NATIVE TREE AND OAK TREE REPORT

TOPANGA ELEMENTARY SCHOOL

22075 Topanga School Road
Topanga, CA 90290
APN: 4445-004-900, 4445-005-902

and

TOPANGA STATE PARK

APN: 4438-029-901, 4445-004-903, 4445-004-903, 4445-004-901, 4438-029-900

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Revised 1 June 2023
Revised 7 May 2025
Revised 27 October 2025

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CERTIFICATION OF ACCURACY OF REPORT

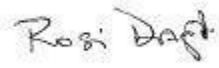
This report provides technical information regarding Native Tree resources to the County of Los Angeles Department of Regional Planning as part of its environmental review of the proposed habitat restoration and fuel modification project at 22075 Topanga School Road (12.25 acres) in Topanga, California (see below for parcel information). The school had been subject to Code Enforcement Case Number: RPCE2020002177 Notice of Violation of the Coastal Zone Provisions of Title 22 of the County Code dated 2 July 2020. The property is located in unincorporated Los Angeles County, within the Santa Monica Mountains Local Coastal Zone, and is owned and managed by Los Angeles Unified School District (LAUSD). The impacted area is on the north/northwest portion of the school property and encompasses approximately 4.75 acres and is commonly referred to as the "Nature Area". The impacts addressed in the violation also involved parcels owned by California State Parks (see below).

APN: 4445-004-900	TES	Northerly school property
APN: 4445-005-902	TES	Southerly school property
APN: 4445-004-903	CSP	North of school
APN: 4445-004-901	CSP	West of school (small parcel)
APN: 4438-029-900	CSP	West of school (small parcel)
APN: 4438-029-901	CSP	West of school

The findings contained herein are based on the following: a review of site plans and other materials provided by the client (LAUSD); the Santa Monica Mountains Local Coastal Plan (LCP), including the Land Use Plan (LUP) and Local Implementation Program (LIP); and GIS mapping and spatial analysis provided by LAUSD, performed by MONARCH Environmental, and Courtney McCammon of CJ Biological.

The proposed project consists of documenting the extent of Native Tree and Oak impacts and removals done in Spring 2020 under violation, and proposes appropriate mitigations and Best Management Practices (BMP) to restore the damaged areas and avoid problems in the future.

This Native Tree and Oak Report presents a true and accurate statement of the condition of the natural resources found at 22075 Topanga School Road, Topanga, Los Angeles County, California on the dates of our site visits between 29 March and 18 May 2021, as well as our follow up visits in April-May 2023 to recheck tree conditions and complies with the requirements of the Santa Monica Mountains Local Coastal Plan criteria.



Rosi Dagit, Certified Arborist #1084

Project Summary

This report provides required information needed for Los Angeles Unified School District (LAUSD) to address Code Enforcement Case Number: RPCE2020002177 Notice of Violation of the Coastal Zone Provisions of Title 22 of the County Code dated 2 July 2020. This report has been revised based on comments from LA County Department of Regional Planning.

Violations

The violations noted include:

1. Development (unpermitted vegetation removal and grading) as defined in the Santa Monica Mountains Local Coastal Program has occurred on the premises without approval from the Department of Regional Planning – 22.44.800; 22.44.810; 22.44.1780; 22.44.1920(A).

2. Development (unpermitted vegetation removal and grading) within protected H1, H1Buffer, and H3 Habitat categories has occurred on the premises without approval from the Department of Regional Planning – 22.44.1900(A), 22.44.1910(A); 22.44.1910(C).

3. Damage and/or removal of one or more protected oak trees (multiple oak trees cut and removed) has occurred on the premises without approval from the Department of Regional Planning – 22.44.950(A); 22.44.950(B).

4. Encroachment and or endangerment of one or more protected oak trees (multiple oak trees cut and removed) has occurred on the premises without approval from the Department of Regional Planning – 22.44.950(A); 22.44.950(B)(2); 22.44.950(B)(3).

A fuel modification plan, native tree and habitat restoration planting plan, mitigation and monitoring plan have also been required in order to address these violations. This report documents the condition of the native trees and oak woodlands that will be used to inform the additional plan documents required.

Purpose and Use of Report

The purpose of this report is to provide all information needed to meet the requirements of the Los Angeles County Oak Tree Protection Ordinance and the Los Angeles County Oak Woodlands Conservation Management Plan related to implementing the projects described in the CUP. Mitigation recommendations incorporate those required by both Los Angeles County and State Parks. The initial data collected in 2021 has been updated to reflect conditions in 2023.

Site Description

The project site is located on several parcels located at the west end of the Topanga Elementary School property. Topanga School Road dead-ends into the property and is accessed from Topanga Canyon Blvd. (State Highway 27) as shown in **Figure 1**.

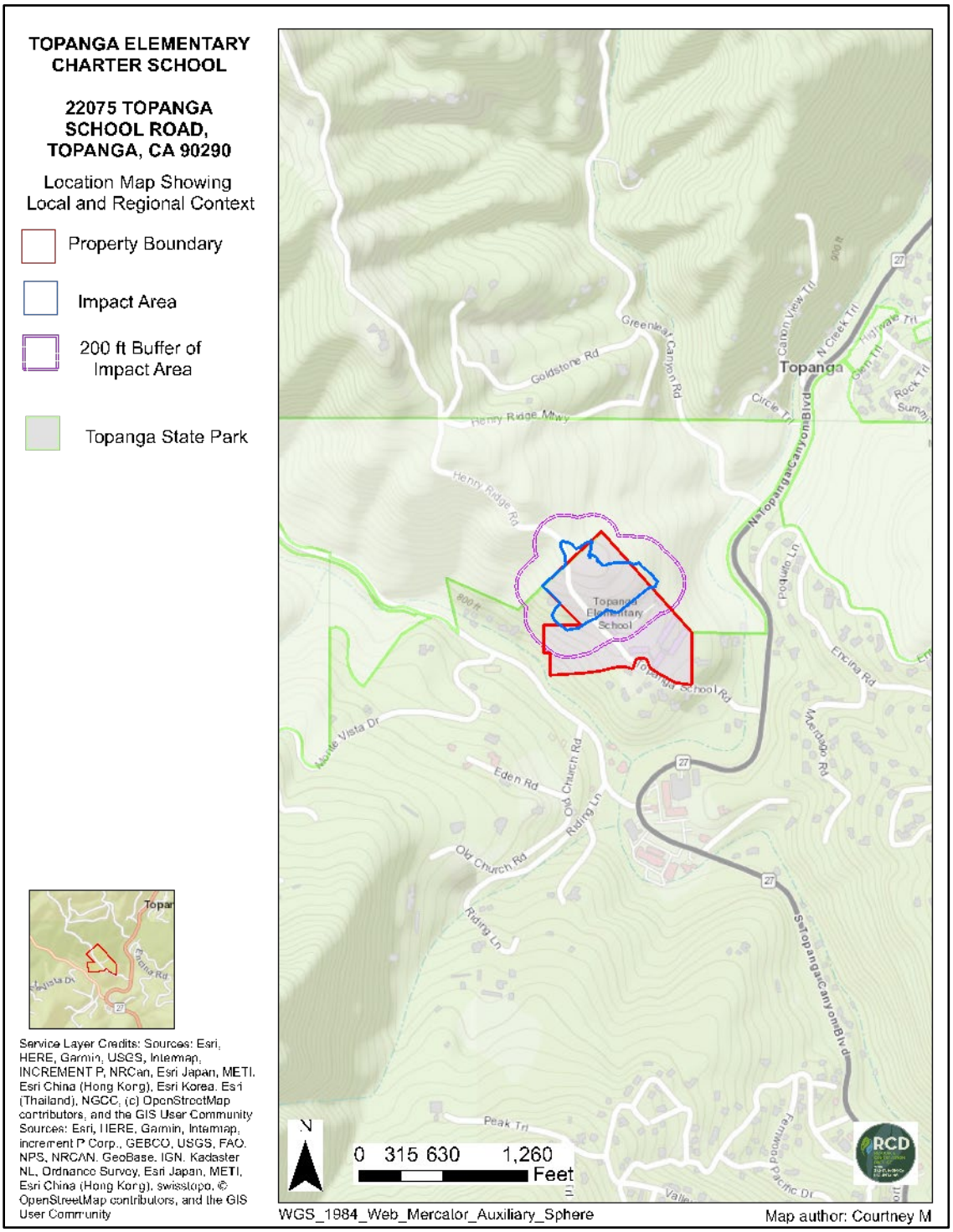


Figure 1. Topanga Elementary School Location Map.

Project Description

This report provides the data needed to develop recommendations for mitigation, as well as prepare a fuel modification and restoration plan. A stand-alone *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan* providing guidelines for BMPs, as well as directions on compliance with the required monitoring, maintenance and reporting, is also provided.

Permit Request

LAUSD was required to apply for and obtain (from the Los Angeles County Department of Regional Planning) approval for a valid Oak Tree Permit covering the damage and encroachments referenced above.

Upon site assessment, it was determined that in addition to impacts to individual oaks, the impacted area qualifies as "oak woodland" (moderately disturbed). This report includes documentation of impacts to both individual oak *trees*, as well as damage to oak *woodland*.

Approval for proposed habitat restoration – in compliance with the Santa Monica Mountains Local Coastal Plan – is also required, and is being addressed by application for a Minor Coastal Development Permit. Sections include but are not limited to: 22.44.1860 Biological Review requirements; 22.44.1870 Biological Assessment requirements; 22.44.1240 Vegetation Management and Landscaping; 22.44.1950 Mitigation,

Mitigation Proposed

Mitigation for this impact lies within the jurisdiction of Santa Monica Mountains LCP (2014), and while the replacement ratio for oak woodland impacts is 2:1, when found within non-riparian H1 habitat the Local Implementation Plan (LIP) requires a 3:1 replacement ratio.

1. Impacted oak woodland canopy cover loss requires restoration of three times the area that was disturbed. An "oak woodland" is defined as an oak stand which consists of two or more oak trees with greater than 10 percent canopy cover, or that may historically supported greater than 10 percent canopy cover, as early as January 1, 2005. A The number of trees required is based on the stem density of a reference area on site or nearby, applied to over twice the acreage of impacted area (Section 21083.4 CEQA).

Because the impacts were to both individual protected native trees and to the oak woodland habitat, we assessed the mitigation required for each type of impact (see **Table 1** for summary). We found the following:

1. At least two mature coast live oak trees were removed without a permit, and an additional 14 coast live oaks sustained greater than 30% damage to their protected zones, *for a total of 16 impacted oak trees*. Based on the required mitigation ratio

of 10:1, a total of 160 mitigation trees are required to be planted as replacement. Additionally, a mature western sycamore had impacts to 50% of the Protected Zone and is also mitigated at a ratio of 10:1.

2. Approximately 0.7 acres of moderately disturbed oak woodland has been impacted by canopy loss, as measured by comparison of canopy cover between 2021 and 2020.

3. The required replacement ratio for oak woodland in non-riparian H1 habitat impacts is three times the area impacted, equaling 2.10 acres. Based on prior studies, we recommend a tree-planting density of 200-300 trees per acre to achieve 10% oak woodland cover (i.e., the minimum coverage density, as commonly defined).

4. The impacted and adjacent areas are identified as having had "moderately disturbed" oak woodland. We therefore recommend that a total of 300 coast live oaks be planted in that area as mitigation for the documented impacts to the oak woodland on the project site. (Note: An additional 50 acorns/seedlings will be planted in case of losses.)

Table 1. Mitigation ratios for proposed restoration.

Impact	**Mitigation planting**
Direct impacts to 16 individual coast live oaks	160 coast live oaks
Direct impacts to 1 western sycamore	10 western sycamores
Impacts to oak woodland	300 coast live oaks

Since there had been no formal, sitewide tree inventory prior to the impact, and because the directives to the contractor from LAUSD included chipping and stump removal of any trees removed or trimmed (see Appendix D provided for reference only), it is impossible to accurately know exactly how many living trees were removed during the violation.

However, based on inspection of the bucked-up trunks and limbs that were left on site lining the Backbone Trail in May 2020 following the impact (**Figure 2a**), it appears that at least two coast live oaks (*Q. agrifolia*) of protected size that were alive were removed (**Figure 2b**).

Additionally, our review of remaining (tagged) tree conditions indicates that at least *14 coast live oaks and one western sycamore* were mechanically damaged by equipment ripping into the trunks (**Figure 2c**).

We further observed that many of the existing trees and volunteers are located in an active (legal) fuel modification zone, which is considered H3 habitat, and which will continue to require annual fuel modification treatments to protect adjacent school buildings.

Therefore, based on the County recommendation, the 160 oaks required to be planted as mitigation for impacts to *specific individual trees* should be included with the total of 300 planted for *oak woodland impacts* in non-riparian H1 habitat.

In addition, during the 2025 sapling tree inventory for this project, we identified 124 coast live oak "volunteers" (i.e., saplings/seedlings; below protected size) which could also serve as mitigation trees instead of planting new trees of which 25 are located in the B and C fuel modification zones.

We recommend that *all* replacement trees be planted on native undisturbed soil, and should be the same species of oak as the removed tree (i.e., *Quercus agrifolia*), with appropriate associated native vegetation included as plantings in the understory.

We further recommend that all new "mitigation trees" be planted *outside* the 100' fuel modification zone to reduce future impacts. This requires that LAUSD and California State Parks legally agree on the locations of the replacement plantings.

As required by the LCP, a *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan* describing mitigation, monitoring and reporting has been prepared to guide future restoration planting and direct fuel modification protocols according to Local Implementation Program (LIP) standards (Sect. 22.44.950). Under this program, on-site restoration should be utilized as circumstances at the site allow, to ensure long-term sustainability of the replacement plantings, to increase the potential to expand/connect to adjacent oak woodlands, and to improve the condition of local oak woodlands that were the subject of the violation.

We further recommended that LAUSD protect the area from future impacts with the following recommendations:

1. Work with California State Parks to develop and execute a legally-binding plan for future management of the fuel modification and habitat restoration area adjacent to the teaching bungalows and playground following the recommendations in the *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan*.

2. Develop a long-term conservation easement on the undeveloped portion of the school property to ensure best practices are followed in future management of the 4.75 acres of the Nature Area.

3. Remove the 44 (flammable, non-native) mature pine trees within Fuel Modification Zones A and B, ideally prior to the installation of restoration plantings.

Figure 2a. Backbone Trail lined with recently cut Coast Live Oaks. Photo taken 29 May 2020.

Figure 2b. Photo of section of Coast Live Oak still oozing sap taken 29 May 2020.

