan Area Statement 119 Country Club Meadows." Tahoe Regional Planning Agency, Retrieved on 8/10/2016. Stateline, NV.

TRPA. (2011). *Threshold Evaluation Report.* Chapter 5, Updated 10/2012. Stateline, NV.

TRPA. (2015). *Code of Ordinances, Rules of Procedures.* Sections 61.3.6.C and 61.3.1-2. Stateline, NV.

TRPA. (2012). *Regional Plan for the Lake Tahoe Basin: Code of Ordinances.* Section IX. Stateline, NV.

TRPA. (1986). *Goals and Policies.* Stateline, NV.

USDA. (1988). *Land and Resource Management Plan.* USDA Forest Service, South Lake Tahoe, CA.

U.S. Department of Agriculture (USDA). (2008). "Vegetation Descriptions North Sierran Ecological Province - CALVEG Zone 3." USFS Remote Sensing Lab, Ecosystem Planning, Last updated on 12/17/2008, Retrieved on 10/14/2011 from http://www.fs.fed.us/r5/rsl/projects/classification/nsierran-veg-descript.shtml.

USDA. (2009a). "Existing Vegetation Data (CALVEG) by Tiles (EvegTile17B_05_24k_v1) in Albers for Lake Tahoe Basin Management Unit." USDA Forest Service Remote Sensing Lab, Ecosystem Planning, Last updated on 1/5/2009, Retrieved 7/22/2015 from http://www.fs.usda.gov/detail/r5/landmanagement/resourcemanagement/?cid=stelprdb5347192.

USDA. (2009b). "Erosion Control Grants NEPA Decision Guidelines." USDA Forest Service, Lake Tahoe Basin Management Unit (LTBMU). September 22, 2009.

U.S. Fish and Wildlife Service (USFWS). (2016). "Information for Planning and Conservation." Fish and Wildlife Service, Sacramento Field Office. Retrieved 8/10/2015 from http://ecos.fws.gov/ipac/project/3F4BA-POUCN-BXNNB-T6EY2-KYJZKQ.

APPENDIX A

Tables

Table 1. Special Status Species List and Habitat.							
Species	Regulatory Status				Habitat Requirements	Identification Period	Potential for Occurrence in the Project Area and Results of Survey
	Federal	State	TRPA	CNPS			
Arabis rigidissima* var. *demota Galena Creek rockcress			SI	1B.2	Broad-leaved upland forests, upper montane coniferous forests on rocky substrates. Known in CA from only two occurrences near Martis Peak and in NV from eleven occurrences in the Carson Range. Elevation range 7,398 to 8,398 feet.	August	**Unlikely.** Outside of elevation range and site lacks suitable habitat.
Astragalus austiniae Austin's astragalus				1B.3	Alpine boulder and rock field, subalpine coniferous forest. Elevation range 8,005 to 9727 feet.	July to September	**Unlikely.** Outside of elevation range. Not encountered during surveys.
Boechera tularensis Tulare rockcress				1B.3	Perennial herb that prefers rocky slopes, subalpine coniferous forest, and upper montane coniferous forest. Elevation range is from 6,000 to 11,000 feet.	June to July	**Potential.** May occur. Not encountered.
Bolandra californica Sierra bolandra				4.3	Perennial herb that prefers mesic, rocky soils in lower to upper montane coniferous forests at elevations from 3,200 – 8,000 feet.	June to July	**Potential.** May occur. Not encountered.
Botrychium ascendens Upswept moonwort				2B.3	Wet or moist soils in lower montane coniferous forests, such as along the edges of lakes and streams. Elevation range 4,950 to 6,039 feet.	Fertile early July to early September	**Potential.** May occur as USFS modeled habitat exists within Project area. Not encountered.
Botrychium crenulatum Scalloped moonwort				2B.2	Lower montane coniferous forests, meadows and seeps, marshes and swamps. Elevation range 4,950 to 10,800 feet.	Fronds mature June to September	**Potential.** May occur. Not encountered.
Botrychium minganense Mingan moonwort				2B.2	Wet or moist soils in lower montane coniferous forests, such as along the edges of lakes and streams. Elevation range 4,950 to 6,039 feet.	Fronds mature June to September	**Potential.** May occur. Not encountered.

