CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER

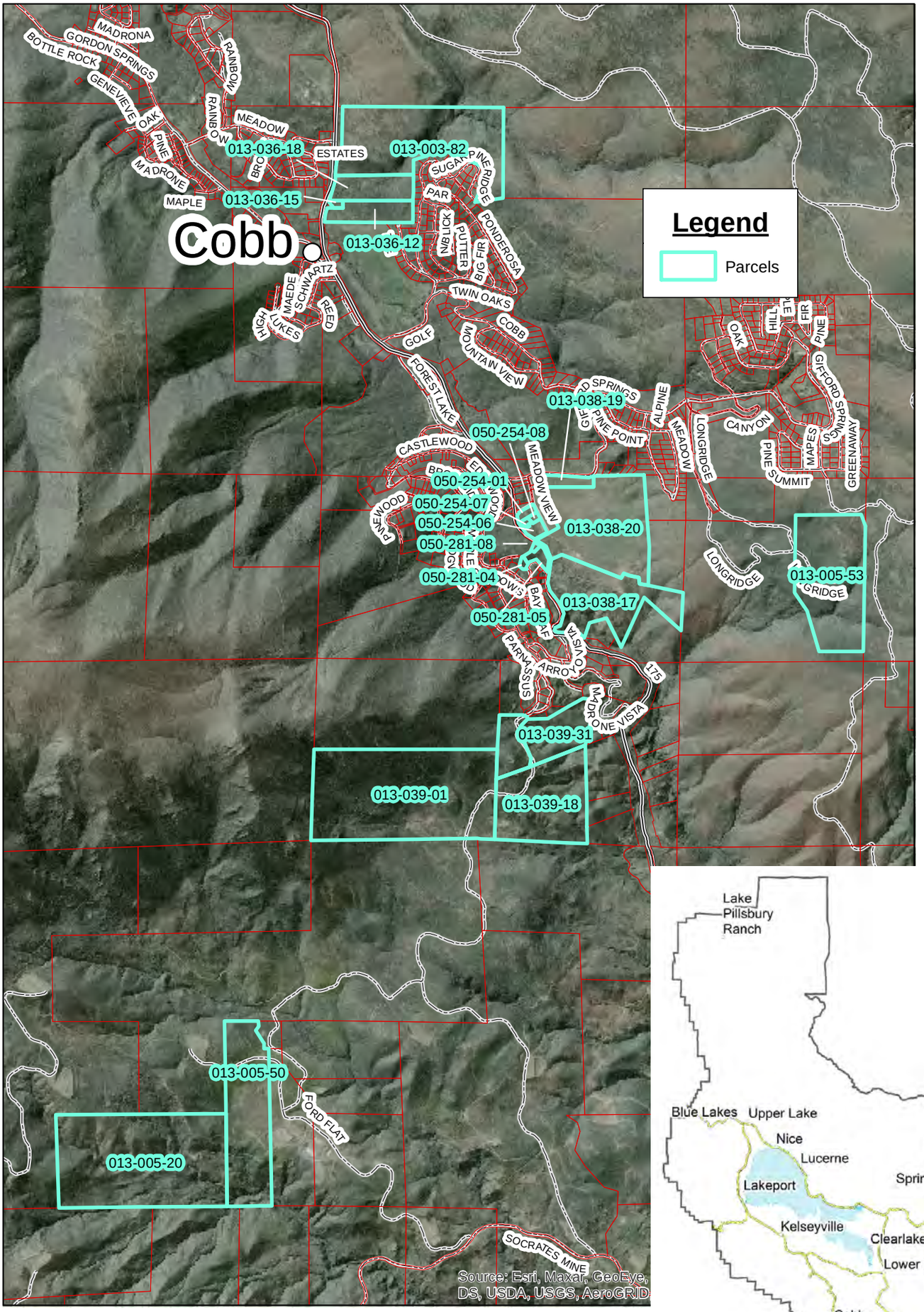
Date: 1/7/2022

SOUTH COBB AREA

Forest Health & Fire Resilence Project

VICINITY MAP

0 0.2 0.4 0.8 Miles



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Lake County Forest Health & Fire Resilience Project Phase 1 South Cobb Area

This treatment area includes area burned in the Valley Fire (11285 Mapes Pass and south) and area just outside the burn scar of the Valley Fire (north of 11285 Mapes Pass) (See *Appendix A* for Project Map). In the burned portion of the treatment area, the goals of the work will be to promote natural regeneration and facilitate small areas of reforestation where appropriate, as well as to reduce the hazard of a future fire. To achieve this, workers will remove standing dead trees and dead vegetation that still poses a fire hazard; thin brush around naturally regenerating pine and fir; thin basal re-sprouting around oaks; plant small areas of ponderosa pine and Douglas fir; clear brush along evacuation routes; and clear brush along access routes that will allow further management in the future.

In the unburned portion of the treatment area, work will focus on reducing the severity of future wildfires that may burn through the area. To achieve this, workers will remove beetle- and drought-killed conifer; thin understory vegetation and ladder fuels; and reduce surface fuels.

No healthy, living trees larger than 16"dbh will be removed unless they pose a serious threat to life or property. The work is intended to encourage the growth of healthy forests where possible; reduce the threat to ecosystem health, human life, and property in the event of a wildfire; and foster biodiversity while maintaining a lowered fire risk in areas that may never regrow as forest following the Valley Fire.

Fuel reduction activities will avoid:

- Sensitive habitat, including riparian areas or wetlands.
- Cultural and historic sites.
- Disturbance to individual specimens of rare, threatened, or endangered species.
- Ground disturbance that could result in sediment delivery to watercourses.

Project Applicant: Clear Lake Environmental Research Center (CLERC)

Project Location: See attached Project Map in *Appendix A*, and attached Address & Parcel Number List in *Appendix A-1.*

Project Size: 148.6 acres of hazardous fuel reduction treatments

Public Agency Approving Project: Lake County Community Development Department

Status Sought under California Environmental Quality Act (CEQA)

There are several different provisions that would allow the work carried out under this project to be exempt from CEQA including multiple emergency exemptions and categorical exemptions:

Emergency exemption under 14CCR 15269(a) for the Valley Fire (declared emergency September 13, 2015); and/or tree mortality in a Tier 2 High Hazard Zone where trees pose a threat to public health and safety (declared emergencies October 30 2015 and August 31 2017).

Categorical exemption under 14CCR 15304: Minor alterations to land. The project consists of the minor alteration of vegetation which will not involve the removal of healthy, mature, scenic trees (even though it is a forestry activity).

Forest Practices Act exemptions including 14CCR 1038(b) Harvesting dead, dying, diseased trees; 14CCR 1038(d) Drought mortality/substantially damaged timberland; 14CCR 1038.3 Forest fire prevention; 14CCR 1038(f) Small timberland owner; and 14CCR 1052.4 Emergency fuel hazard reduction.

Background

Clear Lake Environmental Research Center (CLERC) exists to:

- bring science, education, government, tribal and business groups together to resolve issues involving Clear Lake.
- study the unique properties of Clear Lake and the surrounding area.
- coordinate programs and projects that focus on solutions to environmental and economic problems locally and worldwide.

CLERC received a grant from CalFire's Forest Health Grant Program to implement activities to reduce fuel loads and ensure long-term stability of forest carbon stocks on private and public lands in Lake County.

Treatment Method

Fuel reduction activities will be carried out using a variety of methods that may include hand treatments, piling and burning, mastication, and dozer work. Some biomass materials may be chipped onsite using equipment that remains on the existing road network. The material will be either be chipped and broadcast on site or piled (hand or machine) and burned during safe and permitted periods.