Figure 2c. Photo of Coast Live Oak mechanical damage taken 29 May 2020.

BACKGROUND

Violation details

In Spring 2020, Los Angeles Unified School District (LAUSD) hired a contractor to do brush clearance on the approximately 4.75-acre portion of Topanga Elementary School (known as the Nature Area) located west/northwest of the upper playground, cafeteria and teaching bungalows. This Nature Area has served as an outdoor classroom for over 50 years, with students and parents implementing a variety of stewardship projects over the years, including development of a marked nature trail, a tree monitoring plot established in 2015, numerous oak sapling plantings and a 2019 installation of over 600 pollinator plants funded by a grant from the Xerces Society. The Nature Area is a signature cornerstone of the Topanga Elementary School program.

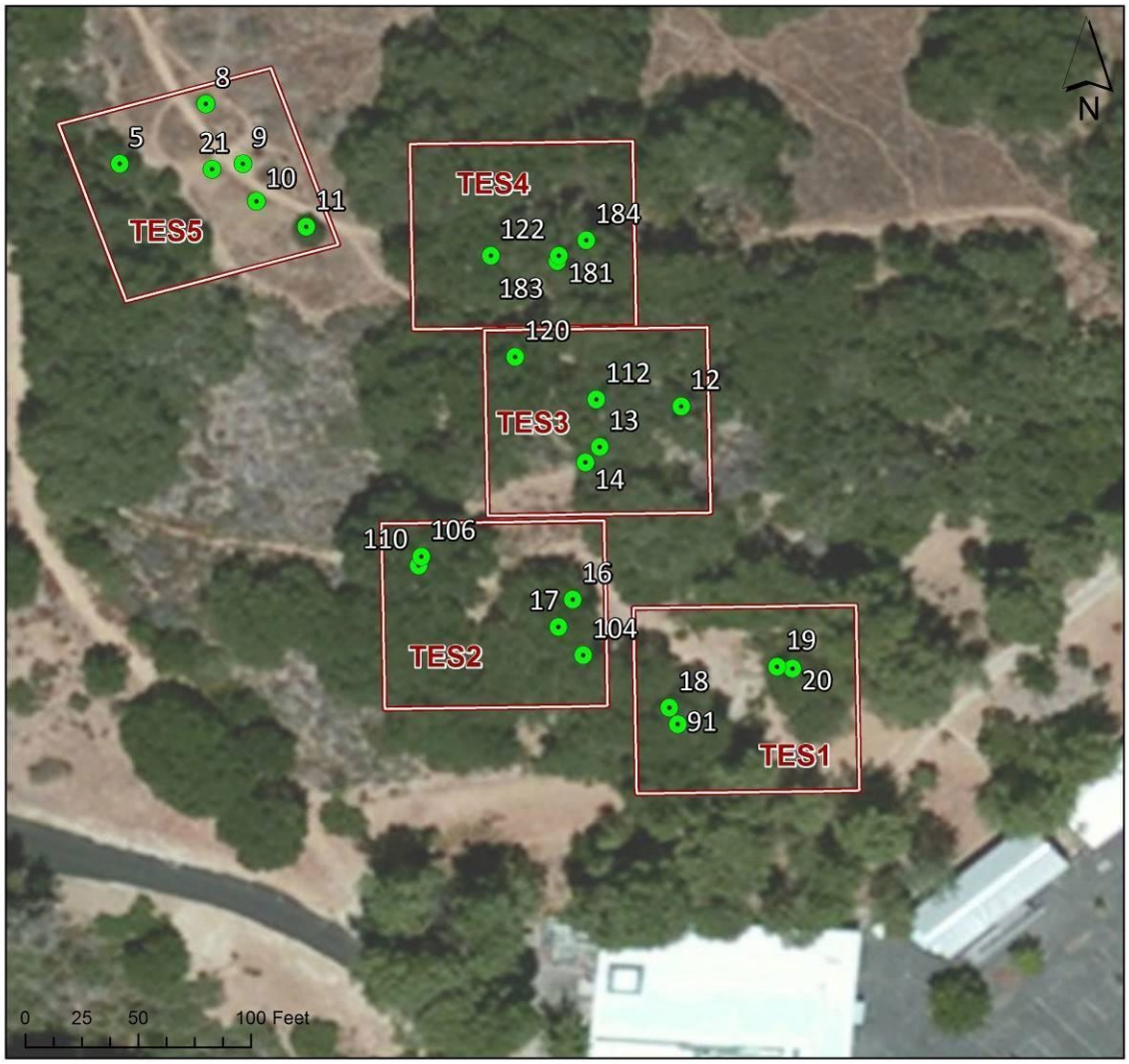
The 2020 brush clearance work took place while the school was closed due to the COVID-19 pandemic. During this work, numerous live and dead coast live oaks were cut down, bucked up and the trunks and branches used to line the Backbone Trail. A BOBCAT with some kind of ripper device mechanically removed all understory vegetation and hit some of the trees causing wounds. In addition to removal of dead oaks, living oaks and branches from living oaks were also removed. All removed trees were cut

into sections ("bucked up") and many stumps appear to have been ground up, making it impossible to accurately count the number of protected trees removed.

Most of the impact occurred within the LAUSD property boundary, but also extended into portions of adjacent Topanga State Park, owned by California Department of Parks and Recreation (State Parks). The extent of the understory and tree disturbance *exceeded the maximum required 200 ft. fuel modification requirement*. The property is located in a Very High Fire Hazard Severity Zone, but previous brush clearance had been limited to reduction of non-native grasses and minimal limbing up of trees.

Pre-violation tree data

While a comprehensive pre-disturbance oak survey had not been performed at the property, we (RCDSMM) do have limited data on its trees. In 2015, the RCDSMM developed survey 44 plots throughout the Santa Monica Mountains National Recreation Area to monitor native tree conditions during and post drought. The students at Topanga Elementary School assisted in tagging, measuring and monitoring a total of 26 oak trees in the "Nature Area" (**Figure 3**). Data on tree condition was collected by students in 2015 and again in 2018 by the RCDSMM as part of the overall study. **Table 2** compares the condition rating and health status of these trees over time. Several trees died due to drought during this period and were removed by LAUSD. Although these dead trees are not protected in the LIP, they do comprise important components of the non-riparian H1 and H3 habitats, and mitigation should incorporate provisions for the loss of structural and dead-wood resources that they provided. (the Oak Tree Ordinance does not require a permit to remove a dead tree; however, these trees were part of the Moderately Disturbed Oak Woodland at the site, and provided habitat services that were lost).



Topanga Elementary School Oak Tree Study

Figure 3. Map showing locations of most tagged oaks monitored by students 2015-2018 (see also Table 2).

Table 2. Condition rating and tree status over time for Topanga Elementary Tree Plots, 2015-2021. NOTE that this data refers to initial tree surveys prepared with students and is provided for reference only. DSH = Diameter at Standard Height

		2015	2015	2018	2018	2021	2021
Tag	**Trunks**	**DSH inches**	**Condition**	**DSH inches**	**Condition**	**DSH inches**	**Condition**
5	5	4.6	excellent	nd	dead-standing	10	good
8	3	3.1	excellent	7.5	good	12	good
9	2	4.5	excellent	2	good	7	good
10	1	5.25	fair	nd	dead-standing		
11	9	31.5	excellent	25.5	good	12	good
12	1	28	fair	nd	dead-standing		
13	1	8.9	good	MISSING			
14	2	7.8	good	7.2	fair	9	good
16	2	17	good	17.4	poor	20	fair
17	1	9.2	good	10	fair	11	good
18	2	51	good	31.1	poor	32	good
19	3	16.8	good	18.4	fair	18	good
20	5	15.2	good	25.1	fair	20	good
21	2	2.5	excellent	MISSING			
91	1	17.2	good	17.4	poor	18	good
92	2	nd	nd	14.6	good		
104	3	16.8	fair	17.2	good		
106	2	18.6	good	17.8	fair		
110	4	86.9	good	64.8	poor	82	fair
112	1	23.5	poor		dead-standing		
120	6	103.7	good		dead-standing		
122	4	51.5	poor		dead-standing		
181	1	16.5	good		dead-standing		
183	2	34	poor	35.8	poor	35	poor
184	2	24.6	poor		dead-standing		
185	2			16.2	good	13	fair

Parents and students responded to tree die-off by planting 25 coast live oak seedlings in the 2016/17 school year, as shown in **Figure 4**. below.

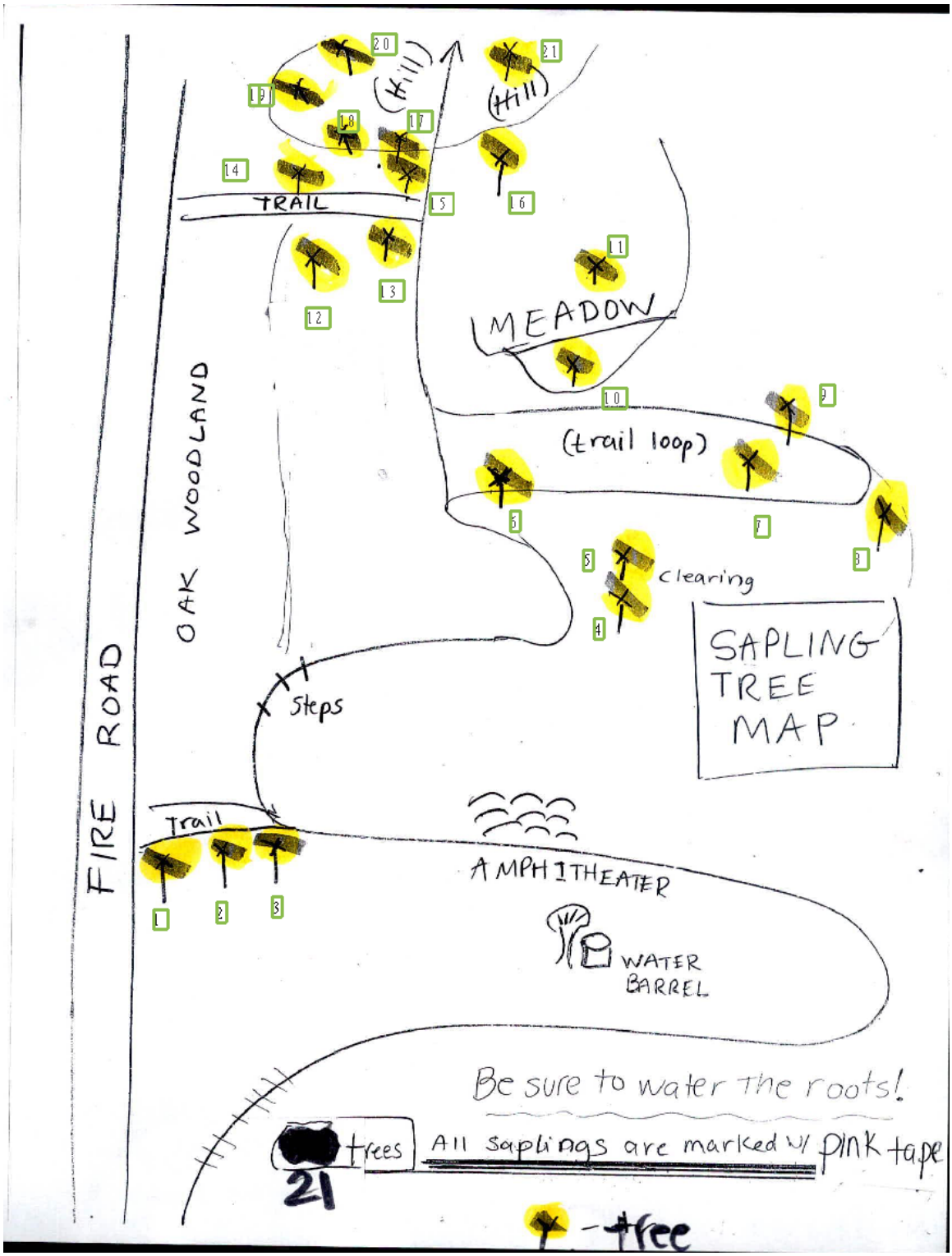


Figure 4. Oak Seedling Map showing locations of seedlings to tagged trees. Map provided by Topanga Elementary School.

Assignment

After discussing the project with LAUSD, as well as with LA County Department of Regional Planning, County Foresters, and State Parks biologists between June 2020 and March 2023, it was agreed that the assignment for assessment, mitigation and monitoring would be as follows:

1. Tag and assess all trees over 6-inch diameter on the LAUSD property and the area of impact extending into State Parks property that were impacted by the unpermitted vegetation removal and grading. (NOTE: Discussion with LA County DRP and State Parks confirmed that trees in the 200' buffer boundary did not need to be tagged, as they are on State Parks property).
2. Tag (and if small cage) oak trees under 6 inches DBS that could potentially qualify as mitigation trees (or that might grow to 6 inches during processing time).
3. Confirm that tree locations are properly indicated on the Site Plan, Fuel Modification Plan, and Restoration Planting Plan maps.
4. Map canopy dripline limits to scale on the map and reflect current canopy extent, tree protected zone and oak woodland canopy coverage.
5. Determine the extent of the impacts and encroachments to both individual oaks as well as the overall oak woodland.
6. Identify individual oak trees in need of restorative care and provide recommendations.
7. Analyze the impacts to protected H1and H3 Habitat categories.
8. Define the Permit Request and potential impacts in accordance with the Los Angeles County Oak Protection Ordinance and the LCP.
9. Identify locations for replacement planting.
10. Provide recommendations for meeting the Permit requirements for mitigating any impacts or loss of protected oaks and oak woodlands on the site.

Due to time constraints, the condition of the trees were based upon *visual assessment only*. No root excavations were done. The project was put on hold in June 2021 and restarted in March 2023, at which time RCDSMM and Monarch revisited all previously-tagged trees to document current condition, and to tag and map additional "volunteer" trees (seedlings/saplings) to potentially use as mitigation. This updated information has been incorporated into this report.

TREE INVENTORY

Methods for Tree Inventory

Data for this report was initially collected between 1 April – 19 May 2021. At that time, all trees with a single trunk over five inches in diameter or having more than two trunks with a combined diameter of over eight inches, were tagged with round, stamped, numbered tags at approximately 54 inches above grade (DSH = diameter at standard height) on the north side of the tree (unless inaccessible). Oak trees under 5-inch diameter were also tagged to document demography of the site and identify potential volunteer trees that could be used for mitigation. Although 6 inch DSH is the lower limit for

identifying individual trees in the LIP, we used the more conservative size of 5 inch DSH in order to delineate the oak woodland areas and to recognize that these trees could reach 6 inches by the time of restoration.