Table 1. Special Status Species List and Habitat.							
Species	Regulatory Status				Habitat Requirements	Identification Period	Potential for Occurrence in the Project Area and Results of Survey
	Federal	State	TRPA	CNPS			
Brasenia schreberi Watershield				2B.3	Perennial rhizomatous herb that prefers marshes and swamps or freshwater. Elevation range 100 to 7,200 feet.	June to September	**Potential.** May occur. Not encountered.
Bruchia bolanderi Bolander's bruchia				4.2	Meadows in mixed conifer and subalpine communities, streams and wet meadows, from 5,577 to 9,186 feet.	Moss	**Potential.** May occur as USFS modeled habitat exists within Project area. Not encountered.
Carex davyi Davy's sedge				1B.3	Perennial herb that prefers subalpine and upper montane coniferous forests between 5,000 to 10,500 feet.	May to August	**Unlikely.** Site lacks suitable habitat.
Carex limosa Mud sedge				2B.2	Perennial rhizomatous herb that prefers bogs, fens, meadows, seeps, marshes, swamps, and both lower and upper montane coniferous forests. Elevation range is between 3,900 and 8,900 feet.	June to August	**Potential.** May occur as CNDDB records exist within five miles of Project area; it was not encountered during surveys.
Carex tahoensis Tahoe sedge				4.3	Perennial rhizomatous herb that prefers alpine boulder and rock fields and subalpine coniferous forests. Elevation range is between 9,300 and 12,500 feet.	July to August	**Unlikely.** Site lacks suitable habitat, outside of elevation range.
Chaenactis douglasii* var. *alpina Alpine dusty maidens				2B.3	Open, subalpine to alpine gravel and crevices; granitic substrate. Elevation range is between 7,749 and 11,007 feet.	July to September	**Unlikely.** Site lacks suitable habitat, outside of elevation range.
Clarkia virgate Sierra clarkia				4.3	Annual herb that prefers Cismontane woodland and lower montane coniferous forest. Elevation range is between 1,300 and 5,300 feet.	May-August	**Unlikely.** Site lacks suitable habitat, outside of elevation range.
Cryptantha crymophila Subalpine cryptantha				1B.3	Subalpine coniferous forest. On dry talus of volcanic formation. Elevation range is between 8,792 and 10,810 feet.	July to August	**Unlikely.** Site lacks suitable habitat, outside of elevation range.

Table 1. Special Status Species List and Habitat.							
Species	Regulatory Status				Habitat Requirements	Identification Period	Potential for Occurrence in the Project Area and Results of Survey
	Federal	State	TRPA	CNPS			
Draba asterophora* var. *asterophora Tahoe draba			SI	1B.2	Alpine boulder and rock fields in crevices, and open talus slopes of decomposed granite in subalpine coniferous forests. Elevation range 8,325 to 11,670 feet.	July to September	**Unlikely.** Outside of elevation range.
Draba asterophora* var. *macrocarpa Cup Lake draba			SI	1B.1	Alpine boulder and rock fields in shade of granitic rocks in subalpine coniferous forest. Elevation range 8,202 to 9,235 feet.	July to August	**Unlikely.** Outside of elevation range and site lacks suitable habitat.
Epilobium howellii Subalpine fireweed				4.3	Meadows and seeps in upper montane coniferous forests. Elevation range 6,600 to 8,910 feet.	July to August	**Potential.** Modeled habitat occurs within Project area, but project area is outside of elevation range and site lacks suitable habitat. Not encountered during surveys.
Epilobium oregonum Oregon fireweed				1B.2	Perennial herb that prefers mesic habitat including bogs and fens, but also lower and upper montane coniferous forests. Elevation is between 1,650 and 7,300 feet.	June to September	**Unlikely.** Site lacks undisturbed suitable habitat.
Epilobium palustre Marsh willowherb				2B.3	Perennial rhizomatous herb that prefers mesic habitat including bogs, fens, meadows, and seeps.	July to August	**Unlikely.** Site lacks undisturbed suitable habitat.
Erigeron gracile Slender cottongrass				4.3	Perennial rhizomatous herb that prefers acidic soils in bogs and fens, meadows and seeps, and upper montane coniferous forests. Elevation range 4,200 to 9,500 feet.	May to September	**Unlikely.** Site lacks undisturbed suitable habitat.
Eriogonum luteolum* var. *saltuarium Jack's wild buckwheat				1B.2	Upper montane coniferous forest, great basin scrub on sandy, granitic substrates. Elevation range between 5,577 and 7,874 feet.	July to September	**Unlikely.** Site lacks suitable habitat.