No stumps will be removed. No new roads or skid trails will be constructed. Trees removed under this exemption will be less than 16" DBH, unless a tree needs to be removed for safety and/or forest health purposes, and only after consultation with a licensed arborist, forester, or qualified fire fighter. No healthy, mature trees will be removed under this exemption. No trees will be sold under this exemption.

Tribal Consultation

CLERC has informally notified the environmental director of the Middletown Rancheria of Pomo Indians, a tribal government adjacent to the project area, of the type and scope of work that will occur under this exemption by providing a treatment description, GIS data, and maps of the project area. At the time of submittal, the environmental director has raised no objections to the treatment plan.

Public Consultation

CLERC presented the type and scope of work that will occur under this exemption to the Cobb Area Council on October 21 2021, and received no objections to the project at that time.

Workers

The planning, administrative, and oversight work will be conducted by contracted licensed foresters, forest technicians, archaeologists, botanists, biologists, and CLERC staff. Field work will be conducted by Licensed Timber Operators, when available, or the landowners themselves. CLERC strives to hire local contractors wherever possible to ensure maximum economic benefits to the immediate community. The grant is anticipated to create approximately 8 full-time employee equivalency over the grant period of 2021 to 2024.

Hours of Equipment Use

To minimize noise related impacts, the use of chainsaws, chipping equipment, and masticators will occur between the hours of 7:00 am and 7:00 pm Monday through Saturday and 8:00 am to 4:00 pm on Sunday.

Cultural and Historic Resources

Prior to initiation of any activities that could potentially cause ground disturbance, all areas included in the Project Location will undergo a records search for cultural and historic resources. A qualified archaeologist will review the records and survey areas that have not been surveyed recently, as determined by the archaeologist. No equipment or vehicle movement will occur within culturally sensitive areas, except for where the areas are currently traversed by existing roads and only for the purpose that existed prior to the implementation of the project. Fuel thinning activities will only occur within historic sites where the historic character can be retained. The project applicant will provide a confidential report on cultural and historic sites identified within the Project Location(s), as well as the exceptions to management within culturally sensitive areas, to the Lake County Community Development Department upon request.

In the event of unidentified cultural resource discovery during the implementation of fuel reduction activities, an immediate buffer of 150 feet will be defined with flagging or fencing around the newly identified resource. A qualified archaeologist will inspect the discovery and determine whether further investigation is required. If the discovery can be avoided and no further impacts will occur, the resource will be surveyed, documented, and submitted to the records search. If the landowner wishes to

continue work in the area, the work will be done only with hand tools, including chainsaws, and only as can be conducted on foot.

Environmental Surveys for Rare Plants and Animals

A records search of the California Natural Diversity Database (CNDDB) has been conducted in a buffer zone of 3 miles around the project area using what was the most updated version at the time of the search (map in *Appendix B*). A list of all special status plants and animals found in the CNDDB is listed in *Appendix B-1*. Using Landfire 2016 data (*Appendix B-2*) and soils data (*Appendix B-3*), the project area has been analyzed for favorable habitat conditions for the species.

In areas identified as having suitable habitat for special status plant species, no work will occur within the area until protocol level floristic surveys are completed by a qualified botanist/biologist. Any special status plants found will be flagged and avoided during implementation.

A wildlife habitat assessment will be completed to determine if suitable habitat exists within and/or adjacent to the proposed project area. If suitable habitat is identified for special status wildlife, protocol surveys will be completed to determine if the proposed fuel reduction activities have potential to impact the species. If a determination is made that habitat quality could be negatively impacted by the treatment activities, the proposed activities will be changed to the point that they will not cause the impact, including complete avoidance of high quality habitat areas.

Nesting Bird Avoidance

Nesting birds may be disrupted by operations that involve chainsaw activities for hand-thinning work, and the use of other mechanized equipment. The nesting bird season is often considered to be between February 1 and July 31. Operations that involve the above activities and are initiated during this time period will be preceded by a survey for nesting birds. The survey will occur in conjunction with a review of the Lake County bird survey to identify which birds may be present in an area. The survey will be conducted by a qualified biologist (whose qualifications have been approved by the lead public agency in Lake County). The surveys will be conducted during periods of high bird activity, such as early in the morning or late in the evening.

If active nests are observed that could be disturbed, including noise disturbance, a temporary, species appropriate, no-disturbance buffer zone, as determined by the biologist, will be created around the nest to provide reasonable assurance that the breeding will not be disrupted.

Bat Roosting Tree Avoidance

Bats seek out trees with cavities, loose bark, cracks, and other features found more commonly in older dead or live trees. As part of the general survey for nesting birds and botanical resources, trees possessing extraordinary features will be identified. These trees will not be disturbed except for where they represent a heightened risk to the objectives of the fuel reduction work, including safety risks, in which case the following processes, with the intent of avoiding harm to the bats, will take place:

- The trees would be removed during periods of bat activity prior to the breeding season. This season is identified as between March 1 and April 15, or between September 1 and October 15

after temperatures rise above 45 degrees Fahrenheit and no more than .5 inches of rainfall has occurred within the previous 24 hours.

- If a tree must be removed as an imminent safety threat, the removal will follow a process over two days to avoid harm to roosting bats. During the first day, noise and vibrations will occur by removing branches and small brush around and in contact with the potential roost tree, which is effective in getting the bats to seek an alternative roost after feeding that evening. The tree will be removed the next day.

Erosion and Soils Conservation

Vegetation management operations will strive to maintain an adequate level of surface level organic material to prevent uninhibited surface runoff.

For all slopes greater than 20%, soils will be stabilized if a vegetation management activity results in less than 70 percent groundcover or native mulch/organic material, including the type of material that results from chipping operations, by incorporating the following practices, as practical:

- Redistribution of material from chipping operations to achieve at least 70% coverage.
- Sow native grasses and other suitable native vegetation on denuded areas where natural colonization is not likely.
- Placement of logs or brush on the contour downslope of denuded areas to reduce sedimentation.
- Install biodegradable erosion-control measures, such as seed-free straw and/or waddles, when denuded areas occur within 25 feet of watercourse and wet area buffers.

These practices will occur prior to wet weather conditions that result in overland flow, or within 10 days of the creation of the bare areas, whichever comes first.

Leak Prevention and Spill Cleanup

CLERC will ensure that all contractors implement measures related to the use of hazardous materials during operations. CLERC will hold kickoff meetings with contractors, in English and in Spanish, as needed, within 24 hours of initiating activities that involve heavy equipment to review the following procedures related to the use of hazardous materials:

Container Management

- All hazardous substance containers must be in good condition and compatible with the substances stored within.
- All containers must be properly labeled.
- Any spills on the outside of containers must be cleaned immediately.
- Do not overfill containers. Provided headspace to allow for expansion.

Good Housekeeping

- The transfer of chemicals must be conducted with a funnel or hose.
- Use drip pans or collection devices to prevent liquids from contaminating soils during transfer of chemicals from one reservoir to another.
- All hazardous substance containers must be closed while not in use.
- Immediately clean up spills or leaks.

- Visually inspect equipment and containers daily to ensure leaks and/or spills are not occurring.
- Emergency spill supplies and equipment will be available within the plan area to respond in a timely manner if an incident should occur.
- All diesel and gasoline powered equipment will be maintained per manufacturer's specification, and in compliance with all state and federal emission requirements.
- Discourage “topping-off” fuel tanks.

Worker Training

- All workers must receive training at the start of each project related to the measures outlined above in English and in Spanish (if necessary). If projects last more than 30 days, a review will be required within 45 days of the previous training.