Tag numbers between 0-800 were used, with the exception of the 319 following tags which were either lost, not deployed, or associated with saplings that disappeared: 2, 4, 10, 12, 16, 27, 71, 75, 76, 80, 98, 99, 100, 104, 106, 110, 112, 113, 117, 120, 122, 125, 129, 130, 131, 133, 134, 136, 137, 138, 139, 140, 142, 145, 147, 148, 149, 150, 151,152, 159, 160, 162, 163, 164, 166, 167, 168, 172, 181, 184, 189, 192, 193, 199, 206, 208, 209, 211, 215, 221, 223-229, 232, 233, 234, 235, 237, 245, 246, 248, 249, 250, 255, 256, 258, 260, 263-269, 271, 272, 280-282, 285, 286, 287, 290, 295, 296, 299, 307, 308, 309, 312, 317, 318, 320, 321, 323, 324, 326-335, 341, 342, 344, 347-349, 353, 360, 362, 363, 366-369, 371, 372, 380-382, 386, 390, 391, 406, 408, 414, 419,421, 430-439, 441, 442, 445,451, 452, 453, 454, 478, 481, 482,484, 485, 490, 496, 505, 515, 516, 517, 522, 525, 540, 558, 560, 561, 577, 592, 596, 598-642, 663, 666-734, 736, 740, 741, 743, 744, 746-748, 761, 767, 769, 785, 786, 789-792, 796, 797.

Completeness was assessed by cross-referencing tag numbers and map locations to ensure that data for all trees was included.

In April-May 2023, all tagged trees were revisited and condition noted. A total of 80 tags that had been placed on saplings had disappeared (and are included in the list of missing tags), several new trees had emerged and were caged (18) and several additional mature trees fell (See **Table 6a and 6b**). Data was reviewed and cross-referenced between the data sheets, maps and field surveys. Additional tree tags were installed and trees were measured, mapped and photographed.

Tags installed by the students in 2015 were not in any order in the field, but included numbers: 5, 8, 9, 10, 11, l2, 13, 14, 16, 17, 18, 19, 20, 21, 91, 92, 104, 106, 110, 112, 120, 122, 181, 183, 184, 185.

Impacted trees on the northern edge of the project site within State Parks were tagged, but no trees in the 200’ buffer zone within State Parks outside the impacted area were tagged.

In April 2025 due to impacts from the Palisades Fire bulldozing, a repeat survey was conducted to determine how many volunteer sapling oaks were still present and to tag with flags any newly sprouted volunteers. Total numbers were adjusted to reflect current conditions.

Tree location was mapped using NAD 84 UTM 11 WGS1984 with a range of accuracy from 3 to 15 feet, with location and field data collected via mobile device utilizing Arbor Note tree inventory software. Quality Assurance/Quality Control review of the data fields and map locations was conducted. Latitude and longitude coordinates are provided in decimal degrees. **Table 3** presents a summary of data sources for tree-mapping.

Table 3. Metadata for maps.

File name	File type	Properties (coordinates, etc.)	Source/date
LA County H Zones	Shapefile	NAD 1983/GCS1983	LA County, unk. date
Vegetation Alliances	Shapefile	NAD 1983/GCS 1983	National Park Service, 2007
Basemap imagery	Basemap	n/a	Maxar/ESRI, 2/2/2020
Impact area	Map layer	NAD 1983/GCS 1983	C. McCammon, April 2020
School site boundary	Map layer	NAD 1983/GCS 1983	C. McCammon, April 2020
Impact area 200-ft buffer	Map layer	NAD 1983/GCS 1983	C. McCammon, April 2020
CA State Parks Boundary	Shapefile	unknown	Noa Rishe CDPR, April 2020
Updated H Zones	Map layer	NAD 1983/GCS 1983	C. McCammon, April 2020
Updated vegetation alliances	Map layer	NAD 1983/GCS 1983	C. McCammon, April 2020
Tree locations	Shapefile	NAD 84 UTM 11 WGS1984	E. Lambert, April – May 2021 Updated by B. Demirci May 2023

Trees were assigned a health and vigor rating based on a summary of the condition of roots, trunk, scaffold branches, small branches and twigs, and foliage according to the current industry standards. Each factor was evaluated individually then compiled to obtain an aggregate condition rating for each tree, expressed as a percentage.

Excellent (81-100%) - A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease or pest infestation.

Good (61-80%) - A healthy and vigorous tree characteristic of its species with less than 25% of the tree affected by visible signs of stress, disease or pest infestation.

Fair (41-60%) - A healthy and vigorous tree characteristic of its species with 25-75% of the tree affected by visible signs of stress, disease or pest infestation.

Poor (21-40%) - Greater than 75% of this tree is affected by visible signs of stress, disease or pests and appears to be in a general state of decline.

Very Poor/Dead (0-19%) - The tree exhibits few, if any, signs of life.

Results of Tree Inventory

Oak and Native Tree Summary

Figure 5a depicts the location of *all trees* in the impact area and adjacent school and State Parks property, and **Figure 5b** shows these same trees relative to habitat category from the LCP (e.g., H1, H2), with size class of oaks noted.

Field data with condition information for all trees are found in **Appendix A**, and photos of each tree are found in **Appendix B**.

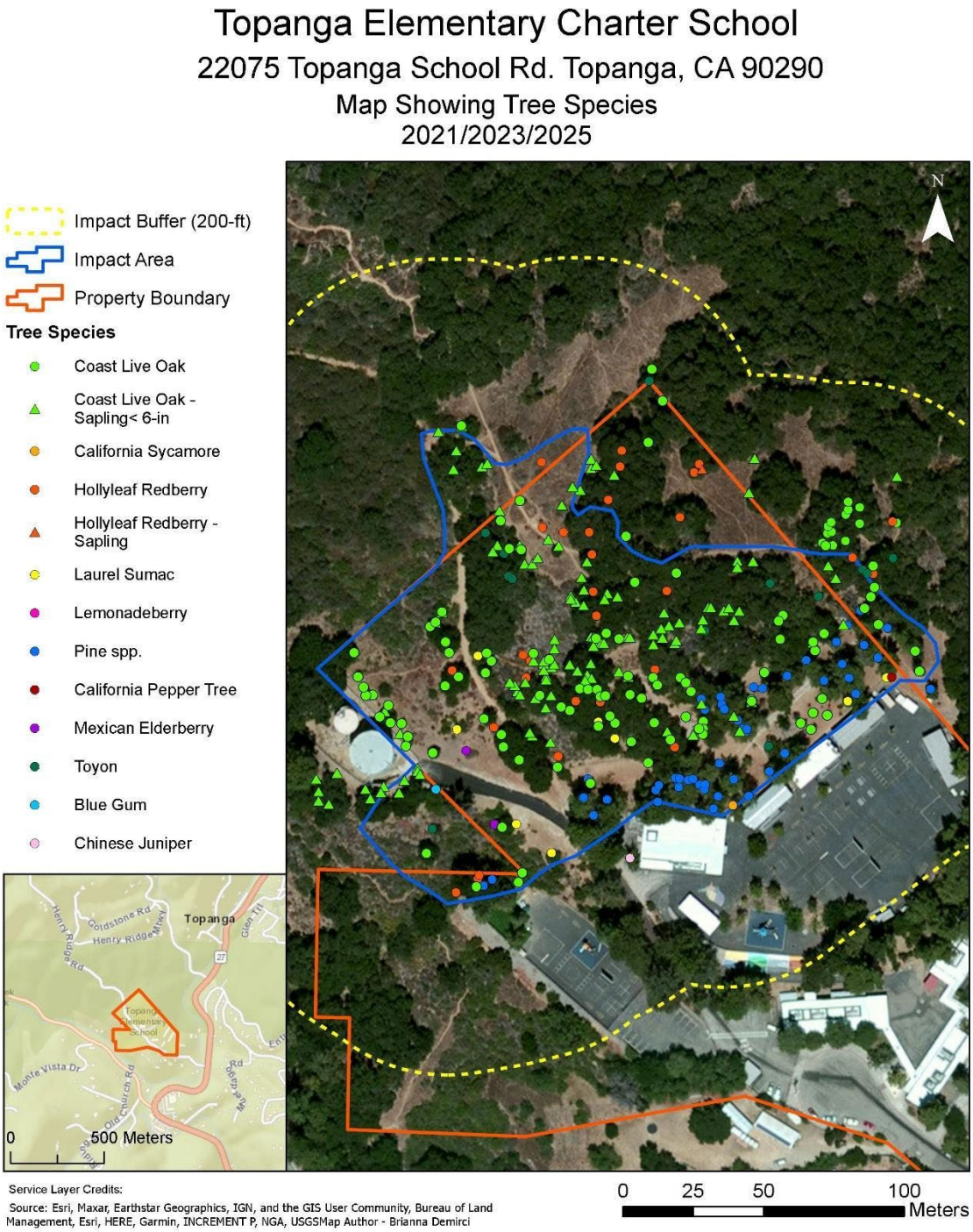


Figure 5a. All trees within the area of impact, as mapped in 2021/2023.

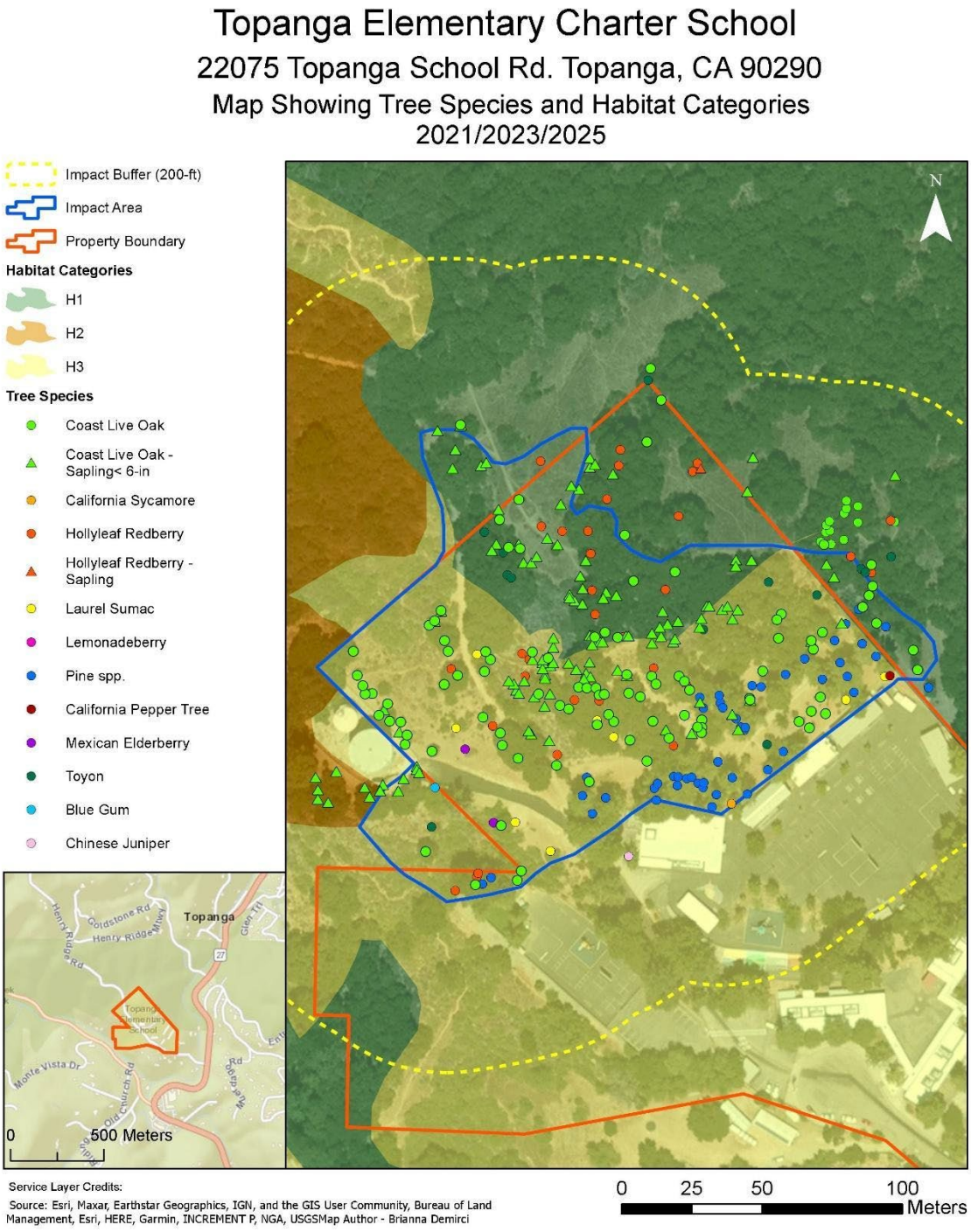


Figure 5b. All tagged trees, including size classes of oaks, in impacted area with LCP habitat designations.

A summary of all protected native trees by species and size class is provided in **Table 4**. Native trees that are recommended for close monitoring, target-specific pruning, or to be

considered for removal due to damage sustained during the 2020 violation are listed in **Table 5**; other dead and/or hazard trees are listed in **Table 6a** (tagged in 2021) or **Table 6b** (tagged in 2023).

Table 4. Summary of Protected Native Trees at 22075 Topanga School Road 2023.

Scientific Name	Common Name	Total Protected Trees 6 inches or greater, and 2 trunks >8 inches
Heteromeles arbutifolia	Toyon	**9**
Malosma laurina	Laurel Sumac	**4**
Platanus racemosa	California Sycamore	**1**
Quercus agrifolia	Coast Live Oak	**180**
Rhamnus ilicifolia	Holly Leaf Redberry	**2**
Sambucus mexicana	Mexican Elderberry	**1**

Table 5. Summary of all Protected Native Trees (n = 6, plus 4 just under size cut off) confirmed to have sustained damage during violation at 22075 Topanga School Road, not including two trees removed outright (which were not measured). Required mitigation is based on ratios set forth by Section 22.44.950. Note*: An additional four trees were found dead in May 2023 where cause of death cannot be specifically traced to violation impacts, so mitigation ratio is based on initial (2021) impact assessment showing them as alive.*
Trees 156, 205, 475 and 550 are under protected size but due to injuries sustained should be monitored over time.