Table 1. Special Status Species List and Habitat.							
Species	Regulatory Status				Habitat Requirements	Identification Period	Potential for Occurrence in the Project Area and Results of Survey
	Federal	State	TRPA	CNPS			
Glyceria grandis American manna grass				2B.3	Perennial rhizomatous herb that prefers bogs, fens, meadows, seeps, marshes, and swamps along stream banks, or lake margins. Elevation range is from 50 to 6,500 feet.	June to August	**Potential.** May occur. Not encountered.
Helodium blandowii Blandow's bog-moss				2B.3	Bogs and fens that are not too rich in iron. Elevation range 6,562 to 8,859 feet.	Moss	**Unlikely.** Site lacks suitable habitat.
Lewisia kelloggii* ssp. *hutchisonii Hutchison's lewisia				3.2	Ridge tops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. Elevation range 5,000 to 7,000 feet.	June to July	**Potential.** May occur as it has USFS modeled habitat within Project area; however, it was not encountered.
Lewisia kelloggii* ssp. *kelloggii Kellogg's lewisia				3.2	Ridge tops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. Elevation range 5,000 to 7,000 feet.	June to July	**Potential.** May occur as it has USFS modeled habitat within Project area; however, it was not encountered.
Lewisia longipetala Long-petaled lewisia			SI	1B.3	Alpine boulder and rock fields in subalpine coniferous forests. Elevation range 8,325 to 9,740 feet.	June to August	**Unlikely.** Outside of elevation range.
Meesia triquetra Three-ranked hump-moss				4.2	Bogs and fens, meadows and seeps in montane coniferous forests. Elevation range 4,290 to 8,250 feet.	Moss	**Unlikely.** Site lacks suitable habitat.
Meesia uliginosa Broad-nerved hump-moss				2B.2	Bogs and fens, meadows and seeps in montane coniferous forests. Elevation range 4,290 to 8,250 feet.	Moss	**Unlikely.** Site lacks suitable habitat.
Peltigera hydrothyria Veined water lichen					Mixed coniferous forests, bogs, fens, wet meadows, seeps, and clear, cold streams. Elevation range 4,000 to 8,000 feet.	Lichen	**Potential.** May occur as it has USFS modeled habitat within Project area; however, it was not encountered.