Emergency Response Plan

- Stop source of spill or leak immediate.
- Utilize rags and other emergency supplies to absorb chemicals immediately.
- Employ communication strategy outlined in Appendix C.

Wildfire Risk Reduction

The following practices will be implemented to reduce the risk of wildfire:

- At all times:
    - All vehicles will include a shovel, a McLeod, or other scraping tool.
    - Equipment operator’s vehicles to be equipped with a 10-pound ABC rated serviceable fire extinguisher.
    - Equipment operator’s vehicles shall be equipped with a serviceable chainsaw (with spark arrestor) with a minimum 20” bar and a 3.5 horsepower engine.
    - Access roads will be clear to allow for emergency vehicle ingress and escape.

- During heightened risk periods, as defined by:
    - Temperatures in excess of 90 degrees Fahrenheit
    - Winds greater than 15 miles per hour
    - Relative humidity less than 20%
    - Dry fuels

    1. Operations can only occur with the presence of a minimum water resource of 100 gallons with a tested pump and 200 feet of 1.5” hose with a serviceable nozzle shall be available within 100’ of equipment operations.
    2. A designated fire spotter will be identified.
    3. The site shall be monitored for an hour after the equipment is shut down.

- All operations to be suspended during National Weather Service Red Flag Warnings and Fire Weather Watches, as advised by local fire suppression authorities, or as determined by CLERC.

- Each operator will have a list of emergency contact personnel (Appendix C) on his/her person on in the vehicle.

Riparian Resources

Vegetation management activities within riparian areas will be limited to the removal of dead and dying vegetation, pruning lower branches, or thinning small saplings (up to 8" DBH) to restore densities that are representative of healthy stands of riparian vegetation characteristic within the area. Any management activities will adhere to a principal of avoiding alteration to a streambed and banks. Activities will prevent vegetative material from entering the bed, channel, or bank of the waterway, unless a permit from the California Department of Fish and Game under 1600 is obtained.

Riparian areas will be defined using the following table, and buffered by the indicated amount:

Water Class	I	II	III
Definition	A-Domestic water, including springs, on site and/or within 100 feet downstream of the operations area and/or B-Fish always or seasonally present	A-Fish always or seasonally present within 1000 feet downstream and/or B-Aquatic habitat for nonfish aquatic species. C- Excludes Class III waters that are tributary to Class I waters.	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions.
Slope Class (%)			
<30	75 feet	50 feet	25 feet
30-50	100 feet	75 feet	50 feet
>50	150 feet	100 feet	50 feet

The use of masticators will not occur within the riparian areas off of existing road networks. Cables may be used to remove thinned biomass material away from the watercourse. Chipping machines may be used within the riparian areas provided they are used on existing roads and where chipped material is unlikely to enter into watercourse channels. Piling and burning may occur within the riparian area provided the activity minimizes exposed areas in close proximity to watercourses.

Emergency Access to Project Areas

The following measures will be implemented to maintain emergency access:

- At least one week prior to temporary lane or full closure of a public road for vegetation management-related work, the appropriate emergency response agency/agencies will be contacted with jurisdiction to ensure that each agency is notified of the closure and any temporary detours in advance and obtain all required encroachment permits.

- In the event of any emergency, roads blocked or obstructed for maintenance activities will be cleared to allow the vehicles to pass.

- During temporary lane or road closures on public roads, flaggers equipped with two-way radios will be utilized where needed to control traffic. During an emergency, flaggers will radio to the crew to cease operations and reopen the public road to emergency vehicles.

- All authorized vehicles at the treatment site will be parked to not block roads when no operator is present to move the vehicle.

Traffic Control Measures

The fuel reduction activities will take place on rural roads and are not anticipated to have an effect on traffic and pedestrian circulation. The following measures will occur in the event operations do take place where there is traffic and pedestrian circulation:

- Any work that disturbs normal traffic signal operations and ensure proper temporary traffic control (lane shifts, lane closures, detours etc.) will be coordinated with the agency having jurisdiction, at least 72 hours prior to commencing worker.
- Flaggers and/or warning signage of work ahead.
- A minimum of twelve (12) foot travel lanes on public roads must be maintained unless otherwise approved.
- Maintaining access to driveways and private roads at all times unless other arrangements have been made.
- Traffic control devices will be removed from view or covered when not in use.
- Sidewalks for pedestrians will remain open if safe for pedestrians. Alternate routes and signing will be provided if pedestrian routes are to be closed.
- Scheduling truck trips during non-peak hours to the extent feasible.

Contractor Training

The applicant will require a training at the beginning of the project for all contractors during which we will review environmental and cultural safeguards defined in this document and review the project objectives.

Environmental Assessment

Aesthetic

Aesthetics are relevant to the project. There is no potential for this project to result in significant impacts.

The visual character within the proposed fuel reduction treatment areas is characterized by primarily wildland. Vegetation consists of dense forest, forest mixed with brush species, and early successional forest (brush and young trees). Viewers in the vicinity would be residents and neighbors. Fuel reduction activities improve the aesthetic as it provides a deeper view into the forest than simply seeing a thicket of vegetation. The fuel reduction work will be evident and appreciated. Healthy, mature trees will be retained.

The natural vegetation and characteristics of the areas would remain. Significant adverse effects to aesthetics would not occur.

Agriculture and Forestry Resources

Agriculture and forestry resources are relevant to the project. There is no potential for significant negative impacts to agriculture and forestry resources. There is an expected positive impact to forestry resources.

The proposed fuel reduction activities would not convert lands from their current uses to other uses. The activities will consist of reducing brush, understory vegetation (ladder fuels) and surface fuels on forestland. Healthy, mature trees would not be removed and young vigorous trees in appropriate locations will benefit from the reduction of soil, water, and light competition.

Air Quality

Air quality is relevant to the project. There is no potential for significant negative impacts to air quality. There is an expected positive impact to air quality.

Vehicles and equipment for fuel reduction activities would emit diesel particulate matter and criteria air pollutants. In a typical day, it is assumed that worker trucks, chainsaw, chipper, and mechanical hand tools would operate for a few hours per crew. No tilling or grading activities that could generate fugitive dust emission would occur. Significant air quality impacts would not occur. The entire project is designed to reduce the negative effects of high severity wildfire including reducing the emissions associated with wildfire. Trees are more likely to survive wildfire where fuel reduction efforts have occurred which are then able to continue sequestering carbon dioxide.

Biological Resources

Biological resources are relevant to the project. There is no potential for significant negative impact to biological resources. Fuel reduction activities would maintain general habitat conditions in a native forest condition with similar habitat conditions as existed prior to the fuel reduction activities, however in a more resilient condition that would ensure greater habitat stability than existed prior to the fuel reduction activities.

No fuel reduction activities would occur that would significantly disturb rare plants. Project activities would not significantly disrupt nesting birds and bats during the reproduction period. Soil impacts

would be minimal due to efforts to minimize soil disturbance which will ensure soil organisms would not be significantly impacted. Significant impacts on biological resources would not occur.

Cultural and Historic Resources

Cultural and tribal cultural resources are relevant to the project. There is no potential for significant negative impacts to cultural and tribal cultural resources. Equipment and vehicles for the fuel reduction activities would operate from existing fire roads and trails adjacent to any cultural and historic sites.

Workers would participate in a cultural and historic resources training to identify features, such as midden, lithic scatter, foundation structure, and garbage heaps. Workers will halt work in the immediate areas upon such discovery until a survey is conducted by an archaeologist. Significant impacts on cultural resources and human remains would not occur.

