Lake County Forest Health & Fire Resilience Project Phase 1 Saratoga Springs Area

The project area was partially burned by the Mendocino Complex Fire, and dead vegetation that remains after the fire could act as hazard fuel in future fires. The purpose of the project is to reduce fuel loads to lessen wildfire risk in priority areas that protect structures, enhance security along evacuation routes, provide improved opportunity and safety for fire suppression, and improve overall forest resilience to wildfire and pests, which are increasingly threatening due to drought and other effects related to climate change. The work will be entirely carried out by hand. Some material will be chipped on established roads and broadcast.

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: 10243 & 9943 Saratoga Springs Rd. APN 00301301 & 00302701. See attached Project Map in *Appendix A.*

Project Size: 24.75 acres

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 Mendocino Complex Fire (declared emergency July 28, 2018).

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 hand 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 by hand 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 Habematolel Pomo of Upper Lake, 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 informal objections to the treatment plan.

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 favorable habitat for annual plants, masticator work and hand work may occur outside of the bloom period. After the initiation of the bloom period, management activities can only occur following a floristic survey, conducted under the guidance of a qualified botanist, within the area of favorable habitat. Once the survey has been completed, the area where the plants are found will be flagged for exclusion until they have gone through the reproduction cycle. If no rare plants are present, all fuels reduction activities can be used.

Where favorable plant habitat may exist for perennial plants, no fuel reduction operations can occur until the plant can be properly identified. Once identified, individual plants will be flagged or when in a group, a 5-foot avoidance buffer will be flagged around the sensitive species, in order for fuel reduction activities to avoid disturbing the plants.

Where favorable habitat is identified for any of the animals identified in the CNDDB search, an assessment will be made whether the habitat quality could be impacted by the fuel reduction activities within the treatment areas. If a determination is made that habitat quality could be negatively impacted by the treatment activities, the activities will be changed to the point that they will not cause the impact, including complete avoidance of critical areas.

Nesting Bird Avoidance

Nesting birds may be disrupted by operations that involve chainsaw activities for hand-thinning work. 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.