Table 1. Special Status Species List and Habitat.							
Species	Regulatory Status				Habitat Requirements	Identification Period	Potential for Occurrence in the Project Area and Results of Survey
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Peltigera gowardii western waterfan lichen				4.2	This foliose lichen (aquatic) is found in cold water creeks with little or no sediment or disturbance in riparian forests. Elevation range is from 3,490 to 8,595 feet.	n/a	**Potential.** May occur. Not encountered.
Polystichum lonchitis northern holly fern				3	This perennial rhizomatous herb prefers granitic or carbonate soils in subalpine coniferous forest and upper montane coniferous forests. Elevation range 5,900 to 8,530 feet.	June to September	**Unlikely.** Site lacks suitable habitat.
Potamogeton robbinsii *Robbins' pondweed*				2B.3	This perennial rhizomatous herb prefers marshes and swamps (deep water, lakes). Elevation range 5,000 to 8,530 feet.	July to August	**Unlikely.** Site lacks suitable habitat.
Rorippa subumbellata Tahoe yellow cress			SI	1B.1/ SE	Shoreline supporting decomposed granitic soils; known only from the shoreline of Lake Tahoe. Elevation range 6,210 to 6,230 feet.	Blooms May to September	**Unlikely.** Outside of elevation range and site lacks suitable habitat.
Schoenoplectus subterminalis Water bulrush				2B.3	Perennial rhizomatous herb that prefers bogs, fens, marshes and swamps, especially along montane lake margins. Elevation range from 2,400 to 7,300 feet.	June to August	**Unlikely.** Site lacks suitable habitat.
Scutellaria galericulata Marsh skullcap				2B.2	Perennial rhizomatous herb that prefers lower montane coniferous forests, meadows, seeps, marshes, and swamps. Elevation range from 0 to 6,800 feet.	June to September	**Unlikely.** Site lacks suitable habitat.
Stuckenia filiformis Slender-leaved pondweed				2B.2	Perennial rhizomatous herb that prefers marshes, swamps, and a variety of shallow freshwater habitats. Elevation range from 980 to 7,000 feet.	May to July	**Potential.** May occur. Not encountered.

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Tonestus eximius Tahoe tonestus				4.3	Perennial rhizomatous herb that prefers subalpine coniferous forests (granitic). Elevation range from 8,200 to 10,820 feet.	July to August	**Unlikely.** Outside of elevation range and site lacks suitable habitat.
Utricularia ochroleuca Cream-flowered bladderwort				2B.2	Perennial stoloniferous herb that can be found in meadows, seeps, marshes, swamps, and lake margins. Elevation range from 4,700 to 4,730 feet.	June to July	**Unlikely.** Site lacks suitable habitat.

Federally Listed Species (Federal):
FE = Federally Endangered
FT = Federally Threatened
FD = Federally Delisted
PT = Proposed Threatened
FCE = Federally Endangered Candidate
FPD = Proposed for Delisting

California State Listed Species (CA):
SE = State Endangered
ST = State Threatened
SR = State Rare
SC = State Candidate