Energy

The vehicles and equipment conducting the fuel reduction activities would consume energy, including gas, diesel, and motor oil. Vehicle engines and fuel used during implementation of the project would comply with State and local energy reduction and efficiency requirements. The use of fuel to implement the project would be minimal and the proposed fuel consumption would, additionally, be considered beneficial and not wasteful given the positive outcome of the work. Implementation of fuel reduction activities would not cause a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Geology

Fuels reduction activities would be implemented without new road construction or grading. Fuels reduction activities would be limited to hand thinning and piling. Only hand thinning and piling, which may include the use of cables from machinery outside of the sensitive or unstable areas, would be conducted on unstable and/or sensitive areas. Landslides and/or debris flows would not occur as the result of fuels reduction activities.

Greenhouse Gas Emissions

Fuels reduction activities would involve manual and mechanical vegetation removal within the fuel reduction treatment areas. Use of vehicles and equipment during these activities and vehicle travel to work areas would generate some greenhouse gas (GHG) emissions. The treatment of the biomass removed during fuel reduction activities will result in GHG emissions. Treatments may include hand piling and burning, including conservation burning, chipping, and scattering. Each option creates GHG emissions in varying degrees and each option has varying effects on the level of resilience provided to the treated forest. Project activities are designed to lower the risk of greater forest loss and reduce the risk of GHG emissions resulting from high severity wildfire in untreated conditions. The forest thinning would result in improved resiliency in the post-treatment stand and result in greater long term carbon sequestration. Significant greenhouse gas emission impacts would not occur.

Hazards and Hazardous Materials

Trucks, vehicles, and equipment are used for ongoing vegetation management. Vehicle and equipment use at work areas and vehicle travel to and from work areas could result in a minimal risk of accidental spills of fuels or lubricants from these vehicles. Workers handling hazardous materials are required to adhere to OSHA and Cal/OSHA health and safety requirements to protect workers. As part of the

project, prevention and response measures, would be implemented that would ensure that hazardous materials are properly stored on-site and that any accidental releases of hazardous materials would be quickly mitigated. Significant impacts related to hazards and hazardous materials would not occur.

Hydrology and Water Quality

Fuels reduction activities in riparian areas would be limited to hand thinning of small saplings (to 8" DBH) and the removal of biomass material using hand labor or cables extending from equipment from outside the riparian buffers or from existing road networks. No biomass material would be deposited with the bed, channel, or bank of a watercourse. No intense ground disturbance from the use of equipment would occur within the riparian buffer zones. The planned activities would not result in significant ground cover removal, that would otherwise result in sediment release, within the riparian buffer zones. In rare cases where bare soil is exposed, erosion control measures would be implemented. Significant hydrology and water quality impacts would not occur.

Land Use and Planning

Implementation of fuels reduction would not involve any conversion of existing land uses to new uses. All activities conducted would comply with local land use regulations and zoning policies. Significant land use changes would not occur.

Mineral Resources

Fuel reduction activities would not result in the loss of availability of a known mineral resource Fuels reduction would not alter land uses, access, or subsurface areas that could impact mineral resources.

Noise

The proposed fuel reduction activities would occur Monday-Saturday between 7:00am to 7:00pm and Sunday 8:00am to 4:00pm. The fuel reduction work would migrate spatially, limiting noise in any one location to a few hours. Measures to minimize noise disruption to nearby neighbors and sensitive receptors would be implemented, as needed. Exceedances of local noise standards would not occur.

Population and Housing

The workers implementing the fuel reduction activities are anticipated to be sourced locally. As such, this project would not induce population growth. No negative impact related to population and housing would occur. By reducing the risk of severe wildfire, the project is intended to have the positive impact of protecting houses that might otherwise be destroyed in a wildfire event.

Public Services

The project would not directly or indirectly induce population growth indirectly necessitating more public services. No new or altered governmental facilities would be needed to provide public services as a result of the project, and the project would not result in increased demand for public services. No impact related to public services would occur.

Recreation

Fuel reduction activities would be performed along the boundary of occupied structures and open space areas. The fuel reduction zones would be located within private recreational areas owned and managed by the landowners participating in the project. Work areas and trails that are accessible to the public and residents occupying the structures adjacent to the work areas may be closed for short durations during fuel reduction activities for safety purposes.

Most work areas are located off of trails where recreationalists would not be located. Although access to discrete areas that recreationalists may use could be unavailable or flagged off during vegetation management activities, the treatments would be for a short duration in one area, typically for only a few hours to a few days. Ample recreational opportunities are available within and surrounding the County of Lake that recreationalists could use if discrete areas are unavailable due to vegetation management activities. The project would not directly or indirectly induce population growth that could increase the use of recreational facilities. Significant recreational impacts would not occur.

Transportation

The project would occur in a rural area with minimal traffic and impacts to the transportation infrastructure. No significant traffic impacts would occur.

Utilities and Service Systems

Biomass generated from fuel reduction activities would be either chipped and scattered, piled and burned, or transported to a permitted facility for combustion or gasification. No impact related to utilities and services systems would occur.

Wildfire

The purpose of the project is to reduce fuel loads, which would reduce the spread and severity of a wildfire, should one occur and to provide defensible space for fire suppression crews to safely defend communities. As stated above, vegetation management crews would maintain fire suppression equipment (e.g., Pulaski axe, shovel, fire extinguisher) in work vehicles during activities that can generate sparks or heat. The project would not impair an adopted emergency response plan or evacuation plan. The project does not involve installation or maintenance of any infrastructure that could exacerbate fire risk. The project does not involve intense ground disturbing activities or off-road vehicle use that could result in downslope or downstream flooding or landslides should a wildfire occur.

CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER

Date: 1/3/2022

SOUTH COBB AREA

Forest Health & Fire Resilence Project

Appendix A. PROJECT MAP

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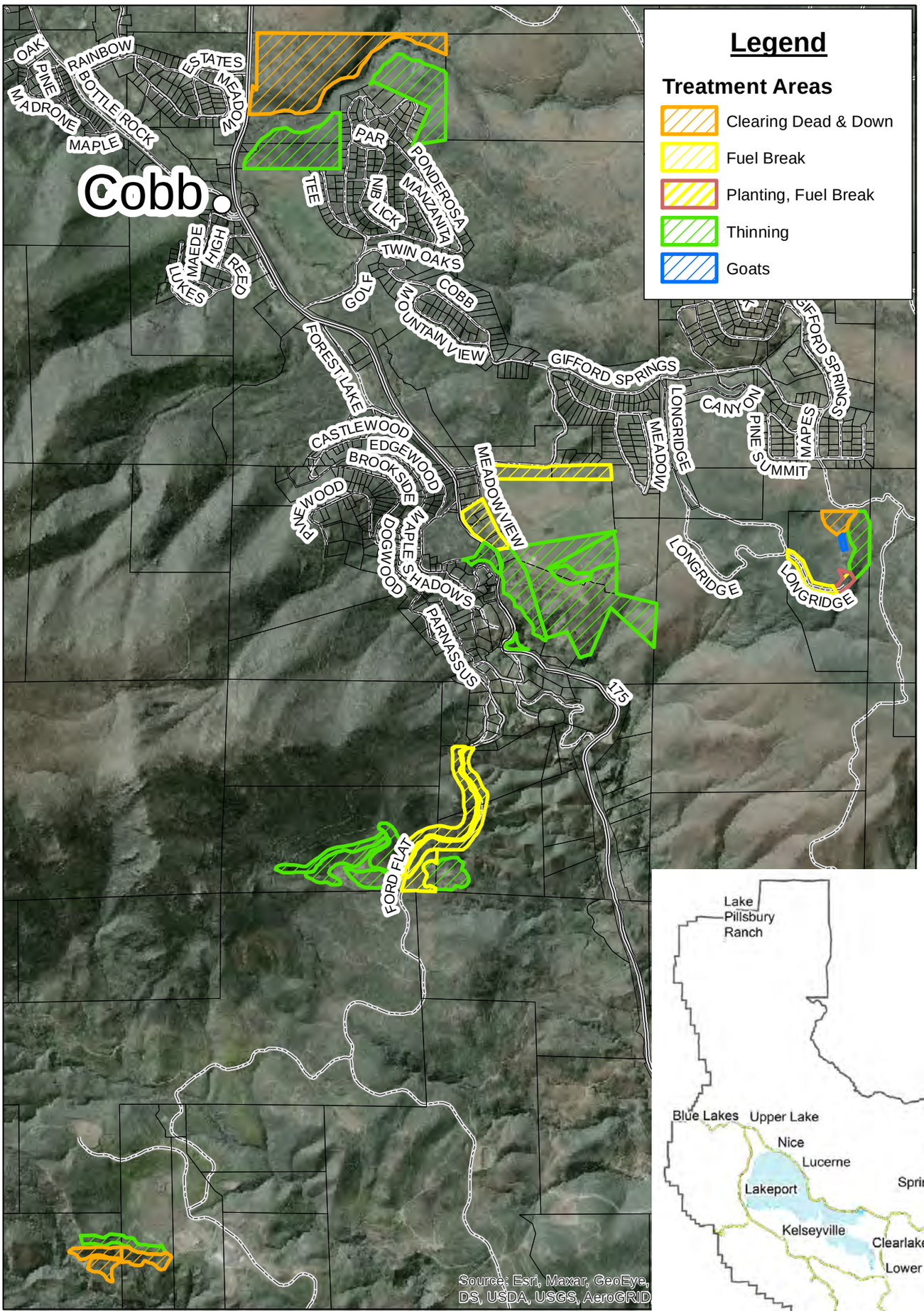


N W E S

Appendix A-1.
ADDRESS & PARCEL NUMBER LIST

ADDRESS	PARCEL NUMBER
16130 State Hwy 175	013-003-82
16210 State Hwy 175	013-036-18
16220 State Hwy 175	013-036-15
16250 State Hwy 175	013-036-12
10675 Gifford Springs Rd	013-038-19
17250 State Hwy 175	013-038-20
17110 State Hwy 175	050-254-01
17130 State Hwy 175	050-254-07
17129 Meadow View Wy	050-254-08
17170 State Hwy 175	050-254-06
17410 State Hwy 175	013-038-17
17211 State Hwy 175	050-281-05
11285 Mapes Pass	013-005-53
17655 Ford Flat Rd	013-039-02
17575 State Hwy 175	013-039-31
17825 Ford Flat Rd	013-039-18
17885 Ford Flat Rd	013-039-01
18935 Ford Flat Rd	013-005-20
18751 Ford Flat Rd	013-005-50

CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER

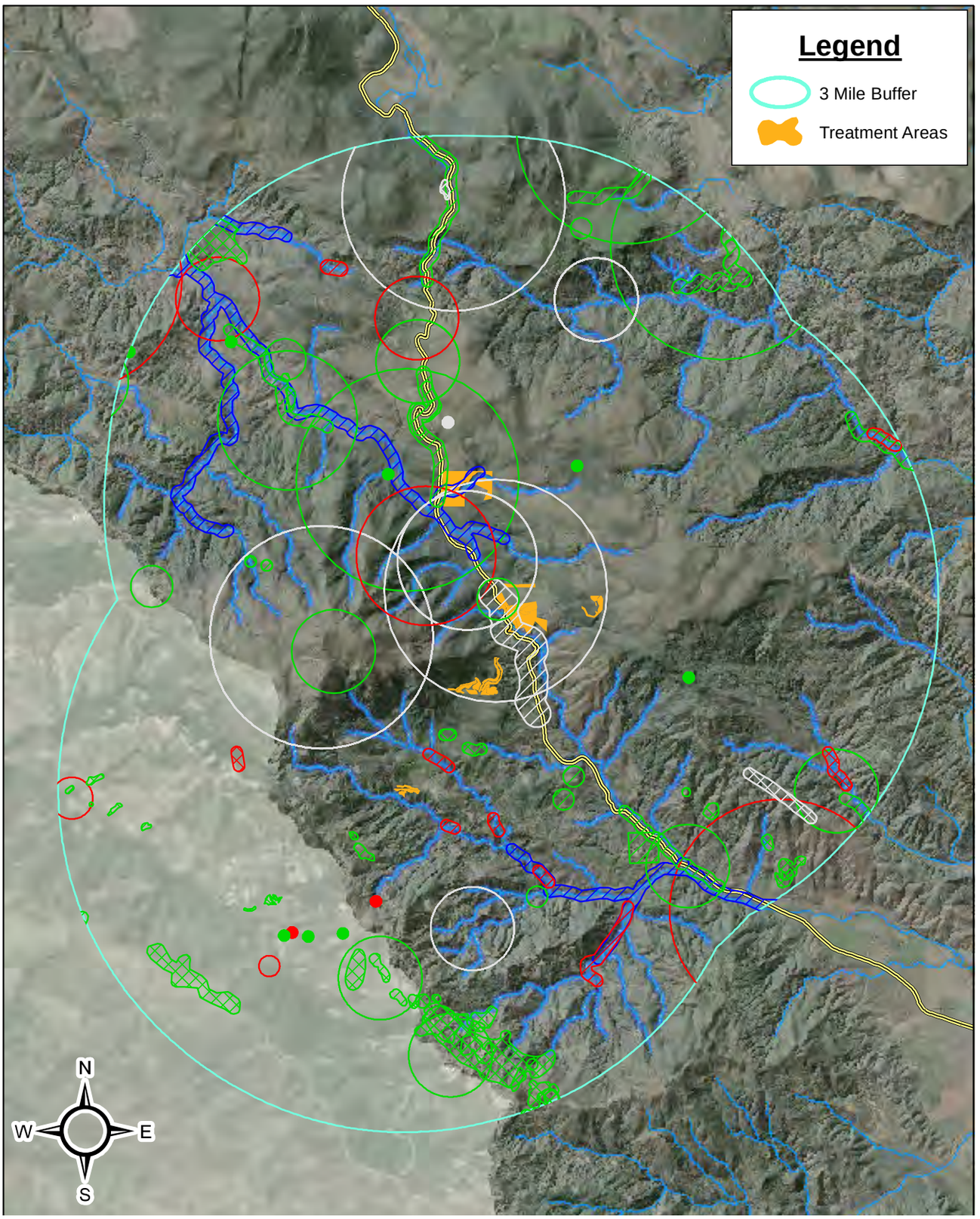
Date: 12/27/2021

SOUTH COBB AREA

Forest Health & Fire Resilience Project

Appendix B. DECEMBER 2021 CNDDB

0 0.5 1 2 Miles



CNDDB Key

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Aquatic Comm. (non-specific)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)