0 0.03 0.06 0.12 Miles

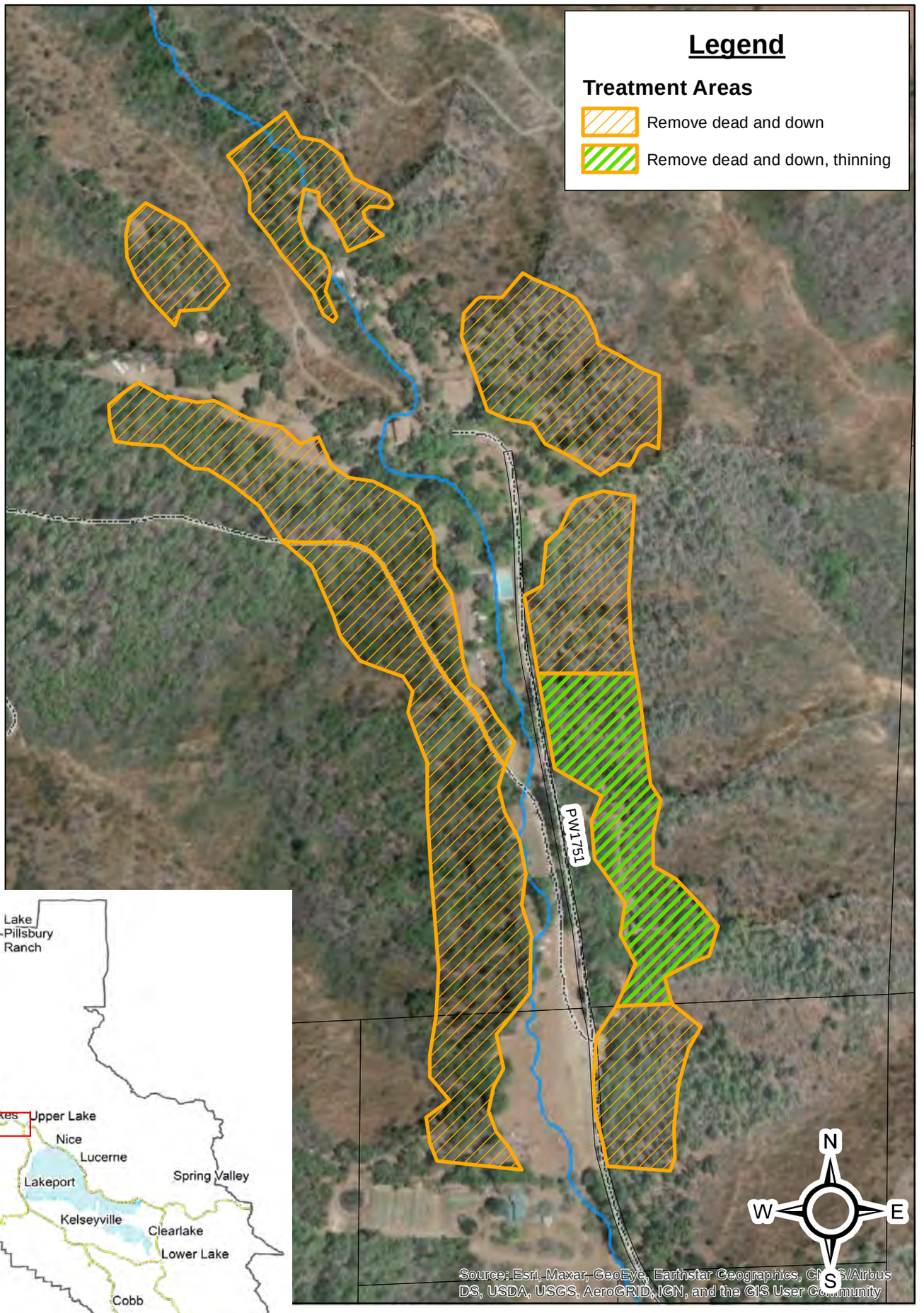
SARATOGA SPRINGS

Forest Health & Fire Resilience Project

Appendix A. PROJECT MAP

CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER

Date: 1/2/2022



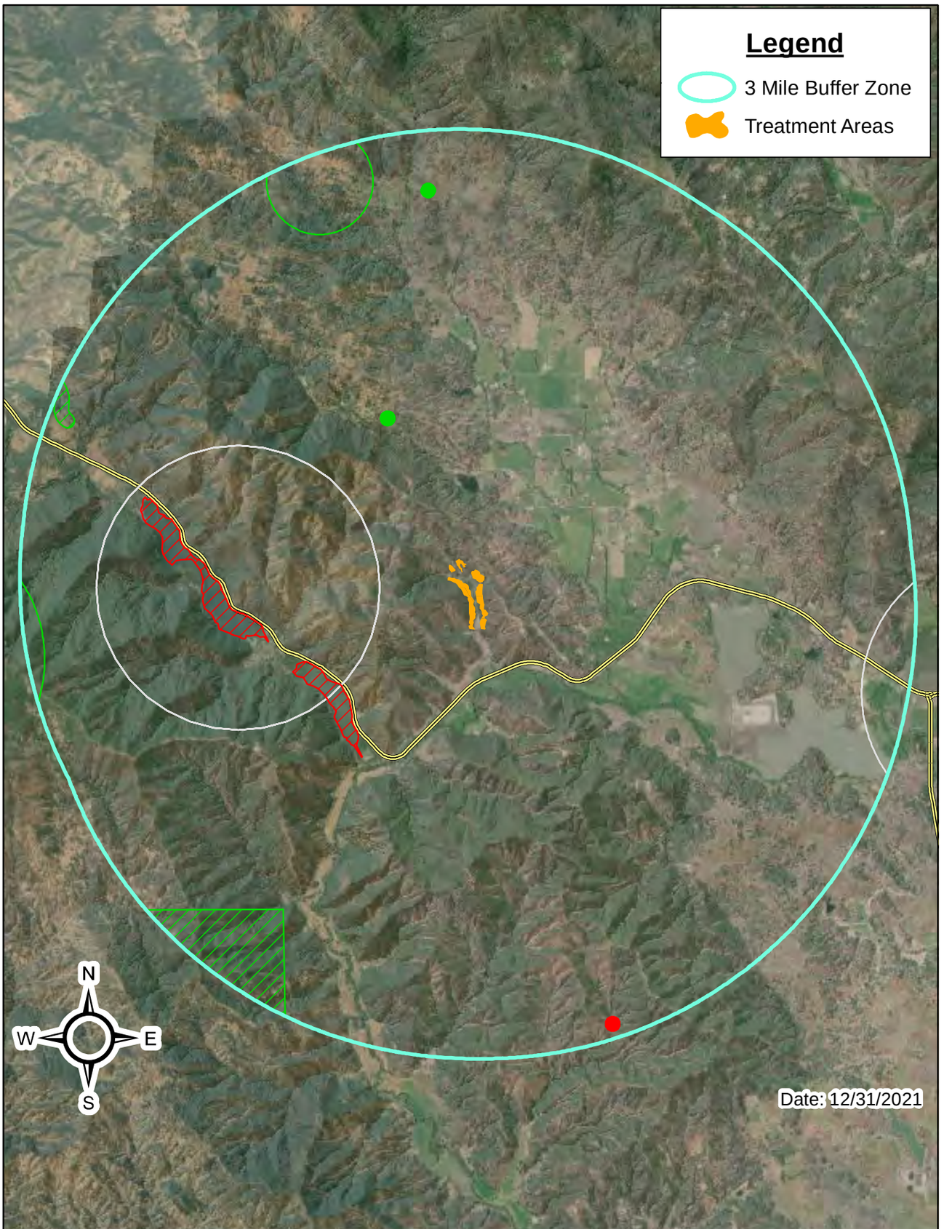
0 0.5 1 2 Miles

SARATOGA SPRINGS

Forest Health & Fire Resilience Project

Appendix B. DECEMBER 2021 CNDDB SEARCH RESULTS

CLEAR LAKE ENVIRONMENTAL RESEARCH CENTER



CNDDB KEY

Plant (80m)

Plant (circular)

Animal (non-specific)

Plant (non-specific)

Animal (80m)

Multiple (circular)