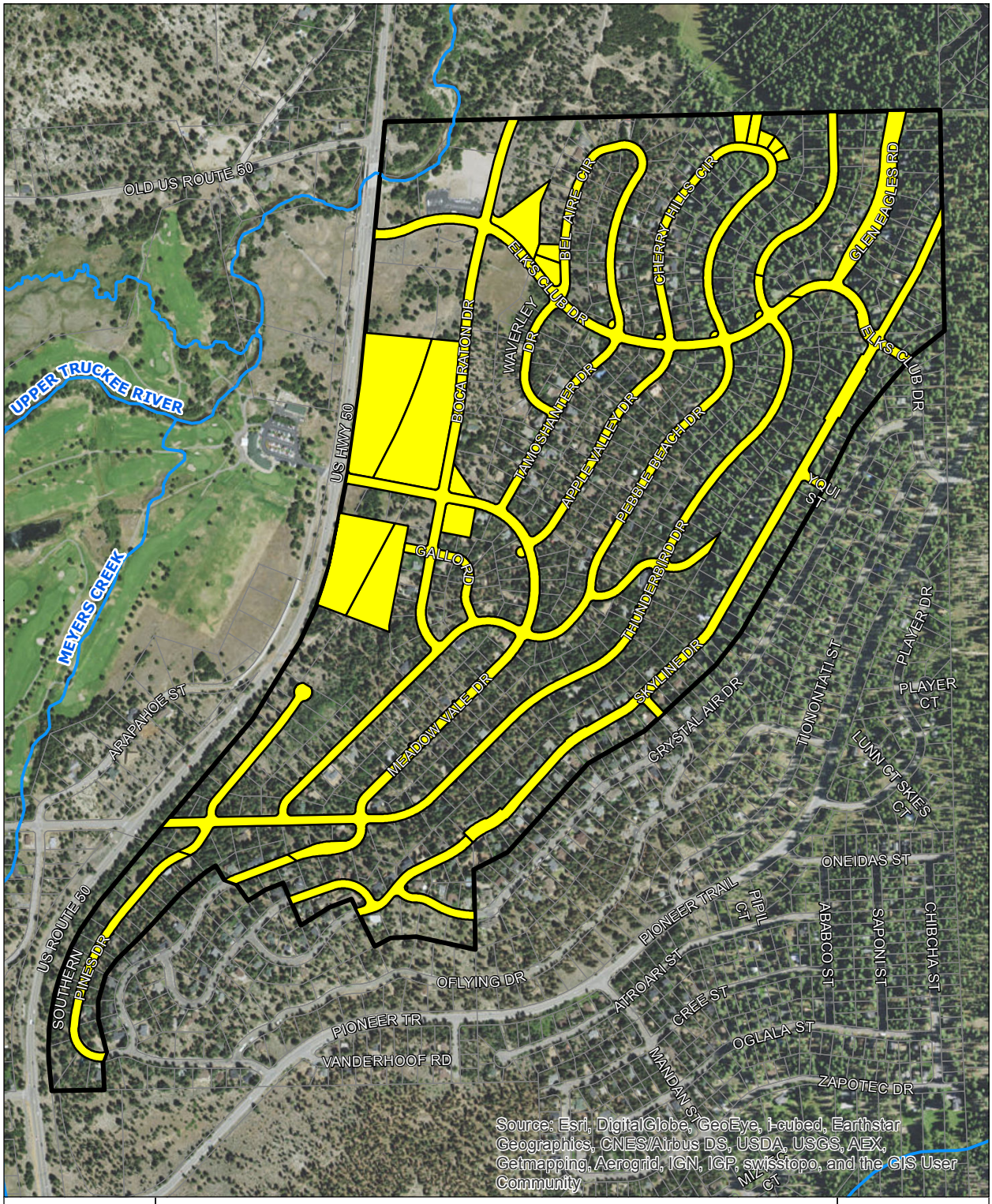
Tahoe Regional Planning Agency (TRPA):
SI = TRPA Special Interest Species

California Native Plant Society (CNPS) List Categories:
1 = Rare in California and elsewhere
2 = Rare in California, but not elsewhere
A = Presumed extirpated or extinct
B = Rare, threatened, or endangered
3 = Plants about which we need more information
4 = Plants of limited distribution

CNPS Threat Code Extensions:
.1 = Seriously endangered in California (Over 80% of occurrences threatened)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened)

APPENDIX B

Figures



Legend

- Project Boundary
- Survey Area
- Parcels
- Streams

Country Club Heights ECP

Draft Basemap

1:10,000

0 500 1,000 ft.