Appendix B-1.
SPECIAL STATUS SPECIES LIST

SOUTH COBB SENSITIVE PLANTS LIST						
SCIENTIFIC NAME	**COMMON NAME**	**CA RARE PLANT RANK**	**HABITAT TYPES**	**POTENTIAL TO OCCUR IN TREATMENT AREAS**	**POTENTIAL TO BE IMPACTED BY TREATMENT**	**BLOOM PERIOD**
Amsinckia lunaris	bent-flowered fiddleneck	1B.2	Coastal bluff scrub, cismontane woodland (openings), valley & foothill grassland, gravelly slopes. Often serpentine.	Low. There are small areas of valley grassland in serpentine areas.	Low. If work will happen during bloom period, surveys will be performed in areas where grassland is found in serpentine soils. If positive ID occurs, plants will be avoided.	March – June (annual)
Antirrhinum subcordatum	dimorphic snapdragon	4.3	Chaparral, lower montane coniferous forest. Gentle, open slopes on serpentine.	Low. There are small areas of chaparral on serpentine soils.	Low. If work will happen during bloom period, surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	April – July (annual)
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	1B.3	Woodland, chaparral, conifer forest, generally volcanic soils.	Moderate. Many areas of manzanita in treatment area.	Low. Bloom period surveys will be performed in areas with manzanita and if positive ID occurs, plant will be avoided.	January/March – May/July (perennial)
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	1B.1	Chaparral, Lower montane coniferous forest (openings). Rocky soils, often serpentine.	Moderate. Many areas of manzanita in treatment area.	Low. Bloom period surveys will be performed in areas with manzanita and if positive ID occurs, plant will be avoided.	February - April (perennial)

Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	1B.2	Grassy openings in chaparral and cismontane woodland, valley and foothill grassland; vertic clay, often serpentine.	Low. There are small areas of valley grassland in serpentine areas.	Low. If work will happen during bloom period, surveys will be performed in areas where grassland is found in serpentine soils. If positive ID occurs, the plants will be avoided.	March – June (annual)
Carex praticola	northern meadow sedge	2B.2	Moist to wet meadows, riparian edges, open forest.	None. Habitat does not occur in treatment area.	None.	May – July (perennial)
Ceanothus confusus	Rincon Ridge ceanothus	1B.1	Closed-cone coniferous forest, chaparral, pine/oak woodland. Volcanic slopes. Sometimes serpentinite.	Moderate. Closed-cone coniferous forest and chaparral both occur in treatment areas.	Low. Surveys will be performed in areas of potential habitats. If positive ID occurs, the plants will be avoided.	February – June (perennial)
Chlorogalum pomeridianum var. minus	dwarf soaproot	1B.2	Serpentine outcrops in chaparral.	Low. There are small areas of chaparral on serpentine soils.	Low. Surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	May – August (perennial)
Eriastrum brandegeeae	Brandegee's eriastrum	1B.1	Open flats of volcanic soils.	None. Habitat does not occur in treatment areas.	None.	April – August (annual)
Erigeron greenei	Greene's narrow-leaved daisy	1B.2	Chaparral (serpentinite, volcanic), woodland & conifer forest (generally serpentine, sometimes rocky alluvium)	Low. There are small areas of chaparral on serpentine soils, but no woodland on serpentine soils or rocky alluvium, in the treatment areas.	Low. Surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	May – September (perennial)

Eriogonum nervulosum	Snow Mountain buckwheat	1B.2	Chaparral. Serpentinite soils.	Low. There are small areas of chaparral on serpentine soils.	Low. Surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	June – September (perennial)
Eryngium constancei	Loch Lomond button celery	1B.1	Vernal pools.	None. Habitat does not occur in treatment areas.	None.	April – June (annual/perennial)
Grimmia torenii	Toren's grimmia	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Openings, rocky, boulder and rock walls, carbonate, volcanic.	Low to none. There are no rocky areas in treatment area.	None. No rocks will be disturbed by treatment.	N/A
Hesperolinon adenophyllum	glandular western flax	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Usually serpentinite. Found on exposed, south-facing slopes according to CNDDB.	Low. Some small areas of exposed, south-facing slopes on serpentine soils in treatment areas.	Low. Surveys will be performed if work will happen during bloom period. If positive ID occurs, plants will be avoided.	May – August (annual)
Hesperolinon bicarpellatum	two-carpellate western flax	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Open or partially-shaded grassy slopes. Usually volcanic.	None. Grassy slopes will not be treated.	None.	March – May (annual)

Imperata brevifolia	California satintail	2B.1	Wet springs, meadows, streambanks, floodplains.	None. Habitat does not occur in treatment areas.	None.	September – May (perennial)
Layia septentrionalis	Colusa layia	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandy or serpentine soils.	Low. There are small areas of chaparral on serpentine soils.	Low. If work occurs during bloom period, surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	April – May (annual)
Lupinus sericatus	Cobb mountain lupine	1B.2	Open wooded slopes, broadleaf upland forest, chaparral, lower montane conifer forest.	Moderate. Chaparral and lower montane conifer forest occur in treatment areas.	Low. Surveys will be performed. If positive ID occurs, plants will be avoided.	March – June (perennial)
Mielichhoferia elongata	elongate copper moss	4.3	Coniferous forest, broadleafed upland forest, chaparral, cismontane woodland, meadows and seeps, coastal scrub. Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate.	Low to none. No vernally mesic habitat in treatment areas.	None. Rocks will not be disturbed by treatments.	N/A
Navarretia leucocephala ssp. bakeri	Baker's navarretia	1B.1	Vernal pools.	None. Habitat does not occur in treatment areas.	None.	April – July (annual)

Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	1B.1	Vernal pools (volcanic ash).	None. Habitat does not occur in treatment areas.	None.	May – June (annual)
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	1B.2	Vernal pools.	None. Habitat does not occur in treatment areas.	None.	May – June (annual)
Panicum acuminatum var. thermale	Geysers panicum	1B.2	Peaty meadows and pockets, geothermally-altered soil. Closed-cone coniferous forest, riparian forest, valley and foothill grassland.	None. Peaty soil does not occur in treatment areas.	None.	June – August (annual/perennial)
Penstemon newberryi var. sonomensis	Sonoma beardtongue	1B.3	Chaparral (rocky), outcrops, talus.	Low to none. No rock outcrops in treatment area. Preliminary field visits do not show rocky chaparral.	Low to none. Crew will be trained to identify plant and avoid.	April – August (perennial)
Sedella leiocarpa	Lake County stonecrop	1B.1	Dry vernal pools, rocky depressions.	None. Habitat does not occur in treatment areas.	None.	June/July – August (perennial)
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	1B.2	Wet soil near streambanks, meadows.	None. Habitat does not occur in treatment areas.	None.	June/July – August (perennial)
Streptanthus brachiatus ssp. brachiatus	Socrates Mine jewelflower	1B.2	Closed-cone coniferous forest, chaparral. Serpentine soils and serpentine barrens.	Low. There are small areas of chaparral on serpentine soils.	Low. Surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	May – June (perennial)
Streptanthus brachiatus ssp. hoffmanii	Freed's jewelflower	1B.2	Serpentinite soils, especially serpentine barrens. Open	Low. There are small areas of chaparral on serpentine soils.	Low. Surveys will be performed where serpentine chaparral is	May – July (perennial)

			Chaparral, open cismontane woodland.		found. If positive ID occurs, plants will be avoided.	
Streptanthus hesperidis	green jewelflower	1B.2	Serpentine barrens, associated openings in chaparral/oak woodlands, cypress woodland.	Low. Surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	Low. If work is planned during bloom period, surveys will be performed where serpentine chaparral is found. If positive ID occurs, plants will be avoided.	May – July (annual)

SOUTH COBB SENSITIVE ANIMALS LIST

SC IENTIFIC NAME	COMMON NAME	STATE RANK	HABITAT TYPES	POTENTIAL TO OCCUR IN TREATMENT AREAS	POTENTIAL TO BE IMPACTED BY TREATMENT
Antrozous pallidus	pallid bat	S3	Tree cavities (oak, ponderosa pine, coast redwood, giant sequoia), rock crevices, old buildings, bridges, caves, mines. Usually forage in open oak woodland, but also in forested canyons.	Moderate. Rocks and old structures do not occur in the treatment area, though tree cavities likely do. Preferred forage area exists in treatment area as well.	Low to none. Bat roosting protocol will be followed as outlined in the document. Work will not occur at dawn or dusk, when bats tend to forage.
Bombus occidentalis	western bumble bee	S1	Nest sites are primarily in underground cavities, often on open west-southwest slopes.	Moderate. Flowering brush exists in treatment areas.	Low to none. Treatment will not collapse underground cavities. Bees can move to outside the treatment area while treatments are taking place.
Corynorhinus townsendii	Townsend's big-eared bat	S2	Roosts in caves and cave analogues, like old mine workings.	Low. No caves or mines in treatment area. Many	Low to none. Nesting habitat does not exist in treatment areas. Work will not occur at dawn or dusk, when bats tend to forage.