Appendix B-1.
Special Status Species List

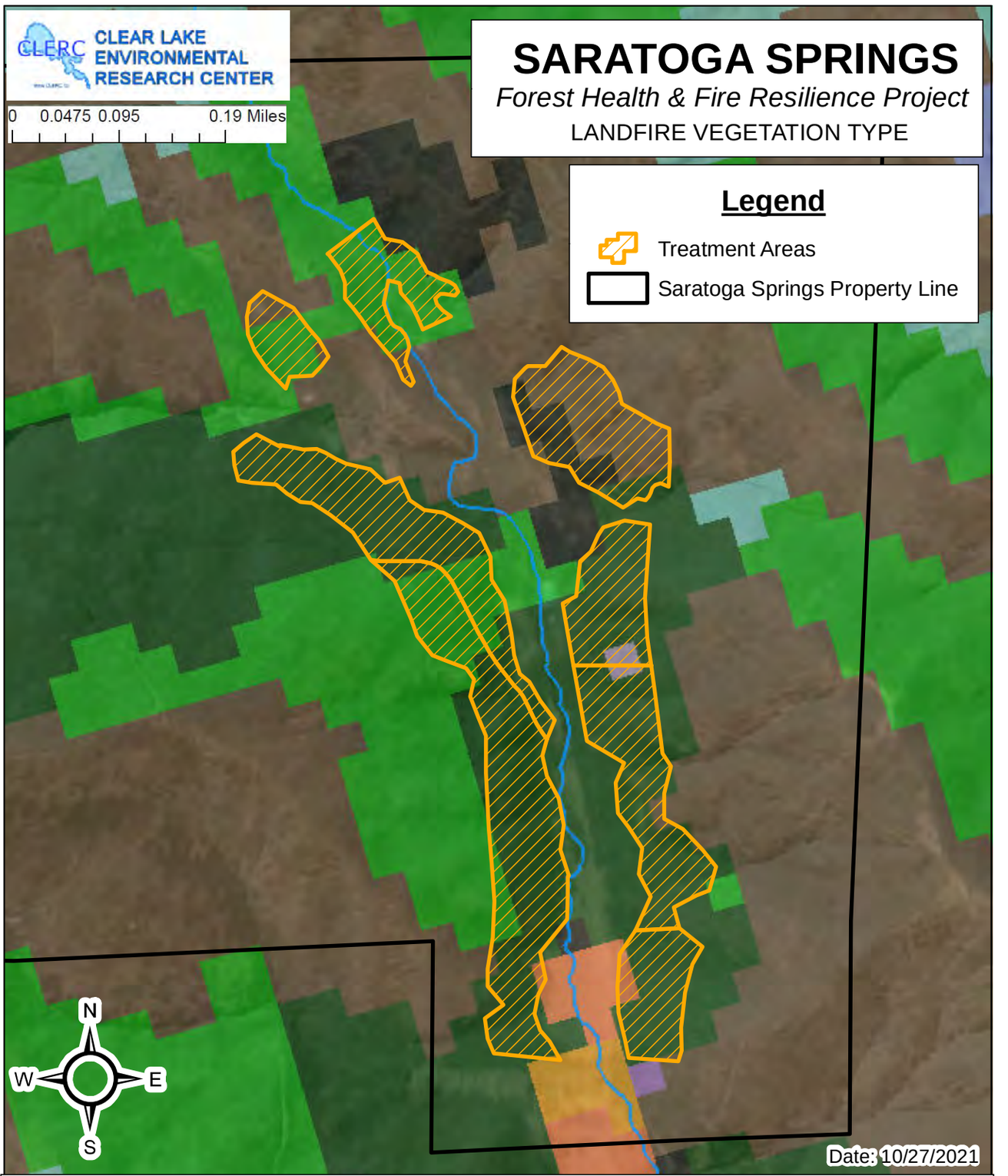
SARATOGA SPRINGS SENSITIVE PLANTS LIST						
SCIENTIFIC NAME	**COMMON NAME**	**CA RARE PLANT RANK**	**HABITAT TYPES**	**POTENTIAL TO OCCUR IN TREATMENT AREAS**	**POTENTIAL TO BE IMPACTED BY TREATMENT**	**BLOOM PERIOD**
Arctostaphylos manzanita ssp. *elegans*	Konocti manzanita	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Usually volcanic soils.	Low to none. Work primarily occurs in closed canopy forest and woodland.	Low to none. Preliminary field surveys did not find any manzanita in project area. Should manzanita be encountered, floristic survey will ensue and plant will be avoided if a positive ID occurs.	March - May (perennial)
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	1B.1	Chaparral, Lower montane coniferous forest (openings). Rocky soils, often serpentine.	Low to none. Work primarily occurs in closed canopy forest and woodland.	Low to none. Preliminary field surveys did not find any manzanita in project area. Should manzanita be encountered, floristic survey will ensue and plant will be avoided if a positive ID occurs.	February - April (perennial)
Brasenia schreberi	watershield	2B.3	Freshwater marshes and swamps, ponds, slow streams.	None. Habitat does not occur in treatment area.	None.	June – September (perennial aquatic)
Calycadenia micrantha	small-flowered calcydenia	1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland. Sparsely vegetated areas; roadsides, rocky soils, scree, serpentinite (sometimes), talus. Found in open, sunny sites.	Low to none. Work primarily occurs in closed canopy forest and woodland.	Low to none. Bloom period occurs mostly outside of treatment season. Should roadside work occur during bloom period, floristic survey will ensue and plant will be avoided if a positive ID occurs.	June - September (annual)