Tag #	Botanical Name	Common Name	Height (ft)	DSH (inches)	% PRZ Affected	Recommended action	Number of mitigation trees required	Latitude	Longitude
6	Quercus agrifolia	Coast Live Oak	28'	9	50	Monitor	10	34.09276912	-118.605628
156	Quercus agrifolia	Coast Live Oak	20'	5	70	Monitor	10	34.09347067	-118.6052139
205	Quercus agrifolia	Coast Live Oak	12'	5	80	Monitor	10	34.09386647	-118.6053566
339	Quercus agrifolia	Coast Live Oak	30'	26	80	Deadwood Removal	10	34.09359769	-118.6048369
352	Quercus agrifolia	Coast Live Oak	20'	22	80	Monitor	10	34.09374272	-118.6048067
475	Quercus agrifolia	Coast Live Oak	12'	5	50	Monitor	10	34.09345805	-118.6048544
489	Quercus agrifolia	Coast Live Oak	18'	15	100	Monitor	10	34.09341933	-118.6046473
549	Quercus agrifolia	Coast Live Oak	8'	6	100	Monitor	10	34.09354159	-118.6041933
550	Quercus agrifolia	Coast Live Oak	20'	5	90	Monitor	10	34.09358013	-118.6041593
553	Quercus agrifolia	Coast Live Oak	20'	10	100	Monitor	10	34.09345722	-118.6040494

Table 6a. Summary of 2021-tagged Protected Native Trees (n = 24) that now (2023) appear dead, or that could be hazardous and need specific monitoring/treatment.

Tag #	Botanic Name	Common Name	Height (ft)	DSH (inches)	% PRZ Affected	Recommended action	Number of mitigation trees required	Lat	Long
28	Quercus agrifolia	Coast Live Oak	47'	30	20	Monitor	5	34.09287255	-118.6056309
70	Quercus agrifolia	Coast Live Oak	33'	17	10	Monitor	5	34.09351211	-118.6059206
91	Quercus agrifolia	Coast Live Oak	46'	18	80	Monitor	10	34.09321439	-118.6050505
116	Quercus agrifolia	Coast Live Oak	32'	23	20	Monitor	5	34.09325481	-118.6051861
157	Quercus agrifolia	Coast Live Oak	35	30	75	Monitor	10	34.09349885	-118.6052406
162	Quercus agrifolia	Coast Live Oak	35'	20	100	Dead	10	34.09356597	-118.6052595
177	Quercus agrifolia	Coast Live Oak	35'	90	0	Monitor	0	34.09379024	-118.6056998
183	Quercus agrifolia	Coast Live Oak	35'	35	80	Monitor	10	34.09381106	-118.6051711
189	Quercus agrifolia	Coast Live Oak	35'	28	0	Dead	0	34.09371255	-118.605673
214	Quercus agrifolia	Coast Live Oak	25'	24	40	Monitor	10	34.0939487	-118.6053269
274	Quercus agrifolia	Coast Live Oak	12'	9	90	Monitor	10	34.09424765	-118.6050386
282	Quercus agrifolia	Coast Live Oak	20'	18	0	Dead	0	34.09413571	-118.6050243
336	Quercus agrifolia	Coast Live Oak	30'	35	60	Monitor	10	34.09366504	-118.6051343
339	Quercus agrifolia	Coast Live Oak	30'	26	80	Monitor	10	34.09359769	-118.6048369
343	Quercus agrifolia	Coast Live Oak	25'	17	100	Monitor	10	34.09369612	-118.604975
376	Quercus agrifolia	Coast Live Oak	15'	32	100	Dead	10	34.09361115	-118.6047639
382	Quercus agrifolia	Coast Live Oak	15'	45	80	Dead	10	34.09366407	-118.6046352
384	Quercus agrifolia	Coast Live Oak	40'	38	90	Monitor	10	34.09366727	-118.6047045
441	Quercus agrifolia	Coast Live Oak	35'	22	75	Monitor	10	34.09348044	-118.604667
471	Quercus agrifolia	Coast Live Oak	30'	46	80	Monitor	10	34.09334461	-118.6049305
557	Quercus agrifolia	Coast Live Oak	25'	18	60	Monitor	10	34.09379158	-118.604401
562	Quercus agrifolia	Coast Live Oak	35'	28	30	Deadwood Removal / Monitor	5	34.09372918	-118.6042161
595	Platanus racemosa	California Sycamore	43'	13	50	Level 3 TRA/ Monitor	10	34.09295368	-118.6047419
736	Quercus agrifolia	Coast Live Oak	43'	20	30	Monitor	10	34.0933246	-118.6051749

Table 6b. Summary of 2023-tagged Protected Native Trees (n = 13) that could be hazardous and need specific monitoring/treatment.

Tag #	Scientific Name	Common Name	Height (ft)	DSH (inches)	% PRZ Affected	Recommended action	Number of mitigation trees required	Latitude	Longitude
95	Quercus agrifolia	Coast Live Oak	22'	6"	NA	monitor	0	34.09331885	-118.6053083
176	Quercus agrifolia	Coast Live Oak	18'	30"	NA	monitor	0	34.09376629	-118.6056191
177	Quercus agrifolia	Coast Live Oak	35'	22"	NA	monitor	0	34.09379024	-118.6056998
196	Quercus agrifolia	Coast Live Oak	20'	34"	NA	monitor	0	34.09364677	-118.6055941
213	Quercus agrifolia	Coast Live Oak	10'	14"	NA	monitor	0	34.09384232	-118.6052261
283	Quercus agrifolia	Coast Live Oak	35'	45"	NA	monitor	0	34.0939518	-118.6051765
313	Quercus agrifolia	Coast Live Oak	15'	6"	NA	monitor	0	34.09386388	-118.6049033
388	Quercus agrifolia	Coast Live Oak	20'	8"	NA	monitor	0	34.09354779	-118.6045777
429	Quercus agrifolia	Coast Live Oak	20'	22"	NA	monitor	0	34.0934651	-118.6047447
489	Quercus agrifolia	Coast Live Oak	18'	13"	NA	monitor	0	34.09341933	-118.6046473
501	Quercus agrifolia	Coast Live Oak	18'	7"	NA	monitor	0	34.09341253	-118.6044961
503	Quercus agrifolia	Coast Live Oak	15'	22"	NA	monitor	0	34.09352045	-118.6045901
506	Quercus agrifolia	Coast Live Oak	8'	9"	NA	monitor	0	34.09348856	-118.6045712

Non-native Trees Summary

In addition to the native trees, the project site also supports pines, juniper, California Pepper and eucalyptus trees in varying degrees of health within the fuel modification zone. The number of individuals per species is found in **Table 7**. Full details for these trees are found in Appendix B.

Table 7. Summary of all non-native trees.

Scientific Name	Common Name	Total <6" DBS	Total 6-20" DBS	Total 21-36" DBS	Total >36"
Eucalyptus globulus	Blue Gum	0	0	0	1
Juniperus chinensis	Chinese Juniper	0	1	0	0
Pinus canariensis	Canary Island Pine	0	1	0	0
Pinus halepensis	Aleppo Pine	2	25	15	3
Pinus torreyana	Torrey Pine	0	1	0	0
Schinus molle	California Pepper Tree	0	1	0	0

OAK WOODLAND ASSESSMENT

Methods for Oak Woodland Assessment

Oak woodland composition and extent were assessed by identifying, mapping and measuring all trees within the oak woodland on the site (as described above). To assess changes in oak woodland canopy cover, we compared the canopy cover in a June 2019 aerial image prior to impact to that remaining in June 2020 (the most recent post-impact aerial photography) by outlining polygons using a buffer radius 3.2 times larger than the canopy area around the oak trees. The outline of the oak woodland was first traced and then polygons were drawn around the canopies (**Figure 6**). The coastal sage scrub and grassland habitat on the site was excluded, as were any significant gaps in the canopy cover.

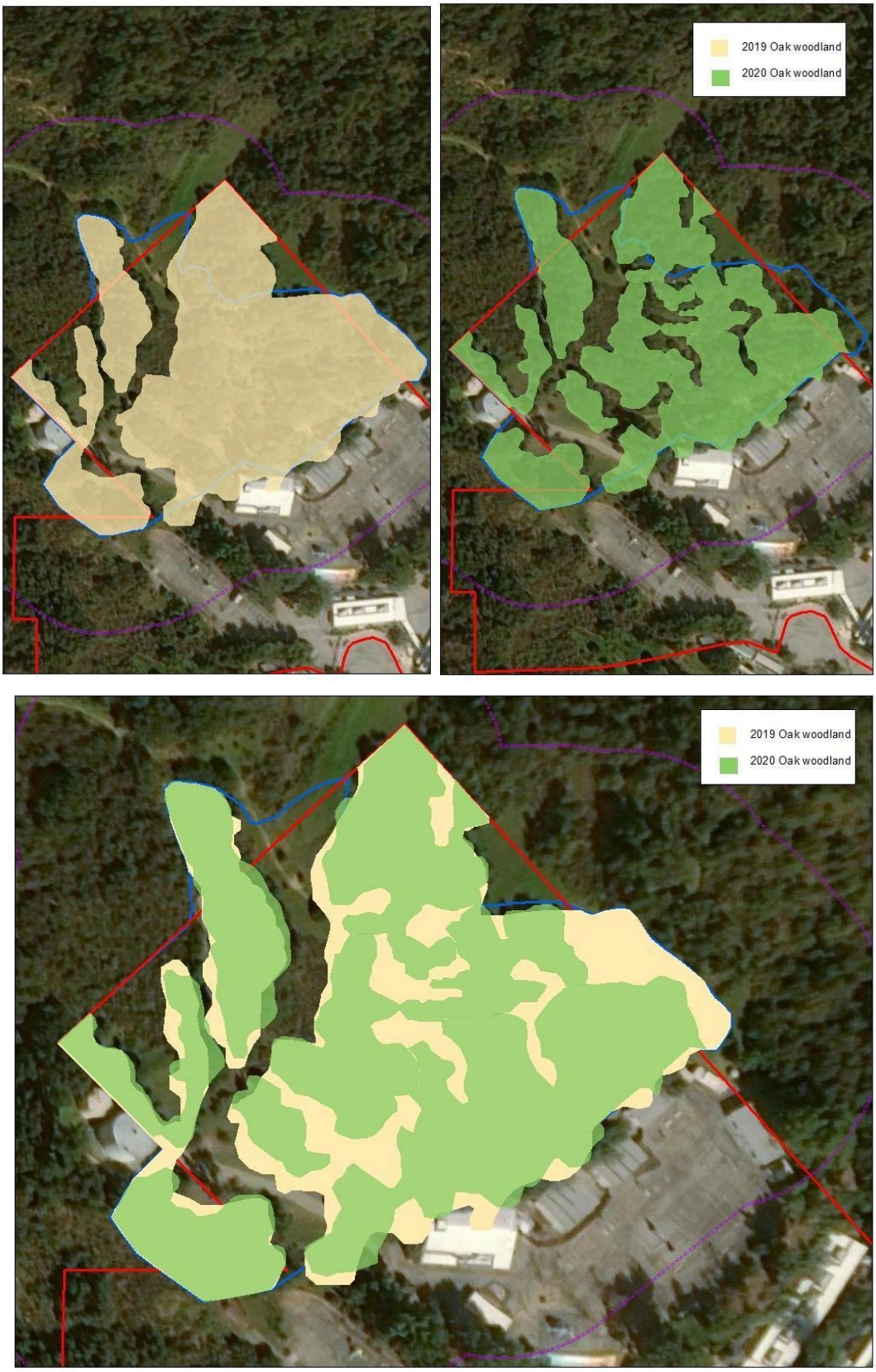


Figure 6. Changes to oak woodland canopy cover, 2019 to 2020.

To calculate tree density within intact/undisturbed oak woodland (to inform our mitigation recommendations), we selected an area of undisturbed oak woodland to the northeast, adjacent to the school property boundary, to provide a reference site (**Figure 7**). Within a (visually) representative, 25 m x 25 m (625 square meters) area of this woodland, we mapped all trees, measured individual tree size and calculated tree density to provide the basis for estimating the number and size of the oak trees present throughout the reference area, and for our planting recommendations (**Figure 8**). We also noted understory species to inform restoration efforts on the project site.

Figure 7. Reference Tree Plot used for Oak Woodland Canopy Demographics. Photos taken on 19 May 2021.

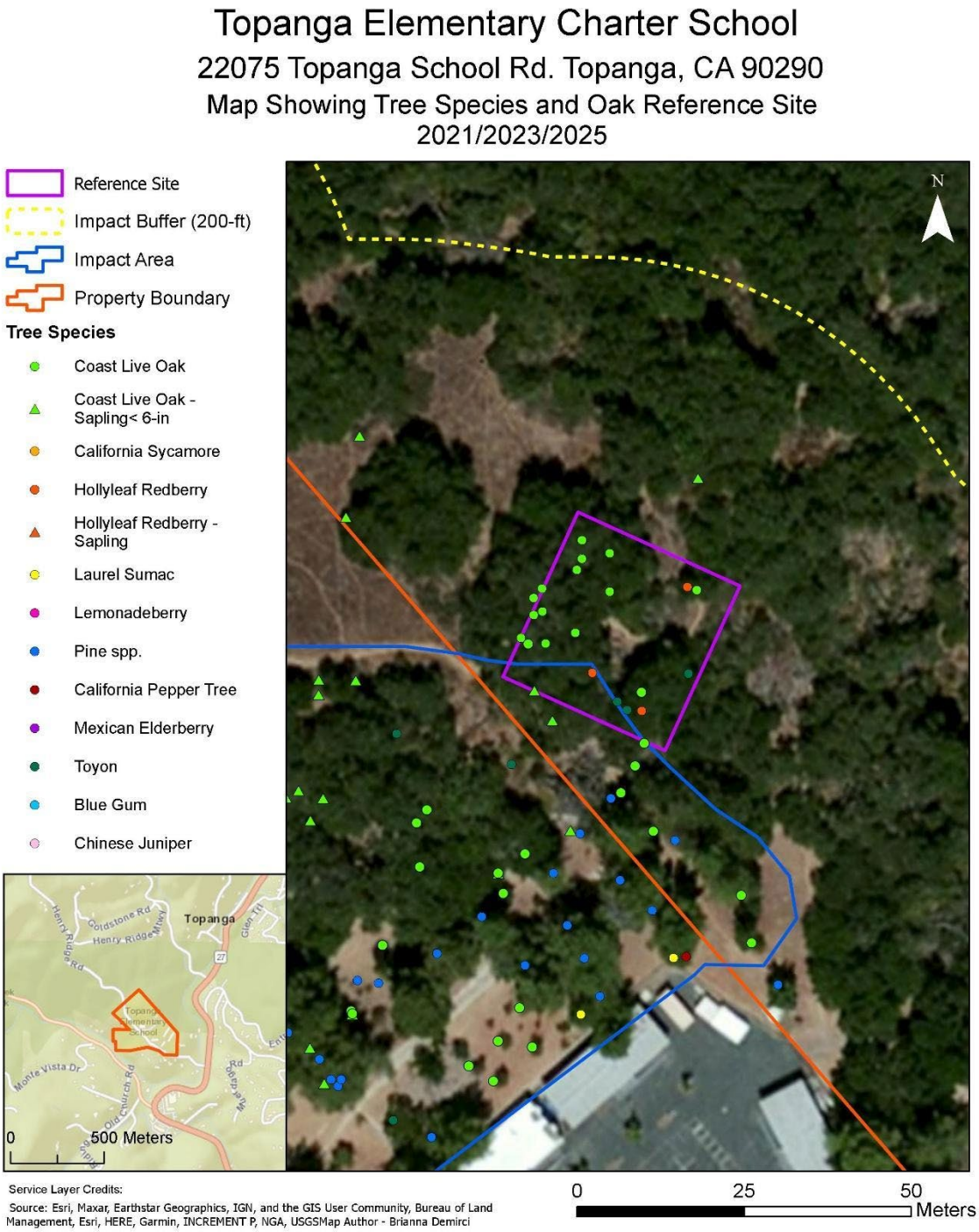


Figure 8. Map showing location of oak woodland reference site, and mapped oaks therein.