N

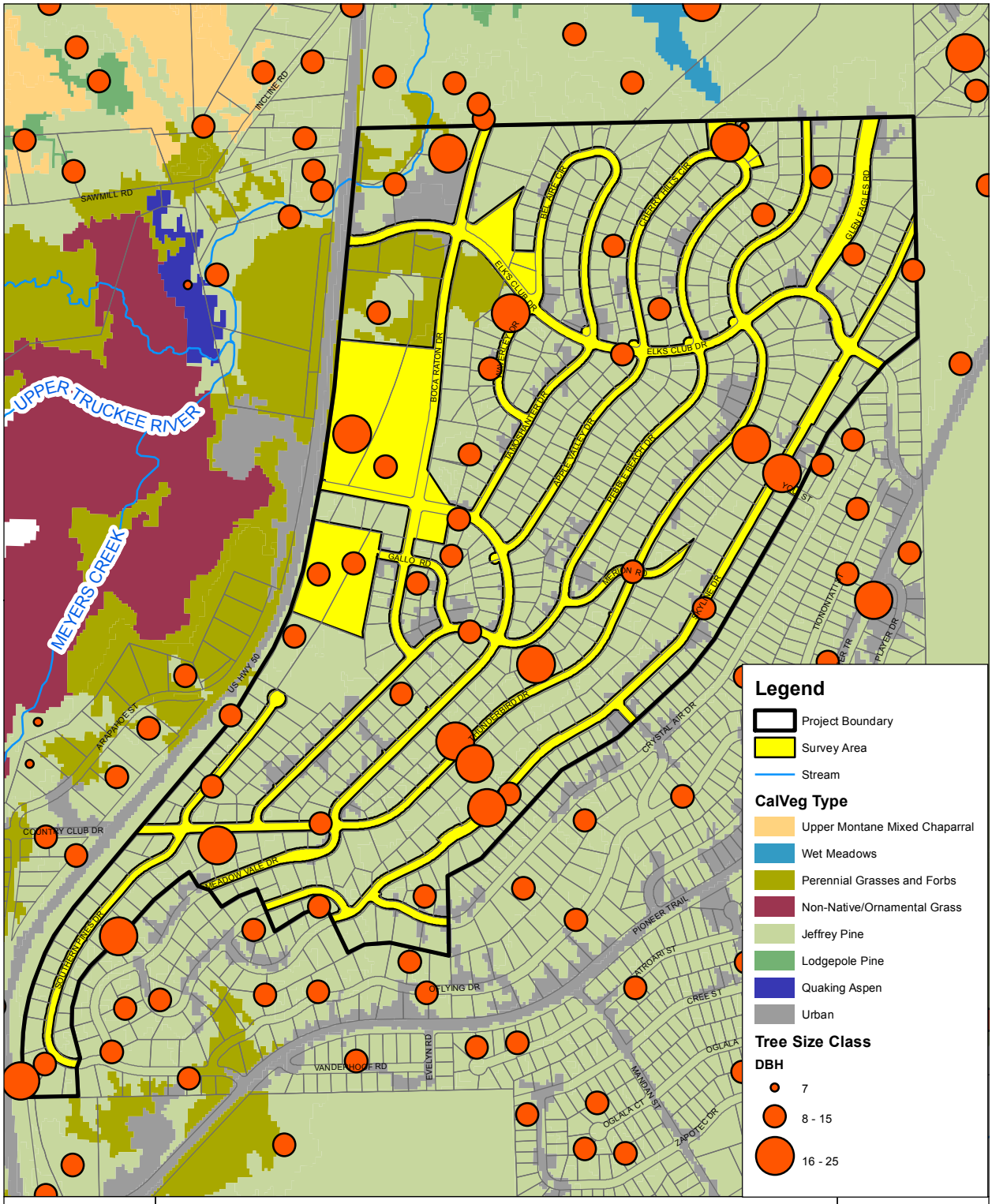
Credits: ESRI; El Dorado County; TRPA

Date: 7/19/2016

Author: drios

Figure 1

NCE



Country Club Heights ECP

Vegetation Communities

1:10,000

0 500 1,000 ft.