Carex comosa	bristly sedge	2B.1	Coastal prairie, marshes and swamps, valley and foothill grassland.	None. Habitat does not occur in treatment area.	None.	May – September (perennial)
Fritillaria purdyi	Purdy's fritillary	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest. Usually serpentinite.	Low. No serpentine soils in treatment area.	Low. Crew will be trained to recognize and avoid plant should one occur in non-serpentine soils.	March – June (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. Work primarily occurs in closed canopy forest and woodland. This species was not found on the property in a survey by CalNPS in 2018.	None. No rocks will be disturbed over the course of the project.	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 to none. No serpentine soils in treatment area. Work primarily occurs in closed canopy forest/woodland. This species was not found on the property in a survey by CalNPS in 2018.	Low to none. If work occurs during the bloom period, crews will be trained to recognize and avoid plant in the unlikely event that one occurs in non-serpentine soils.	May – August (annual)
Streptanthus glandulosus ssp. hoffmanii	Hoffman's bristly jewelflower	1B.3	Chaparral, cismontane woodland, valley and foothill grassland (often serpentinite). Rocky areas. Serpentine outcrops.	Low to none. Work primarily occurs in closed canopy forest and woodland, and not in rocky soils. This species was not found on the property in a survey by CalNPS in 2018.	Low to none. Crew will be trained to recognize and avoid plant in the unlikely event that one occurs in non-rocky, non-serpentine soils.	March – July (annual)

SARATOGA SPRINGS SENSITIVE ANIMALS LIST

SC IENTIFIC NAME	COMMON NAME	STATE RANK	HABITAT TYPES	POTENTIAL TO OCCUR IN TREATMENT AREAS	POTENTIAL TO BE IMPACTED BY TREATMENT
Bombus occidentalis	western bumble bee	S1	Nest sites are primarily in underground cavities, often on open west-southwest slopes.	Low. Treatment areas are in closed canopy forests/woodland that does not support many flowering plants.	Low to none. Treatment activities will not cause ground disturbance or collapse of underground cavities. Not many flowering plants grow in treatment areas.
Emys marmorata	western pond turtle	S3	Ponds, lakes, rivers, streams, creeks, marshes, irrigation ditches, with abundant vegetation and rock/muddy bottoms.	None.	None.
Gonidea angulata	Western ridged mussel	S1S2	Fish-bearing, permanently inundated watercourses, rivers, lakes, and reservoirs.	None.	None.
Hysterocarpus traskii lagunae	Clear Lake tule perch	S2S3	Warm, turbid lakes; exclusively, Lower & Upper Blue Lakes, Clear Lake	None.	None.