The Los Angeles County Oak Woodlands Conservation Management Plan (2011; LACOWCMP) requires several specific site analyses, including:

1. A determination of the habitat value/integrity of the woodland (**Table 8**);
2. An analysis of impacts to the oak woodland; and
3. An analysis of the severity of the impacts (**Table 9**).

Table 8. Existing Condition Evaluation: Definitions.

Woodland Integrity	Intact	Moderately Degraded	Severely Degraded
Existing Condition:	Site is currently in a "wild" state where all ecological functions such as groundwater infiltration, shade, habitat, nutrient cycling, carbon sequestration, wind/noise/dust abatement, and the stand is self-sustaining and regenerating. Understory of grasslands may be dominated by invasive exotic grasses and forbs. Fire exclusion or frequency may have altered native woodland. Woodland supports associated flora and fauna and are free from destructive land practices that limit long-term persistence.	Even though the site has been altered, oak woodlands persist and retain some of their functions. Natural regeneration is possible, wildlife use still occurs, and some level of ecosystem services is still present. The majority of oak woodlands in the County fall within this category.	Site has been drastically altered from the natural condition to accommodate residential, commercial or industrial uses, and oak woodlands remain in scattered locations. Natural regeneration is not possible. Soil is compacted, contaminated or paved. Wildlife habitat is limited and associated understory vegetation has been replaced by managed non-native landscaping.
Examples:	Oak woodlands far from roads and trails within large wilderness-like areas (e.g., interior of the Santa Monica Mountains).	Golf courses intermixed with fragmented oak woodlands, many of the subdivisions and urban wild land interface areas found in the Santa Monica Mountains, Santa Clarita Valley, along the foothills of the San Gabriel Mountains and throughout the Puente Hills.	Small clusters of oaks within or surrounding parking lots, isolated small stands in parks or open spaces surrounded by urban development, or woodlands remaining along freeway corridors.
Recommendation:	Projects that would alter the oak woodland should receive the highest level of scrutiny. Project alternatives that would avoid this alteration should be fully explored and given first consideration.	Project needs to be reviewed within the context of preventing further ecosystem function losses. This could include reduction of project scale, adjusting project footprint to reduce impacts, identifying opportunities to preserve connectivity,	Site should be reviewed within the context of adjacency to other oak woodland stands, potential for restoration and the potential to restore connectivity and ecosystem

		increase groundwater retention, and restore habitat.	functions. A Severely Degraded site may be a good choice for a mitigation area that could be restored.

Table 9. Impact Severity Evaluation.

Impact Severity	Intact Woodland	Moderately Degraded Woodland	Severely Degraded Woodland
Low:	Minimal disturbance to stand structure and composition and habitat features resulting in no increased edge habitat or fragmentation; road and stream crossings are not being considered; activities will not result in the introduction of exotic or invasive species. Minimal site or spatial disturbance may still result in significant impacts to an intact or core woodland.	Regeneration potential is being maintained across the site; understory oak associates present or can be restored; expansion of developed areas are centralized; new road and stream crossings not being considered. In the absence of special circumstances, statutes or ordinances, this may represent a non-significant impact.	Majority of remnant trees are retained; understory removal or road widening does not compromise existing tree health; no further loss of ecosystem services considered. In the absence of special circumstances, statutes or ordinances, this may represent a non-significant impact.
Moderate:	Detectible change or reduction in canopy, structure or composition; loss of some habitat features, subtle impacts increasing fragmentation, edge creation or loss of connectivity (fences, roads, other artificial barriers or buffers).	Regeneration potential is being marginalized; developed areas expand into previously undeveloped areas; new roads or stream crossings proposed; habitat features are being lost; activities will add exotic an invasive species.	Loss of a majority of existing trees; activities will inhibit or harm residual tree health and vigor; barriers constructed will increase fragmentation; ecosystem services will be lost or degraded.
	These impacts are considered significant.		
High:	Obvious change or reduction or loss of canopy, structure or composition; loss of existing habitat features; fragmentation and parcelization of contiguous ownerships; introduced roads, stream crossings and/or exotic invasive species; creation of edge effects; construction of barriers (fences, roads, etc.).	Large scale impacts including loss of habitat, understory, resulting in fragmentation and increased edge effects; Loss of woodland structure and changes in composition in large continuous woodland patch.	Loss of remnant trees or stand increases fragmentation across the landscape through loss of connectivity.
	These impacts are considered significant.		

Results of Oak Woodland Assessment

Characterization of Oak Woodland on Project Site

The oak woodland throughout the subject property (including within the impact area) is composed of coast live oak (*Quercus agrifolia*), one California sycamore (*Platanus racemosa*), hollyleaf redberry (*Rhamnus ilicifolia*), toyon (*Heteromeles arbutifolia*), elderberry (*Sambucus caerulea*), lemonade berry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*). The impacted oak woodland on the project site is adjacent to and integrated with publicly-owned state park land to the north, west and southwest and is bisected by the regionally significant Backbone Trail. In addition, other side trails and old fire roads provide a well-used network of trails throughout the site used by students and the public.

In addition to the drought, this oak woodland has been impacted by an infestation of western oak bark beetle. No evidence of introduced pests such as the Invasive Shot Hole Borer or Gold Spotted Oak Borer has been noted. The natural decomposing fungi and bacterial often found on downed materials were evident, but no introduced diseases were noted.

We observed a diverse range of tree size within the approximately 4.75-acre impact area (**Figure 9**); specifically, we found 37 mature living trees (21-36” DSH size range), 9 declining trees that were over 36”, and 134 young trees (5-10” DSH). This site has been stewarded by the school students who have planted many seedlings over the years, which

contributes to the percent of younger trees especially along the slope behind the cafeteria and bungalows.

As of 2023, we estimate that at least an additional 113 coast live oaks and saplings have died since the 2021 assessment. But, because we could not directly connect their failure to the impacts of 2020, they are not included to develop the number of mitigation trees recommended for planting.

Figure 9. Photo taken on 18 May 2020 showing the demographic range of the trees on the site.

In 2021 we observed the oak woodland understory to have been severely disturbed by brush clearance in spring 2020, leaving little natural understory vegetation remaining at that time. However, site surveys in spring 2023 followed an almost 50-inch rain year, which led to some recovery occurring, with additional native species observed that had not been present following the disturbance and drought conditions documented in 2021. A full assessment of the vegetation communities and special status species on the site is included in the *Biological Assessment Report* (April 2021; revised 2023).

Based on our analysis of the canopy changes between 2019 and 2020, we calculated at least 0.7 acres of impact (including outright loss of trees, canopy loss, and encroachment) to the oak woodland occurred as a result of the 2020 violation.

We found a total of 16 coast live oak trees in the 0.15-acre oak woodland reference area, varying in size from 2 to 47 inches DBS (**Table 10**). Of these, four were dead, and two were found to be in "poor" condition.

Table 10. Tree demographics of reference site (native species only).

ID #	Botanical	Common	Height (ft)	Canopy Spread 1 (ft)	Canopy Spread 2 (ft)	2021 DBH (Total inches)	Largest Stem 1 (inches)	Largest Stem 2 (inches)	DBH Class	Health	latitude	longitude
563	Quercus agrifolia	Coast Live Oak	30'	20		11	0	0	7"-20"	80% - Good	34.09365993	-118.6042107
564	Quercus agrifolia	Coast Live Oak	25'	20		17	8	5	7"-20"	60% - Fair	34.09362945	-118.6042243
557	Quercus agrifolia	Coast Live Oak	25'	25		18	0	0	7"-20"	80% - Good	34.09379158	-118.604401
Q1	Quercus agrifolia	Coast Live Oak	35	45	15	47.8	17.3	15.5		Fair	34.09.3793	118.60.4373
Q2	Quercus agrifolia	Coast Live Oak	20	20	0	20.7	10.5	10.2		Fair	34.09.3800	118.60.4413
Q3	Quercus agrifolia	Coast Live Oak	25	15	5	14.6	14.6			Fair	34.09.3831	118.60.4393
Q4	Quercus agrifolia	Coast Live Oak				8.3	8.3			Dead	34.09.3836	118.60.4379
Q5	Quercus agrifolia	Coast Live Oak	7	2	2	1	1			Good	34.09.3854	118.60.4393
Q6	Quercus agrifolia	Coast Live Oak	12			25.9	13.2	12.7		Dead	34.09.3867	118.60.4380
Q7	Quercus agrifolia	Coast Live Oak	25	25	15	40.4	17.4	13.5		Poor	34.09.3893	118.60.4324
Q8	Quercus agrifolia	Coast Live Oak	25	15	25	16.4	8	8.4		Fair	34.09.3908	118.60.4316
Q9	Quercus agrifolia	Coast Live Oak	25	20	20	31.9	12.7	10.9		Fair	34.09.3933	118.60.4316
Q10	Quercus agrifolia	Coast Live Oak				8.3	8.3			Dead	34.09.3916	118.60.4271
Q11	Quercus agrifolia	Coast Live Oak				41.5	19.5	12.3		Poor	34.09.3864	118.60.4270
Q12	Quercus agrifolia	Coast Live Oak				24.2	16.5	7.7		Dead	34.09.3808	118.60.4325
Q13	Quercus agrifolia	Coast Live Oak	5	2	2	<5	0.5			Good	34.09.3868	118.60.4129
T1	Heteromeles arbutifolia	Toyon	20	20	25	<20	5.4	4.2	<20	Good	34.09.3755	118.60..4140
565	Heteromeles arbutifolia	Toyon								Good	34.09.3705	118.60.4239
R1	Rhamnus ilicifolia	Hollyleaf Redberry	10	6	6	<5	2		<5	Good	34.09.3704	118.60.4215
R2	Rhamnus ilicifolia	Hollyleaf Redberry	7	5	5	<5	1		<5	Good	34.09.3754	118.60.4296
R3	Rhamnus ilicifolia	Hollyleaf Redberry	5	2	2	<5	0.5		<5	Good	34.09.3872	118.60.4144

Based on the baseline conditions of the entire project site (i.e., prior to the 2020 violation), we find the Integrity of the oak woodland here to be "**moderately degraded**". As described in **Table 8**, "Even though the site has been altered, oak woodlands persist and retain some of their functions. Natural regeneration is possible, wildlife use still occurs, and some level of ecosystem services is still present."

Based on impacts prior to the 2020 violation, we find the Impact Severity for this woodland to be "**moderate**", due to the long-term impacts from annual fuel modification that reduces regeneration potential and encourages non-natives (see **Table 9** for description).

Ecosystem Services from Oak Woodland

A summary of ecosystem services provided by oak woodlands as described by the LACOWCMP is required as part of impact analysis. Carbon sequestration and storage, avoided stormwater runoff capture and temperature moderation are a few of the commonly assessed ecosystem services provided by oak woodlands. Using the density of the trees counted in the reference area of the oak woodlands adjacent to the Nature Area (see above), **Table 11** provides a conservative estimate of the value of these services based on a single average size coast live oak in the Santa Monica Mountains. There are 180 coast live oaks this size or greater on the project site which cumulatively provide a conservative total of ecosystem services worth of $6,287 each year.

Table 11. Ecosystem service value estimation for each mature (10-inch DBS, 35'-tall) coast live oak tree in the Santa Monica Mountains (Based on data from iTree summarized in Dagit et al. 2019).

Ecosystem Service	Avoided Benefits	Value
Water Quality		
Stormwater Runofff Avoided (gal)	62.22	
Rainfall Intercepted (gal)	487.64	
Runoff Avoided ($)		$ 2.87
Air Quality		
Carbon Monoxide (oz)	0.17	
Ozone (oz)	10.54	
Nitrogen Dioxide (oz)	1.41	
Sulfur Dioxide (oz)	0.34	
Particulate Matter <2.5 Microns	0.35	
Annual Benefit ($)		$ 0.10
Carbon storage/sequestration		
Sequestered (lbs)	123.26	
Sequestered ($)		$ 2.87
CO2 Stored to Date (lbs)	1250.96	
CO2 Store to Date ($)		$ 29.09
TOTAL BENEFITS/Tree/YEAR		**$ 34.93**

Impacts *from* Oak Woodland Restoration

Table 12 lists factors to consider in determining significance thresholds from the proposed project. As a "project" (even one that proposes restoration, rather than development), impacts must be considered and evaluated, and reduced to a less-than-significant level.