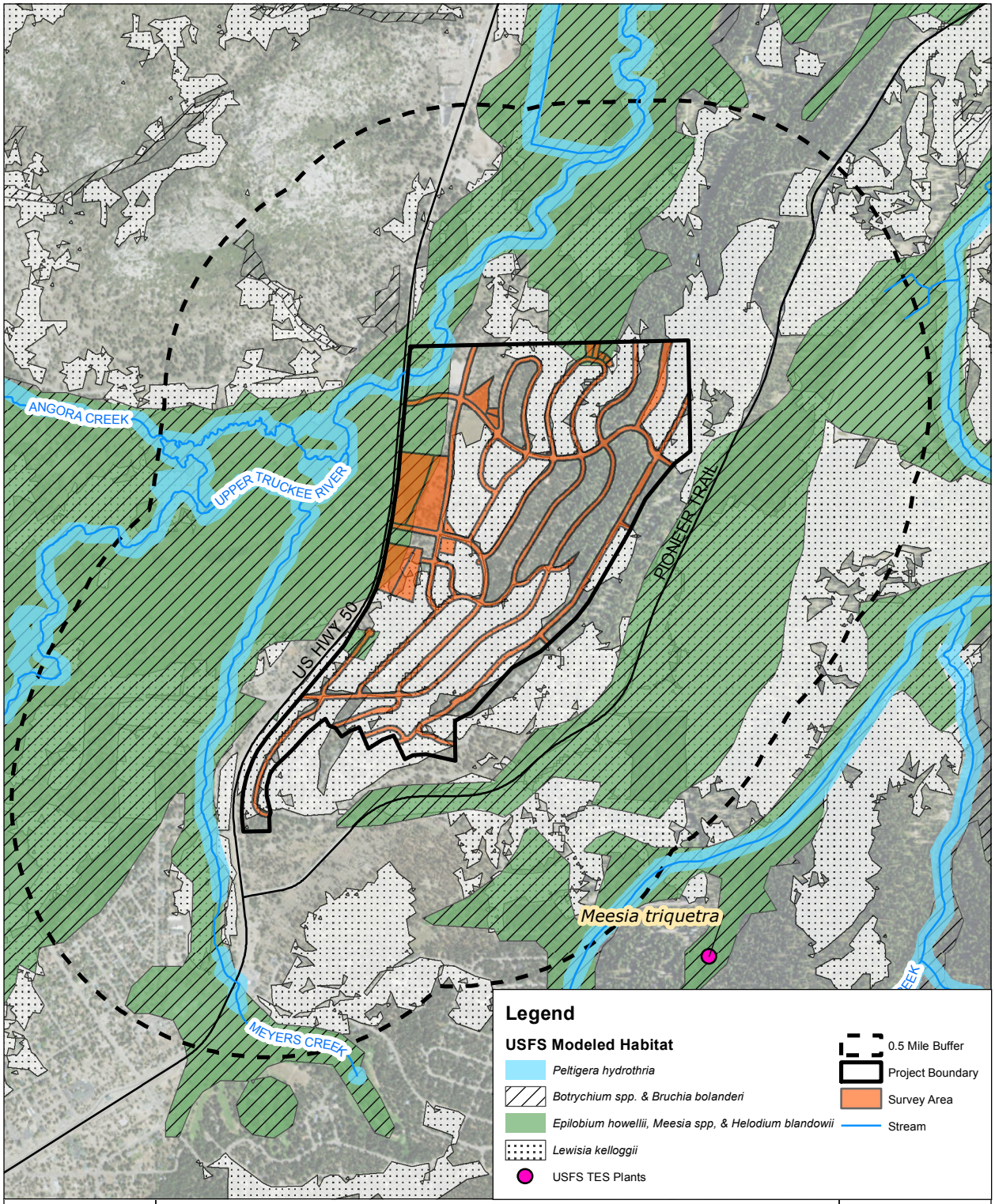
N

Credits: ESRI; TRPA; El Dorado County; CalVeg

Date: 9/2/2016

Author: mrios

Figure 2



Country Club Heights ECP

Draft Vegetation Base Map

1:20,000

0 1,000 2,000 ft.

N

Credits: ESRI; El Dorado County; TRPA; CNDDB; USFS

Date: 10/5/2016

Author: mrios

Figure 3