			Prefer foraging in edge habitat and open areas over wooded habitat.	treatment areas are wooded, but a few are brush.	
Dicamptodon ensatus	California giant salamander	S2S3	Mesic coastal forests and coastal chaparral habitat.	None. Coastal habitat does not exist in treatment areas.	None.
Lasiurus blossevillii	western red bat	S3	Edge habitat adjacent to streams and open fields. Roost primarily in orchards and mature riparian trees (ie cottonwood).	None. Habitat does not occur in treatment areas.	None.
Lasiurus cinereus	hoary bat	S4	Deciduous and coniferous forests and woodlands with open flying room below, often at the edge of clearings.	Low. Coniferous forest and woodland occurs in treatment areas but it has heavy undergrowth that may block bats.	Low to none. Bat roosting protocols will be followed as outlined in this document. Thinning ladder fuels and understory vegetation may improve bat habitat by providing more open spaces below trees.
Myotis evotis	long-eared myotis	S3	Roosts in buildings, crevices, spaces under bark, and snags. Feeds in edge habitat, in open habitat, and over water.	Low. Edge habitat occurs in treatment areas, as do snags, but no open habitat or water.	Low to none. Bat roosting protocols will be followed as outlined in this document. Snags with exemplary habitat qualities, such as cat eyes and hollow trunks, will be saved unless they present a significant hazard.
Myotis thysanodes	fringed myotis	S3	Dry habitats where open areas are interspersed with mature forests – ex. Ponderosa pine or oak. Roost in caves, underground mines, buildings, and	Low. Most treatment areas have been logged consistently so they are not “mature”. Roosting habitat, except for snags, does not occur in treatment areas.	Low to none. Bat roosting protocols will be followed as outlined in this document. Snags with exemplary habitat qualities, such as cat eyes and hollow trunks, will be saved unless they present a significant hazard.

			sometimes large, hollow snags.		
Progne subis	Purple martin	S3	Occur in CA from March – September. Nesting season May to mid-August. Nest in conifer snags, bridges, utility poles, sometimes buildings. Usually nest near large wetlands or bodies of water.	Low. Potentially could nest in some conifer snags in the treatment areas, but treatment areas are not very close to large wetlands or bodies of water.	Low. Nesting bird protocols will be followed as outlined in this document. Nesting season is generally outside of treatment season. Snags with exemplary habitat qualities will be preserved unless they present a significant hazard.
Rana boylii	foothill yellow-legged frog	S3	Primarily stream-dwelling. Requires shallow, flowing water with some cobble-sized substrate.	None. Habitat does not occur in treatment area.	None.
Rana draytonii	California red-legged frog	S2S3	Aquatic habitat.	None. Habitat does not occur in treatment area.	None.
Taricha rivularis	red-bellied newt	S2	Redwood forests, tan oak, douglas fir, madrone. Breed in moderate to fast-flowing mountain streams with rocky bottoms.	None. Habitat does not occur in treatment area.	None.

CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER

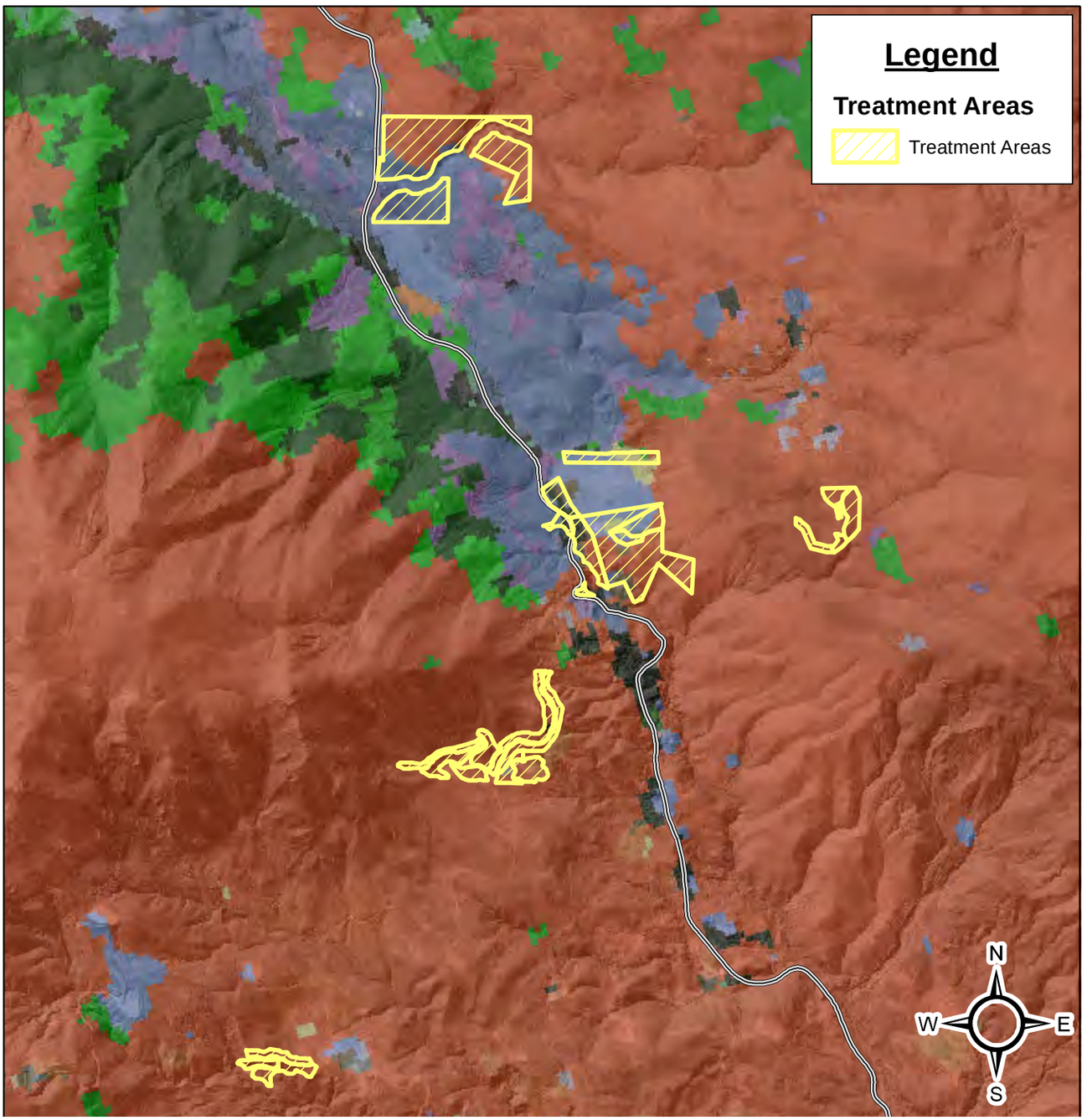
SOUTH COBB AREA

Forest Health & Fire Resilence Project

Appendix B-2. LANDFIRE MAP

0 0.275 0.55 1.1 Miles

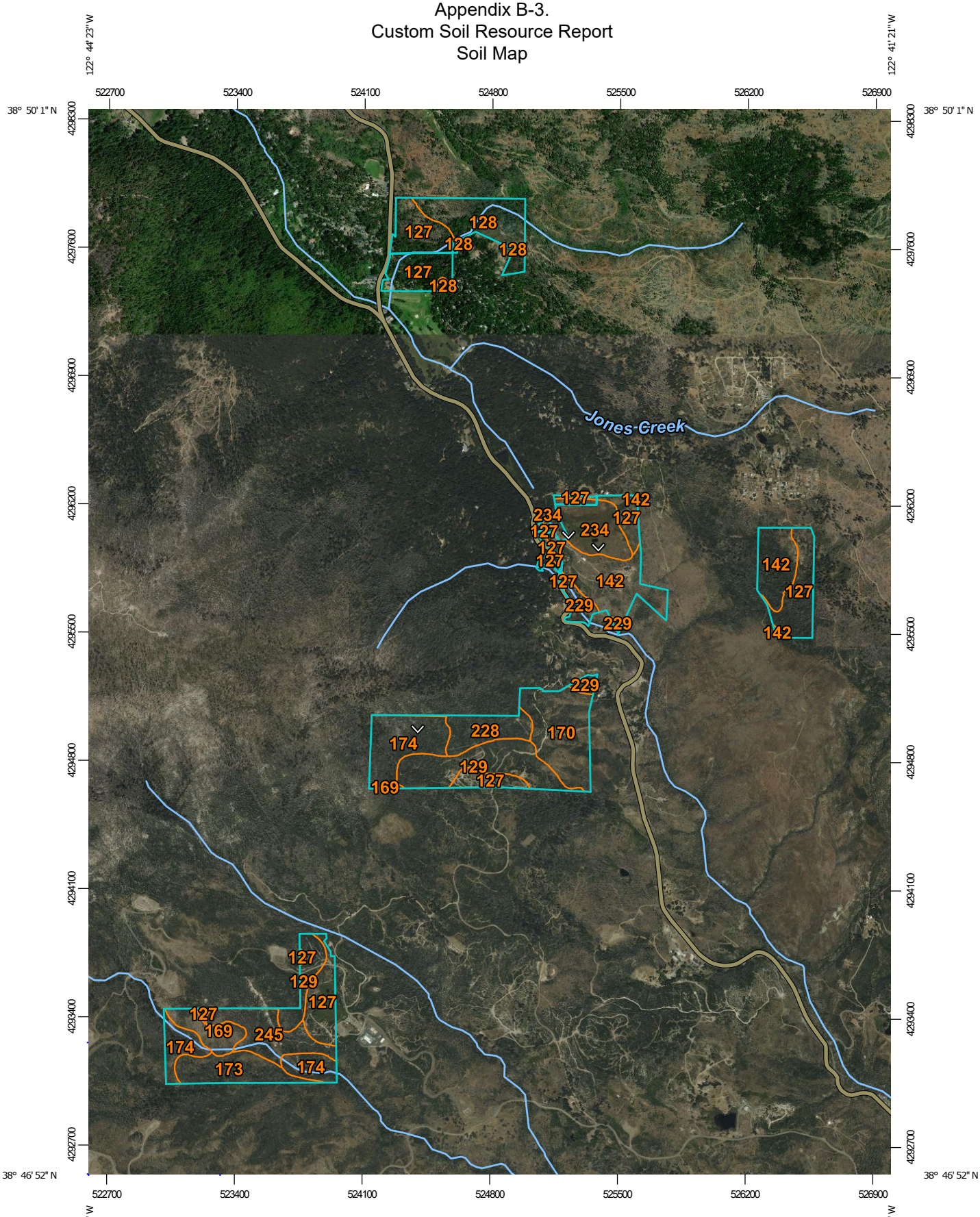
Date: 1/3/2022



Landfire 2016 Vegetation Type

- Mediterranean California Dry-Mesic Mixed Conifer Forest and Woodland
- Mediterranean California Mixed Oak Woodland
- Mediterranean California Lower Montane Conifer Forest and Woodland
- Mediterranean California Mixed Evergreen Forest
- Northern and Central California Dry-Mesic Chaparral
- California Lower Montane Foothill Pine Woodland and Savanna
- California Central Valley and Southern Coastal Grassland
- California Mesic Serpentine Grassland
- California Northern Coastal Grassland
- Recently Logged-Herb and Grass Cover
- Recently Burned-Herb and Grass Cover
- Recently Burned-Shrub Cover
- Recently Disturbed Other-Herb and Grass Cover
- Mediterranean California Lower Montane Black Oak Forest and Woodland
- Mediterranean California Lower Montane Black Oak-Conifer Forest and Woodland
- Open Water
- Developed-Low Intensity
- Developed-Roads
- Western Cool Temperate Urban Deciduous Forest
- Western Cool Temperate Urban Evergreen Forest
- Western Cool Temperate Urban Mixed Forest
- Western Cool Temperate Urban Herbaceous
- Western Cool Temperate Urban Shrubland
- Western Cool Temperate Developed Ruderal Deciduous Forest
- Western Cool Temperate Developed Ruderal Evergreen Forest
- Western Cool Temperate Developed Ruderal Mixed Forest
- Western Cool Temperate Developed Ruderal Shrubland
- Western Cool Temperate Developed Ruderal Grassland
- Western Cool Temperate Developed Ruderal Mixed Forested Wetland
- Western Cool Temperate Developed Ruderal Shrub Wetland
- Western Cool Temperate Developed Ruderal Herbaceous Wetland
- Central California Coast Ranges Cliff and Canyon
- Mediterranean California Foothill and Lower Montane Riparian Woodland
- Temperate Pacific Subalpine-Montane Wet Meadow
- California Ruderal Grassland and Meadow

Appendix B-3.
Custom Soil Resource Report
Soil Map



Map Scale: 1:28,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 400 800 1600 2400

Feet
0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County, California
Survey Area Data: Version 18, Sep 6, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 18, 2016—Jul 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Appendix C.
Emergency Contact List

Emergency response and report information:

1. Immediately call 9-1-1 for all emergencies.

2. Location:

3a. After reporting the need for an emergency response, reach out **until the first contact** is made, in the order below, to the following people in the delineated order.

1	Carolyn Ruttan	Senior Program Manager	CLERC	
2	Teresa Mayorga	Administrative Manager	CLERC	
3	Laurel Bard	Fire & Forestry Project Coordinator	CLERC	
4	Tom Bendure	Forester	DSF	
5	Will Evans	Executive Director	CLERC	
6	John Nickerson	Forester	DSF	

4. Contacted person (above) is to ensure:
   A. All personnel onsite are safe. If not, call 911 and maintain contact with personnel.
      a. Get a description of their location and access to their location.
   B. In the event of fire, landowner is contacted. (To be filled out for each project)

Landowner Contact Information

*	Name	Phone number	Notes
1			
2			
3			
4			

   C. In the event of a spill, contractor is contacted. (To be filled out for each project)

*	Name	Phone number	Notes
1			