Table 12. Level of Significance Analysis. LTS= Less Than Significant; PS = Potentially Significant; S= Significant

IMPACT	ACTION	LEVEL
Net loss of oak woodland acreage.	Planting and maintaining new oaks.	LTS
Increased habitat fragmentation.	Planting and maintaining understory plants.	LTS
Loss of vertical and horizontal structural complexity.	Planting and maintaining new oaks and understory plants.	LTS

Loss of understory species diversity, locally uncommon or rare species or associations.	Planting new understory plants; avoiding areas with sensitive species (e.g., Catalina mariposa lily).	LTS
Loss of food sources for wildlife.	Planting new oaks and understory plants.	LTS
Loss of nesting, denning, burrowing, hibernating and roosting structures.	Planting new oaks and understory plants.	LTS
Loss of habitats and refugia for sedentary species and those with special habitat requirements, i.e. mosses, lichens, rocks, native grasses and fungi.	Avoiding areas with sensitive species and other unique (to the site) natural features.	LTS
Road construction, grading, trenching, activities affecting changes in grade, other road-related impacts.	n/a	LTS
Road construction, grading, trenching, activities affecting changes in grade, other road-related impacts.	n/a	LTS
Loss of riparian function, reduced bank stability and increasing sedimentation or water temperature that impacts native fishes and other aquatic species.	n/a	LTS
Road building activities that aggravate existing conditions	n/a	LTS
Changes in environmental conditions that prevent existing residual trees from natural regeneration.	Irrigating newly-planted oaks and understory species for 5-7 years to encourage establishment.	LTS
Proposed project designs that result in construction that poses barriers to wildlife or fish passage.	n/a	LTS
Proposed project designs that result in the probable introduction or expansion of invasive plants and animals	Maintaining and weeding understory plantings for 5-7 years.	LTS
Loss of individual heritage trees that are recognized and/or protected by ordinance or statutes.	Establishing Best Management Practices for future fuel modification and tree-trimming sitewide.	LTS
Loss of appropriate recruitment sites for recognized and/or protected heritage tree species.	Establishing Best Management Practices for future fuel modification and tree-trimming sitewide.	LTS
Loss of individual trees where the natural occurrence and range of the species has been dramatically reduced and altered resulting in decreased recruitment/restoration potential for the species.	n/a	LTS
The removal of even a few individual trees that represents a significant portion of the existing population of	Establishing Best Management Practices for future fuel modification and tree-trimming sitewide.	LTS

that species.		
Loss of ecosystem services such as groundwater recharge, erosion protection, water quality protection, temperature moderation.	n/a	LTS
Changes to carbon sequestration potential.	n/a	LTS
Loss of view-shed, aesthetics, amenity value, public recreation opportunities, historic or cultural resources.	n/a	LTS

Recommendations for Oak Woodland Mitigation

Estimating either "ideal" oak woodland stand density (in terms of trees per acre) is nearly impossible, since natural tree density in this habitat varies tremendously based on tree age and size, slope, topography, and many other factors. Further, oak tree density is highly variable *within* stands, because overall tree biomass may be represented by a small number of very large oaks, or a profusion of smaller trees. And, because most available research has focused on tree (or wood) volume and production, or on aspects of oak tree regeneration, reported counts of individual trees are uncommon in the literature. With these caveats, a sampling of 20 stands of oak woodland and savannah (including many coast live oak) at Sedgewick Preserve in Santa Barbara Co. reported stand densities averaging 4.4-5.5 trees/acre, with a maximum of 11.8 trees/acre in stands sampled (http://www.biogeog.ucsb.edu/projects/oak/reports/finalreportSBCORP_oct2005.pdf). Another study of seven widely-spaced oak stands throughout California (of three species, *Q. douglasii*, *Q. wislizenii* and *Q. agrifolia*) found a stand density (measured in volume of wood, rather than number of trees) ranging from 6 to 170 s.f./acre, which roughly translates into 6 to 170 mature oaks per acre (assuming a basal diameter of c. 13.5"; https://calag.ucanr.edu/download_pdf.cfm?article=ca.v042n04p23). Of course, since 170 mature oaks would be unlikely to occur in a single acre, the number of oak trees expected to occupy a mature oak woodland would be much closer to the six trees/acre than 170.

In terms of planting recommendations, Standiford, McCreary and Frost (2002) found that for blue oak (*Q. douglasii*) woodland restoration, at the highest level of management, a planting density of 200 trees per acre would take ten years following planting to reach the minimum 10% canopy cover criteria for oak woodland under optimal site conditions. Thus, one could reasonably use a 200-300 tree/acre planting requirement to achieve a 10% cover of oak woodland at a given site within the seven years recommended by Los Angeles County.

Because the project site will continue to be managed (by the school) as a "Nature Area" (i.e., with oak woodland habitat), we strongly recommend including existing volunteer oaks (or previously-planted seedlings) in calculating on-site mitigation. Full details on this mitigation are found in the *Native Tree and Coastal Sage Scrub Replacement*

Planting Mitigation, Maintenance and Monitoring Plan, and will include direction on understory restoration planting, as well as on preventing impacts from fuel modification.

Continued fuel modification management will be required to protect the existing school structures located adjacent to the oak woodland, but future guidance provided by the Fuel Modification Guidelines (Appendix C) of the *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan* should limit impacts going forward.

As described above, we intend our project to reduce these ongoing impacts, and those resulting from the 2020 violation, to a "Less Than Significant" level through implementation of the Fuel Modification Plan and the *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan,* which provide guidelines for Best Management Practices to minimize future impacts at the project site.

Fencing

We do not recommend a fencing plan; the site is largely fenced from Topanga School Rd., and difficult for the public to access from the west/north (via Backbone Trail).

COORDINATION WITH OTHER PLANS

Fuel Modification Plan Coordination

A fuel modification plan for the project site has been prepared in conjunction with this report and is detailed in the *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan*. **Table 13** shows the distribution of existing native trees within each of the fuel modification zones in the project area, including 124 volunteer saplings proposed for use as mitigation (see Appendix A for inventory of individual trees).

We propose that additional mitigation planting occur primarily on state park property adjacent to the impacted area, and *outside* the 100 ft fuel modification zone for the school, as shown in the proposed Restoration Planting Plan (**Figure 14**). Placing restoration trees outside the 200 ft zone will reduce competition from existing oaks as well as reduce potential for any future inadvertent impacts due to fuel modification activities.

As shown in **Table 13**, we mapped a total of 50 flammable non-native trees within the fuel modification zones. Removal of all is recommended, but especially of the 44 trees located in Zones A and B. The majority of trees in the fuel modification zones (n = 241) are native, however, and specific guidelines on appropriate limbing up, trimming and understory clearing are found in the *Native Tree and Coastal Sage Scrub Replacement Planting Mitigation, Maintenance and Monitoring Plan.*

Table 13. Summary of all trees that are located in the impacted and proposed fuel modification zones.

Native					
Botanical	**Common**	**Zone A**	**Zone B**	**Zone C**	**TOTALS**
Heteromeles arbutifolia	Toyon	0	1	4	5
Malosma laurina	Laurel Sumac	2	1	3	6
Platanus racemosa	California Sycamore	1	0	0	1
Quercus agrifolia	Coast Live Oak	11	62	143	216
Rhamnus ilicifolia	Hollyleaf Redberry	0	1	8	9
Rhus integrifolia	Lemonade Berry	1	2	0	3
Sambucus mexicana	Mexican Elderberry	0	0	1	1
	TOTALS	**15**	**67**	**159**	**241**
Non Native					
Botanical	**Common**	**Zone A**	**Zone B**	**Zone C**	
Juniperus chinensis	Chinese Juniper	1	0	0	1
Pinus canariensis	Canary Island Pine	1	0	0	1
Pinus halepensis	Aleppo Pine	7	33	6	46
Pinus torreyana	Torrey Pine	1	0	0	1
Schinus molle	California Pepper	1	0	0	1
	TOTAL	**11**	**33**	**6**	**50**

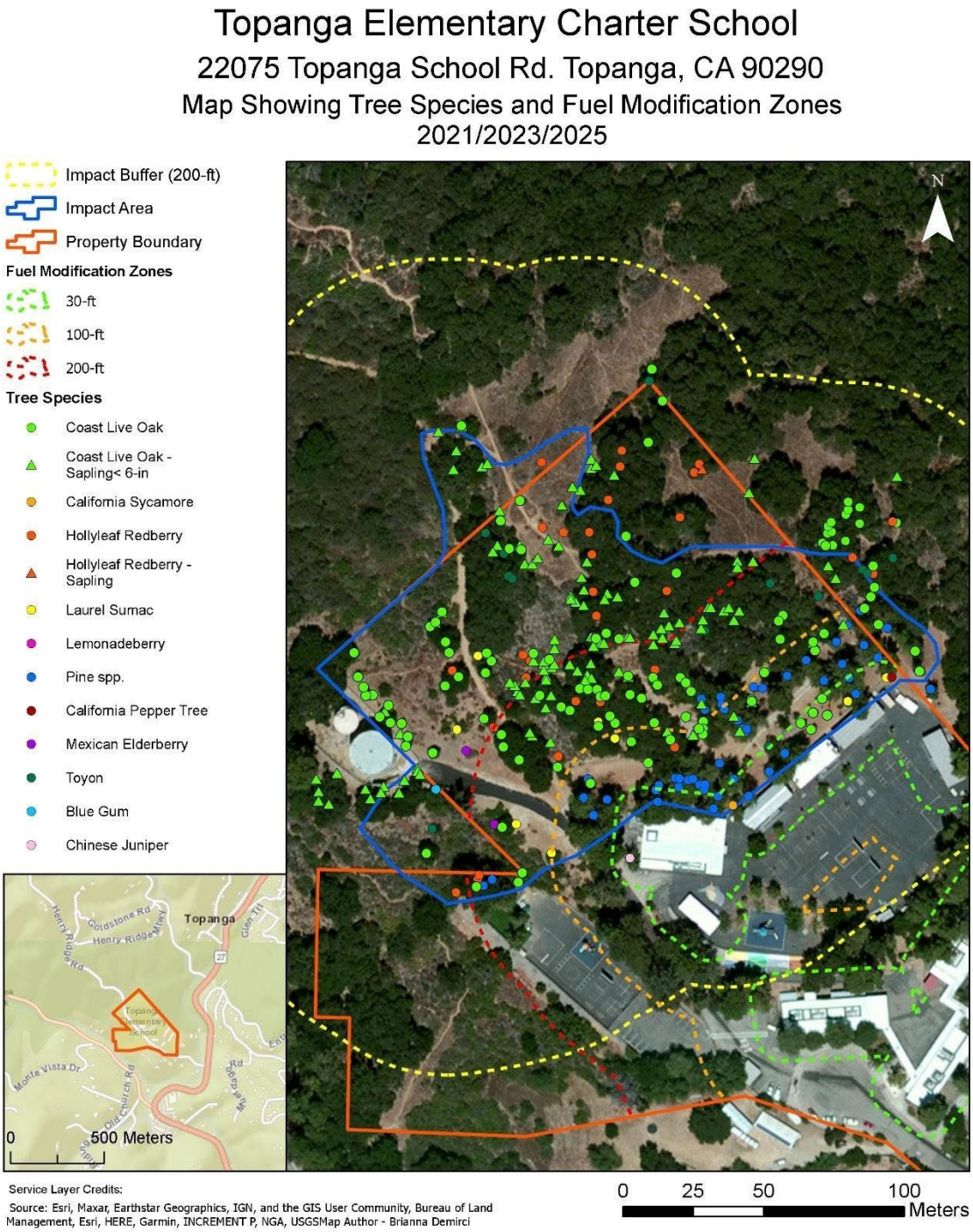


Figure 10. Fuel Modification Zones with locations of individual trees shown in each.

Restoration Planting Plan Coordination

Recommendations on the placement, care and monitoring proposed for replacement and existing trees, and native plantings, are detailed in the *Native Tree and Coastal Sage Scrub Restoration Planting, Mitigation, Maintenance and Monitoring Plan.*

Our proposed use of the 124 coast live oak volunteers currently growing on the site furthers the County goals of supporting restoration of locally sourced seeds (see Appendix A for complete inventory of these trees).

GENERAL PROJECT RECOMMENDATIONS

1. Require that all Best Management Practices outlined in the Fuel Modification Guidelines and Restoration Planting Plan are implemented.
2. Required implementation of the *Native Tree and Coastal Sage Scrub Restoration Planting, Mitigation, Maintenance and Monitoring Plan.*
3. If a decision is made to *not* use existing volunteer baby oaks for required mitigation, then any additional planting will be done using genetic material collected locally within the watershed, and will be planted in fall according to industry standards.
4. Soil of any seedlings grown for mitigation planting will be tested for *Phytophthora sp.* and not installed unless deemed safe.
5. All mitigation plantings will be selected according to the guidelines detailed in the *Native Tree and Coastal Sage Scrub Restoration Planting Mitigation, Maintenance and Monitoring Plan.* As required by the LCP, D-slip or equivalent size, plus an acorn, will be planted for each mitigation tree required.
6. All mitigation plantings will be installed in a random, natural pattern within the locations identified on the (revised) plot plan included with this report.
7. The removal of any living limbs and all deadwood will be done under the supervision of a Certified Arborist or other qualified professional in accordance with the standards of the LA County Oak Tree Protection Ordinance, the Local Coastal Plan and ISA. Remedial pruning to remove stub cuts should also be done. No trees will be "lollipopped".
8. A nesting bird survey should be conducted according to industry standards prior to any activities in or around the trees.
9. Any roots larger than 1" diameter will be kept if possible. While exposed, they will be wrapped in burlap and kept moist. If it is necessary to cut any roots, they shall be cut cleanly.
10. All work done in the protected zone (edge of the dripline plus 5 feet or within 15' of the trunk, whichever is greater) of the trees shall be done using hand tools in accordance with the LA County Oak Tree Protection Ordinance.
11. Soil compaction within the root zone shall be minimized. No equipment, spoils or debris will be stored within the protected zone of the trees.
12. No dumping of liquids or solvents, paints, concrete washout or other harmful substances will be permitted. All cleaning fluids will be disposed of properly.
13. Monitoring will continue for 7 years post approval of the permit. The arborist will submit a yearly report documenting condition of all tagged and planted mitigation trees based on two visits per year.
14. Fuel reduction for brush clearance will minimize impacts to the native trees and oaks and the native understory vegetation.
15. A copy of this report will be kept on site for reference during any of the proposed permitted activities.

REFERENCES

Dagit, R., T. Hartwig, C. Simon, J. Decruyenaere, D. LeFer, T. Scott, M. Witter, M. Ferriter, L. Jessup, R. Ly and J. Spector. 2019. *Los Angeles County Native Tree Priority Planting Plan for the Santa Monica Mountains National Recreation Area*. Final Report for Los Angeles County Contract #SPF03-03. Resource Conservation District of the Santa Monica Mountains, Topanga, CA.

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Pillsbury, N., L. E. Bonner and R. P. Thompson. 2002. Coast Live Oak Long-term Thinning Study: 12 year results. *In*: Standiford, R. B., *et al*, Tech. Ed. *Proceedings of the Fifth Symposium on Oak Woodlands: Oaks in California's Challenging Landscape*. Gen. Tech. Rep. PSW-GTR-184, Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture: 681-692

Appendix A.