Appendix B-2.
Landfire Vegetation Type



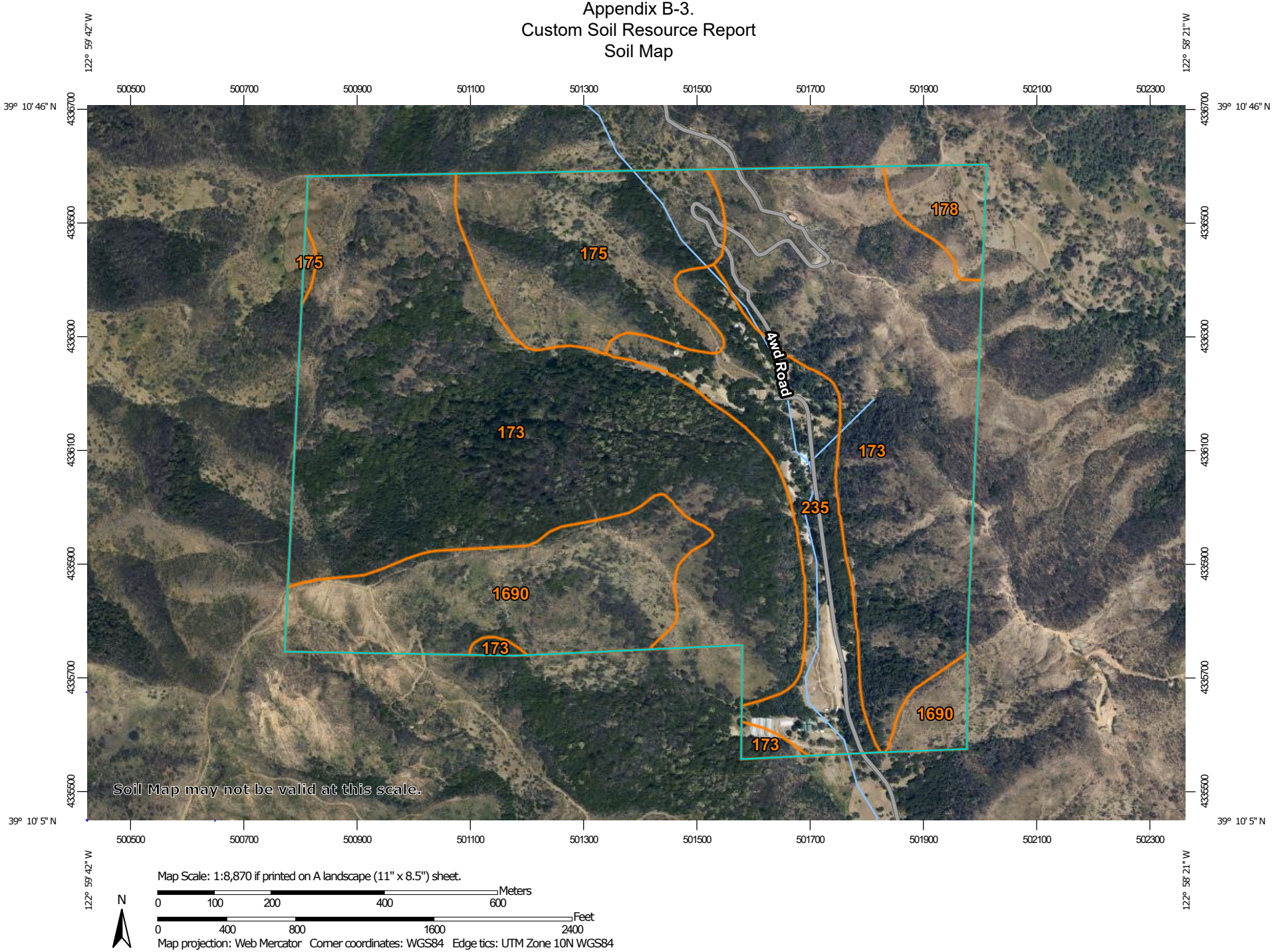
LANDFIRE VEGETATION TYPE 2016

LandFire - Vegetation Type (2016)

Value

- 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
- Developed-Roads
- Temperate Pacific Freshwater Emergent Marsh
- Western Cool Temperate Urban Evergreen Forest
- Western Cool Temperate Urban Mixed Forest
- Western Cool Temperate Urban Herbaceous
- Western Cool Temperate Developed Ruderal Grassland
- Western Cool Temperate Fallow/Idle Cropland
- California Ruderal Grassland and Meadow

Appendix B-3.
Custom Soil Resource Report
Soil Map



Map Scale: 1:8,870 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 400 800 1600 2400

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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: May 5, 2019—Jun 3, 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	707-295-0333
2	Teresa Mayorga	Administrative Manager	CLERC	707-850-0650
3	Laurel Bard	Fire & Forestry Project Coordinator	CLERC	831-295-4989
4	Tom Bendure	Forester	DSF	707-349-6750
5	Will Evans	Executive Director	CLERC	678-425-8970
6	John Nickerson	Forester	DSF	707-489-2443

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			