2021 AND 2023 Field Data Summarizing Tree Condition

Table A-1. Summary of all trees within the fuel modification zones.

lification Zone A (30-ft)										
Tag #	Botanical	Common	2023 health	2021 Health	2023 DBH total	2021 DBH (Total)	Height	Latitude	Longitude	LAUSD Tag
1	Juniperus chinensis	Chinese Juniper	80% - Good	60% - Fair	18	18	23'	34.09278	-118.605	1065061
555	Pinus canariensis	Canary Island Pine	80% - Good	80% - Good	17	13	30'	34.09334	-118.604	No Tag
556	Schinus molle	California Pepper Tree	80% - Good	80% - Good	8	9	10'	34.09337	-118.604	1065101
571	Malosma laurina	Laurel Sumac	80% - Good	60% - Fair	10	7	15'	34.09337	-118.604	1065100
572	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	6	4	8'	34.09339	-118.604	1065150
578	Pinus halepensis	Aleppo Pine	60% - Fair	60% - Fair	22	22	50'	34.09332	-118.604	No Tag
579	Malosma laurina	Laurel Sumac	60% - Fair	60% - Fair	11	11	15'	34.09329	-118.604	No Tag
580	Quercus agrifolia	Coast Live Oak	60% - Fair	60% - Fair	5	4	10'	34.09331	-118.604	1065145
583	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	7	5	10'	34.09328	-118.604	1065143
584	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	6	6	14'	34.09325	-118.604	1065144
585	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	7	10	10'	34.09326	-118.604	No Tag
587	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	9	15	18'	34.0932	-118.604	1065195
588	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	8	11	18'	34.09322	-118.604	1065193
589	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	1	1	4'	34.09319	-118.605	No Tag
590	Quercus agrifolia	Coast Live Oak	80% - Good	60% - Fair	7	4	7'	34.09314	-118.605	1065109
591	Pinus halepensis	Aleppo Pine	80% - Good	60% - Fair	22	22	40'	34.09312	-118.605	1065110
593	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	24	24	59'	34.09307	-118.605	1065135
594	Pinus torreyana	Torrey Pine	40% - Poor	60% - Fair	19	17	74	34.09299	-118.605	1065132
595	Platanus racemosa	California Sycamore	40% - Poor	80% - Good	15	13	43'	34.09295	-118.605	1065114
597	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	20	17	70	34.09294	-118.605	1065113
759	Rhus integrifolia	Laurel Sumac	80% - Good	80% - Good	6	8	12'	34.093	-118.605	1065131
762	Quercus a - Sapling	CLO-sapling	40% - Poor	80% - Good	4	4	5	34.09295	-118.605	No Tag
763	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	5	3	10	34.09294	-118.605	1065129
765	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	10	10	35'	34.093	-118.605	1065057
770	Pinus halepensis	Aleppo Pine	60% - Fair	80% - Good	28	28	59'	34.09296	-118.605	1065133
775	Pinus halepensis	Aleppo Pine	60% - Fair	80% - Good	15	15	55'	34.09298	-118.605	1065134

ification Zone B (100-ft)										
Tag #	Botanical	Common	2023 health	2021 Health	2023 DBH total	2021 DBH (Total)	Height	Latitude	Longitude	LAUSD Tag
18	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	55	32	37'	34.09318	-118.805	1085282
114	Malosma laurina	Laurel Sumac		80% - Fair	5	5	15'	34.09318	-118.805	
118	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Fair	7	7	10'	34.09315	-118.805	No Tag
119	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Fair	7	8	12'	34.09318	-118.805	1085288
121	Rhamnus ilicifolia	Hollyleaf Redberry	80% - Good	80% - Good	2	2	8'	34.09314	-118.805	No Tag
123	Quercus a - Sapling	CLO-sapling	dead	80% - Fair	1	1	3'	34.09313	-118.805	
446	Quercus a - Sapling	CLO-sapling	80%-Good	80% - Good	2	2	7'	34.09338	-118.805	
447	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Fair	22	22	50'	34.09337	-118.805	No Tag
456	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	40	37	81	34.09326	-118.805	1085484
457	Quercus a - Sapling	CLO-sapling	80% - Fair	80% - Good	1	1	3	34.09323	-118.805	No Tag
458	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	32	23	87	34.09323	-118.805	1085479
459	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	2	1	3	34.09323	-118.805	No Tag
460	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	2	3	3	34.09321	-118.805	No Tag
485	Quercus agrifolia	Coast Live Oak	80% - Good		4			34.09318	-118.805	No Tag
486	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	19	18	35'	34.09318	-118.805	1085418
501	Quercus agrifolia	Coast Live Oak	40% - Poor	80% - Good	7	7	18'	34.09341	-118.804	No Tag
502	Pinus halepensis	Aleppo Pine	40%- Poor	80% - Fair	32	31	40'	34.09342	-118.804	
504	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	1	1	2'	34.09347	-118.805	No Tag
508	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	8	8	15'	34.09345	-118.804	1085503
509	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Fair	2	2	12'	34.09351	-118.804	
510	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Fair	2	2	12'	34.09351	-118.804	
511	Quercus a - Sapling	CLO-sapling	80%- good	80% - Fair	3	2	10'	34.09352	-118.804	
512	Quercus a - Sapling	CLO-sapling	80%- good	40% - Poor	3	3	15'	34.09354	-118.804	
513	Quercus a - Sapling	CLO-sapling	80%- good	40% - Poor	2	1	8'	34.09352	-118.804	
514	Quercus a - Sapling	CLO-sapling	80%- good	80% - Fair	2	2	15'	34.09351	-118.804	
518	Quercus a - Sapling	CLO-sapling	80%- good	80% - Fair	3	3	12'	34.09349	-118.804	
519	Quercus agrifolia	Coast Live Oak	80%- Fair	80% - Fair	8	8	22'	34.09351	-118.804	
520	Quercus a - Sapling	CLO-sapling	80%- good	80% - Fair	2	1	10'	34.0935	-118.804	
521	Quercus a - Sapling	CLO-sapling	80%- good	80% - Fair	2	1	10'	34.0935	-118.804	
523	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	3	4	9'	34.09344	-118.804	1085484
524	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	1	2	8'	34.09352	-118.804	No Tag
526	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	24	22	50'	34.09359	-118.804	No Tag
527	Quercus a - Sapling	CLO-sapling	80% - Fair	80% - Good	3	2	8	34.09324	-118.805	1085490
528	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Good	4	2	8	34.09325	-118.805	1085488
529	Quercus a - Sapling	CLO-sapling	80% - Fair	80% - Good	8	2	8	34.09326	-118.805	1085489
530	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Good	7	5	8	34.09326	-118.805	1085488
531	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	8	5	12	34.09326	-118.805	1085501
532	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	31	31	80	34.0932	-118.805	1085481
533	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	1	1	3	34.09318	-118.805	No Tag
534	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	2	1	3	34.09319	-118.805	No Tag
535	Quercus a - Sapling	CLO-sapling	80% - Fair	80% - Good	2	1	3	34.0932	-118.805	No Tag
536	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	9	9	39'	34.09319	-118.805	1058471
537	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	5	5	24'	34.0932	-118.805	1085482
538	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Good	34	3	4	34.09326	-118.805	No Tag
539	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	2	2	8	34.09324	-118.805	No Tag
541	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Good	19	2	8	34.09325	-118.805	No Tag
542	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	13	12	40'	34.09333	-118.805	1085489
544	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	25	25	50'	34.09333	-118.805	1085493
545	Quercus a - Sapling	CLO-sapling	80% - Good	80% - Fair	2	2	7'	34.09335	-118.805	No Tag
546	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09354	-118.804	No Tag
547	Quercus agrifolia	Coast Live Oak	80% - Good		7			34.09354	-118.804	No Tag
548	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Fair	2	1	8'	34.09355	-118.804	No Tag
549	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Fair	5	6	8'	34.09354	-118.804	No Tag
550	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Fair	8	5	20'	34.09358	-118.804	No Tag
551	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Fair	5	5	15'	34.09357	-118.804	No Tag
552	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Fair	19	20	50'	34.09353	-118.804	No Tag
553	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	11	10	20'	34.09348	-118.804	No Tag
554	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	10	10	18'	34.09339	-118.804	No Tag
573	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	23	23	60'	34.09344	-118.804	1085160
574	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	36	36	80'	34.09348	-118.804	1085159
575	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Fair	48	48	50'	34.09341	-118.804	1085148
578	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Fair	17	17	50'	34.09337	-118.804	1085147
581	Pinus halepensis	Aleppo Pine	80%- Fair	80% - Fair	19	19	50'	34.09336	-118.804	1085192
582	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	5	8	10'	34.0933	-118.804	1085152
586	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	5	4	10'	34.09328	-118.804	1085153
643	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09302	-118.805	
656	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09338	-118.805	
657	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09329	-118.805	
658	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09329	-118.805	
659	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09348	-118.804	
660	Quercus agrifolia	Coast Live Oak	80% - Good		1			34.09359	-118.804	
661	Quercus agrifolia	Coast Live Oak	80% - Good		8			34.09309	-118.805	1085283
662	Quercus a - Sapling	CLO-sapling	80% - Good		1			34.09309	-118.805	No Tag
751	Quercus a - Sapling	CLO-sapling	80% - Fair	80% - Fair	5	2	10'	34.09299	-118.805	1085022
752	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Fair	1	1	10'	34.09298	-118.805	No Tag
753	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Fair	7	5	15'	34.0929	-118.805	1085000
754	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	7	8	28'	34.09297	-118.805	1085003
755	Quercus agrifolia	Coast Live Oak	80% - Fair	80% - Fair	3	2	9'	34.09295	-118.805	No Tag
756	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	48	48	55'	34.09297	-118.805	1085002
757	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	22	22	60'	34.09292	-118.805	1085041
758	Rhus integrifolia	Lemonade Sumac	80% - Good	80% - Good	10	10	12'	34.09302	-118.805	1085125
760	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Fair	4	2	8'	34.09299	-118.805	1085074
764	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	10	10	35'	34.09302	-118.805	1085075
766	Quercus agrifolia	Coast Live Oak	80% - Good	80% - Good	1	2	8	34.09303	-118.805	No Tag
768	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	28	28	75	34.09301	-118.805	1085136
771	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	14	14	78	34.09303	-118.805	1085127
772	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	9	9	59'	34.09304	-118.805	1085126
773	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	11	11	42'	34.09304	-118.805	1085130
774	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	19	19	85	34.09304	-118.805	1085115
776	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	12	12	54'	34.093	-118.805	1085118
777	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	14	14	55'	34.09302	-118.805	1085122
778	Pinus halepensis	Aleppo Pine	40% - Poor	80% - Good	8	8	42'	34.09302	-118.805	1085121
779	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	9	8	42'	34.09304	-118.805	1085128
780	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	7	7	28'	34.09303	-118.805	1085072
783	Pinus halepensis	Aleppo Pine	80% - Good	80% - Good	3	3	20'	34.09354	-118.804	1085584
784	Pinus halepensis	Aleppo Pine	80%- Fair	80% - Good	8	8	35'	34.09309	-118.805	
793	Heteromeles arbutifolia	Toyon	80% - Good	80% - Fair	18	18	15'	34.09315	-118.805	1085111
794	Rhus integrifolia	Lemonade Sumac	80%- good	80% - Fair	10	14	18'	34.09324	-118.805	
798	Pinus halepensis	Aleppo Pine	80% - Fair	80% - Good	15	15	45'	34.09348	-118.804	1085572
Tag Missing	Quercus agrifolia	Coast Live Oak	80%- Fair		45			34.09348	-118.804	1085381

Table A-2. List of potential volunteer oaks that could be used for mitigation.

2025 saplings added >6 inches Tag #	2025 Ht inches	2025 Health	latitude	longitude	
900	4	Good	34.09172	-118.58432	
901	2	Good	34.09296	-118.60614	
902	2	Good	34.09389	-118.60566	
903	2	Good	34.093	-118.60609	
904	2	Good	34.09302	-118.60601	
905	2	Good	34.09306	-118.60596	
906	3	Good	34.09305	-118.60596	
907	3	Good	34.09304	-118.60595	
908	3	Good	34.09298	-118.60603	
909	5	Good	34.09298	-118.6061	
910	4	Good	34.09299	-118.60616	
911	3	Good	34.09304	-118.60627	
912	4	Good	34.09294	-118.6063	
913	4	Good	34.09302	-118.60635	
914	3	Good	34.09298	-118.60634	
915	5	Good	34.09295	-118.60634	
916	4	Good	34.09324	-118.60609	
917	5	Good	34.09317	-118.60603	
918	3	Good	34.09317	-118.60552	
919	4	Good	34.09318	-118.60553	
920	4	Good	34.09315	-118.60548	
921	3	Good	34.09331	-118.60558	
922	4	Good	34.09333	-118.60557	
923	3	Good	34.09329	-118.60551	
924	3	Good	34.09334	-118.60555	
925	4	Good	34.09333	-118.60559	
926	5	Good	34.09334	-118.60561	
927	4	Good	34.09326	-118.60547	
928	5	Good	34.09414	-118.6059	
929	4	Good	34.09416	-118.60581	
930	5	Good	34.09372	-118.60553	
931	2	Good	34.09403	-118.60573	
932	3	Good	34.09408	-118.60583	
933	5	Good	34.09372	-118.60556	
934	2	Good	34.09378	-118.60558	
935	5	Good	34.09374	-118.60551	
936	3	Good	34.09368	-118.60534	
937	2	Good	34.09404	-118.60571	
938	3	Good	34.09402	-118.60584	
939	4	Good	34.09364	-118.60533	
940	3	Good	34.09363	-118.60524	
941	5	Good	34.09361	-118.60525	
942	4	Good	34.09359	-118.60533	
943	7	Good	34.09361	-118.60538	
944	7	Good	34.09362	-118.6052	
945	5	Good	34.09357	-118.60502	
946	5	Good	34.09353	-118.605	
947	5	Good	34.09352	-118.60503	
948	5	Good	34.0935	-118.60506	
949	5	Good	34.09347	-118.60527	
950	5	Good	34.09362	-118.60538	
951	4	Good	34.0936	-118.60536	
952	4	Good	34.09347	-118.60526	
953	4	Good	34.09347	-118.60525	
954	4	Good	34.09349	-118.60516	
955	4	Good	34.09346	-118.60529	
956	4	Good	34.09373	-118.60532	
957	5	Good	34.09349	-118.6053	
958	5	Good	34.09349	-118.60529	
959	5	Good	34.09349	118.60515	
960	5	Good	34.09354	-118.60496	
961	5	Good	34.09355	-118.60487	
962	5	Good	34.09359	-118.60485	
963	5	Good	34.09359	-118.60484	
964	5	Good	34.0936	-118.608	
965	5	Good	34.09358	-118.60479	
966	5	Good	34.09359	-118.60477	
967	5	Good	34.09358	-118.60473	
968	5	Good	34.09355	-118.60475	
969	5	Good	34.09374	-118.60468	
970	5	Good	34.09374	#NAME?	
971	5	Good	34.09372	-118.60474	
972	5	Good	34.09396	-118.6047	
973	5	Good	34.939	-118.60503	
974	5	Good	34.09402	-118.60413	
975	5	Good	34.09407	-118.60468	
976	5	Good	34.09378	-118.60543	
977	5	Good	34.0938	-118.60547	
978	5	Good	34.09391	-118.60542	
979	5	Good	34.09396	-118.60535	
980	5	Good	34.09397	-118.60538	
981	5	Good	34.09403	-118.60531	
982	4	Good	34.09406	-118.60531	
983	4	Good	34.09404	-118.60529	
984	4	Good	34.09401	-118.60522	
985	5	Good	34.09373	-118.60439	
986	4	Good	34.09369	-118.60436	
987	5	Good	34.09328	-118.60487	
988	4	Good	34.09318	-118.6049	
989	4	Good	34.09319	-118.605	
990	5	Good	34.09338	-118.60519	
991	3	Good	34.09335	-118.60532	
992	2	Good	34.09338	-118.60535	
993	5	Good	34.09339	-118.60545	
994	2	Good	34.0934	-118.60538	
995	5	Good	34.0934	-118.60544	
996	4	Good	34.09341	-118.60552	
997	4	Good	34.09336	-118.60547	
998	4	Good	34.0933	-118.60545	
999	5	Good	34.09335	-118.60547	
1000	2	Good	34.0934	-118.60548	
1001	3	Fair	34.09338	-118.60548	
1002	4	Good	34.09341	-118.60548	
1003	5	Good	34.09345	-118.60544	
1004	3	Good	34.09348	-118.60544	
2023 Saplings still present		**2025 Health**	**latitude**	**longitude**	**DBH**
126		Good	34.0934037	-118.605299	>1
141		Good	34.0934681	-118.6050589	3
152		Good	34.09349	-118.6050242	1.5
187		Good	34.0937788	-118.6056664	>1
188		Good	34.093757 9	-118.6056834	6
383		Fair	34.093522	-118.604876	4
394		Fair	34.0934733	-118.604977	4
400		Fair	34.0934827	-118.6049709	1
535		Fair	34.093195	-118.6047209	2
539		Fair	34.093243	-118.6047449	2
546		Good	34.093542	-118.604328	>1
646		Fair	34.093527	-118.6059	>1
647		Good	34.09356	-118.605875	>1
648		Good	34.094157	-118.605812	>1
652		Good	34.093368	-118.605312	>1
653		Good	34.093357	-118.605295	>1
654		Fair	34.093363	-118.605154	>1
658		Good	34.093289	-118.604677	>1
659		Good	34.093482	-118.604444	>1

APPENDIX B.

Photos of All Tagged Trees

TO BE ADDED IN FINAL

APPENDIX C.
FUEL MODIFICATION GUIDELINES
AND
BEST MANAGEMENT PRACTICES (BMP's)

TOPANGA ELEMENTARY SCHOOL
18 May 2023

Annual Fuel Modification will be done in accordance with the Santa Monica Mountains Local Coastal Implementation Plan (LIP Sections 22.44.950, 22.1920.K) and the County of Los Angeles Oak Tree Protection Ordinance (Title 22: Part 6). These guidelines incorporate some but not all of the LAUSD Maintenance and Operations Scope of Work for Fire Clearance and Tree Trimming. Fuel reduction for brush clearance will minimize impacts to the native trees and oaks and the native understory vegetation.

A copy of these Guidelines will be kept on site for reference during any of the proposed permitted activities and provided as part of the Scope of Work for any contractors.

LAUSD AND California Department of Recreation (CDPR) Requirements:

1. LAUSD will oversee contractor for fuel modification and tree care in coordination with CDPR.
2. Contractor shall be licensed by the Contractors State License Board with a D-49 license.
3. Contractor shall provide (acceptable to the District) General Liability Insurance, Workman Compensations Insurance and insurance on all vehicles, owned, non-owned or hired. Contractor shall be listed on Los Angeles Unified School District Safety Pre-Qualify Requirements Log. See LAUSD Contractor Safety Pre-Qualifications Requirements page in the Project Manual.
4. Contractor shall be responsible for complying with relevant permits and Right of Entry agreements with California Department of Parks and Recreation, Angeles District.
5. Contractor will work with LAUSD and CDPR to obtain a Los Angeles County Oak Tree Permit if tree removal, or branches greater than 2 inches need pruning, or any other potential impact requiring compliance with the Oak Tree Protection Ordinance.
6. The LAUSD Tree Department and the site administrator shall arrange a job start meeting with CDPR to coordinate start date and award the contract. The accepted Best Value Rank contractor shall be present at this meeting and will be awarded the contract by signing the B-Letter and reviewing these Guidelines and BMP's.
7. Performance Bonds for jobs of $15,000 or more shall be delivered within ***6 working days after opening of bids*** to the Tree Department.
8. All work shall be completed in its entirety within the schedule established by the site administrator and CDPR.
9. Contractor must have a minimum of six (6) employees on the job site. All employees must wear a company uniform or safety vest at all times, preferably with company and employee names in plain sight.

10. Contractor must have a least one (1) foreman on sight at all times who can communicate clearing in ENGLISH or any language spoken by other crew members that do not speak ENGLISH during the performance of this contract.
11. Only competent workers shall be employed by the contractor. Any worker who is found to be incompetent, intermate, troublesome, disorderly or otherwise objectionable, or who fails or refuse to perform work properly and acceptable shall be immediately removed from the district and CDPR work site and not be reemployed on future District contracted work.
12. Contractor shall provide an International Society of Arboriculture (ISA) Certified Arborist to direct and apply ISA tree trimming standard to all contracted tree trimming functions. The certified Arborists shall be onsite for the initial kick off meeting with LAUSD and CDPR and be present on site to supervise and document all tree trimming activities. Inspections by the District shall not relieve the contractor of the obligation to fulfill the conditions of the contract.
13. Contractor shall provide a Qualified Biologist or Restoration Ecologist to direct and CNPS and SMMLCP standards to all contracted fuel modification within the restoration planted areas in Zones A and B. The Qualified Biologist or Restoration Ecologist shall be onsite for the initial kick off meeting with LAUSD and CDPR and be present on site to supervise and document all fuel modification activities. Inspections by the District shall not relieve the contractor of the obligation to fulfill the conditions of the contract.
14. The Contractor shall employ the American National Standard(ANSI) for Tree Care Operations – Tree, Shrub, and other Woodly Plant Maintenance- Standard Practices (Pruning) with a limit of no more than 15% of living material removed unless there is a documented Risk Assessment that dictates additional removal.
15. The contractor will employ ANSI 2133.1- American National Standard for Arboriculture Operations - Pruning, Repairing, Maintaining and Removing Trees and Cutting Brush- Safety Requirements.
16. Contractor will notify LAUSD Tree Department and CDPR upon completion of all work.
17. The LAUSD Tree Department, site administrator and CDPR must authorize any change in schedule.
18. While engaging in work during closed school hours the contractor shall notify School Police (213) 625-6631 by phone at the beginning and end of the work day.
19. Contractor shall contact State Parks DISPATCH 951.443.2969 at the start of each work day where activities will occur within Topanga State Park.
20. Contractor shall provide a temporary restroom such as a mobile porta potty for the length of the contract. If contractor leaves portable restroom overnight, contractor is required to provide secured temporary fencing and lock restroom with padlock.

GENERAL BMP's

1. All work will be done using hand tools that are disinfected between trees with a 10% Clorox solution.

2. All vehicles, machinery, tools and equipment shall be in good and safe conditions. Such equipment shall meet all requirements of applicable ordinance and laws including OSHA requirements.
3. Any vehicles used to access existing fire roads shall be thoroughly cleaned and undercarriage, tires and axles washed prior to arrival at the site. Contractor shall operate all vehicles in a manner that will not cause scrapes, marks, stains, scuff or any other marks to hard surfaces such as, but not limited to, concrete walks, landing and driveways and not cause damage to planted or native wildland areas.
4. Clean and remove all trash and debris (excluding natural materials to remain as mulch) from hillsides.
5. A nesting bird survey should be conducted according to industry standards prior to any activities in or around the trees.
6. No dumping of liquids or solvents, paints, concrete washout or other harmful substances will be permitted. All cleaning fluids will be disposed of properly.
7. Monitoring will continue for 7 years post approval of the permit. The Certified Arborist will submit a yearly report documenting the condition of all tagged and planted mitigation trees based on two visits per year.

VEGETATION REMOVAL TREATMENTS

1. Prior to commencing work the Qualified Biologist will walk the site, especially the H1 areas within the 100 foot fuel modification area and mark any sensitive plants that should be retained in addition to those noted on the Restoration Planting Plan.
2. Removal of understory vegetation within Zone A will be supervised by a Qualified Biologist or Restoration Ecologist.
3. Removal will be done with hand tools and avoid impacts to native understory plants.
4. Clearance will be focused on Zone A with less intense removal in Zone B.
5. Weed whacking and cutting tools shall be kept sharpened to a condition that will leave a smooth final cut. Such tools shall be kept clean, disinfected with a 10% Chlorox solution and kept free of infections materials.
6. Removal will be done in late winter through early summer before invasive grasses seed set or plants reach 12 inch height.
7. Hand removal of invasive species such as *Euphorbia terricina*, etc. shall be implemented as directed by the Qualified Biologist or Restoration Ecologist in coordination with CDPR ecologist to reduce spread into the adjacent state park.
8. Cut invasives, especially seeds, shall be placed in closed containers and disposed of at a landfill.

TREE PLANTING AND TRIMMING TREATMENTS

1. The removal of any living limbs and all deadwood will be done under the supervision of a Certified Arborist or other qualified professional in accordance with the standards of the LA County Oak Tree Protection Ordinance, the Local Coastal Plan, ANSI and ISA standards. A LA County Oak Tree Permit will be required to be on site at all times if pruning or tree care needs meet the standard for need. Remedial pruning to remove stub cuts should also be done. No trees will be “lolly-popped”.

2. Pruning and cutting tools shall be kept sharpened to a condition that will leave a smooth final cut. Such tools shall be kept clean, disinfected with a 10% Chlorox solution between cuts and kept free of infections materials.
3. Pruning Cuts:
    - All pruning cuts shall be made just outside the branch bark ridge collar, without causing injury to the tree.
    - NO FLUSH CUTS permitted.
    - No stubs shall be left in the tree. Cuts shall have no ripping or tearing of the bark.
4. General Pruning:
    - Remove NO MORE than 15 % of tree foliage unless otherwise directed by the onsite Certified Arborist in accordance with the Tree Maintenance Dept. and CDPR.
    - Sufficient branch structure should remain in the interior of the tree.
    - Foliage shall be removed in a manner to leave the tree in symmetrical balance.
    - Remove dead, diseased, damaged and crossing limbs ONLY within the first 100 ft (Zone B).
    - All trunks and branches larger than 6 inches in diameter shall be cut in sections not to exceed 6 feet in length and shall be lowered to the ground using ropes or other mechanical devises. ANY SUCH REMOVAL SHALL BE COVERED BY AN OAK TREE PERMIT.
    - Smaller limbs with the potential for property damage or personal injury shall also be lowered using ropes or other mechanical devices. The use of ropes or other mechanical devices to lower limbs shall not relieve the contractor of liabilities resulting from property damage or personal injury.
    - No crown reduction or drop crotch pruning shall be done at this site.
5. Native trees will be limbed up from the ground a maximum of 6 feet only within the first 100 feet (Zone B).
6. No native trees will be removed without a LA County Oak Tree Permit and approval from CDPR.
7. Certified Arborist will survey and document presence of any invasive beetles, diseases or pathogens. Reports will be shared with LAUSD, CDPR and Los Angeles County Agricultural Commissioner to determine appropriate follow up treatment.
8. Any roots larger than 1” diameter will be kept if possible. While exposed, they will be wrapped in burlap and kept moist. If it is necessary to cut any roots, they shall be cut cleanly.
9. All work done in the protected zone (edge of the dripline plus 5 feet) of the trees shall be done using hand tools in accordance with the LA County Oak Tree Protection Ordinance.
10. Soil compaction within the root zone shall be minimized. No equipment, spoils or debris will be stored within the protected zone of the trees.
11. All trees shall be planted in accordance with the requirements detailed in the *Native Tree and Coastal Sage Scrub Restoration Planting, Mitigation, Maintenance and Management Plan*.

Appendix D.
LAUSD Maintenance and Operations Scope of Work for Fire Clearance and Scope of Work for Tree Trimming

(Note: This information is provided for reference only to illustrate the usual standards required by LAUSD, which do not comply with the County Oak Tree Protection or LCP guidelines.)

To be added in final pdf

APPENDIX E
ASSUMPTIONS AND LIMITING CONDITIONS

Any legal description provided to the consultants is assumed to be correct. Any title or ownership of the properties is assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation by Rosi Dagit and Evin Lambert as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only the examined items and their condition at the time of inspections; and b) the inspection is limited to visual examination of accessible items without dissections, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants and property may not arise in the future.

APPENDIX F
ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

I, Michael Terry acknowledge that I have received a copy of this document and that I have read and understand this disclosure statement.

Signed: /s/Rosi Dagit

Date: 6.6.23

APPENDIX G
CERTIFICATION OF PERFORMANCE

I, Rosi Dagit, ISA Certified Arborist WE-1084A

I, Evin Lambert, ASCA Registered Consulting Arborist 667, ISA Certified Arborist WE-9776A

certify:

- That I have personally inspected the tree(s) and/or property referred to in this report, and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms of the Assignment;

- That I have no current or prospective interest in the vegetation of the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

- That the analysis, opinions, and conclusions stated herein are my own;

- That my analysis, opinions and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;

- That no one provided significant professional assistance to the consultant, except as indicated within the report;

- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am a member of the International Society of Arboriculture, and acknowledge, accept, and adhere to the ISA Standards of Professional Practice.

Signed: /s/ Rosi Dagit Date: 6.6.23

Signed: /s/ Evin Lambert Date: 6.6.23