Notice of Impending Development

Campus Hazardous Tree Replacement Program
Phase 1
I. INTRODUCTION

This Notice of Impending Development (NOID) has been prepared for the removal and replacement of 31 mature Eucalyptus *globulus* (Tasmanian blue gum) trees at various locations around the University of California, Santa Barbara (University) Main Campus (see attached location map). The University intends on removing and replacing the trees during winter break beginning December 16, 2019 when a majority of the campus population is gone.

BACKGROUND:
In February 2019 storms several blue gum eucalyptus fell and damaged University property (see attached photos). There have been many other instances of these fallen trees or limbs damaging property at the University, and adjacent property in Isla Vista over the last several years. There were several tree failures in 1985 and 1997, and again in 2017 and 2019 when several large trees fell in the core of campus. The 2017 failures at the west end of Academic Green occurred at about 8:30 AM on a weekday and narrowly avoided striking students going to class. The February 2, 2019 failures occurred on a Saturday, totaled a car, and did significant damage to an office building and area lighting.

The blue gum eucalyptus were planted as agricultural windbreaks between 1915 and about 1927 and are approximately 87 to 97 years old. The trees are approaching the end of their lifespan and have been determined to be unhealthy and unsafe to persons and property in their vicinity.

Since the events from the winter storms the University has been evaluating the health and safety of these trees to determine the best course of action to provide safety to the campus population and protect campus property.

With upwards of 30,000 people on campus at any given weekday and over 10,000 on weekends, the campus has a responsibility to provide a safe environment and remove weak and hazardous trees.

In July 2019 an arborist survey was completed to evaluate the remnant windrow trees on the Main Campus. A sample of 20 percent of a total of approximately 290 blue gum trees on the Main Campus were evaluated. Forty-one trees were evaluated and the results represent the health of all of the remnant windrow trees since they were all planted at the same time frame and are all approximately the same age. All of the mature eucalyptus trees are nearing the end of their lifespan, are diseased, or have poor structure. A majority of the forty-one trees evaluated received a fair or poor rating and a few a very poor rating (primarily along El Colegio Road near Pauley Track). One tree received a “good” rating and one received a “normal” rating. The arborist report is attached (Muraoka 2019).

A coastal raptor habitat survey was conducted in June 2019 and determined the trees in the Main Campus core are not raptor habitat. The Coastal Breeding Raptor Survey Report is attached (Dudek 2019).
PROJECT NEED:
The mature trees are located in heavily travelled and populated areas around the University and residential and academic buildings surround the trees. Tree failure could potentially result in damage to property and persons and therefore need to be removed.

II. PROJECT DESCRIPTION

ENVIRONMENTAL SETTING:
The 31 blue gum eucalyptus trees being removed are located in various developed locations around Main Campus. There are many heavily and frequently used bicycle lanes, sidewalks, roads, parking lots, and buildings near the trees. Ornamental landscaping and other mature trees also surround a majority of the tree removal sites. Five of the trees that will be removed are along El Colegio Road south of Pauley Track at the West campus entrance.

PROJECT DESCRIPTION:
The Santa Barbara campus proposes to remove 31 blue gum eucalyptus trees on the Main Campus (see attached map). The campus will hire a contractor to remove the trees. All of the trees will be replaced 1:1 at a minimum and tree replacement would take place immediately after tree removal. See Table 1 and attached tree removal and replacement figures.

Table 1: Phase 1 Tree Removal and Replacement

<table>
<thead>
<tr>
<th>Location</th>
<th>#Trees Removed</th>
<th>#Trees Replaced</th>
<th>Replacement Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSB Near SW Corner</td>
<td>3</td>
<td>3</td>
<td>Afrocarpus gracilior 60” box onsite</td>
</tr>
<tr>
<td>Academic Green</td>
<td>2</td>
<td>2</td>
<td>Corymbia citriodora-Mesa Road median</td>
</tr>
<tr>
<td>Trailer 937 Near Broida</td>
<td>2</td>
<td>2</td>
<td>Corymbia citriodora Mesa Road median</td>
</tr>
<tr>
<td>Webb Hall NW Corner</td>
<td>3</td>
<td>3</td>
<td>Corymbia citriodora Mesa Road median</td>
</tr>
<tr>
<td>Parking Lot 9</td>
<td>4</td>
<td>4</td>
<td>Corymbia citriodora-Mesa Road median</td>
</tr>
<tr>
<td>El Colegio Median</td>
<td>5</td>
<td>5</td>
<td>Corymbia citriodora, Mesa Road median</td>
</tr>
<tr>
<td>Between Lot 29 and HSSB S of</td>
<td>12</td>
<td>12</td>
<td>7-foot tall Quercus acutissima/Quercus</td>
</tr>
</tbody>
</table>
| tree Planting. Sixteen Corymbia citriodora (Lemon gum) will be planted within the median along Mesa Road. The median is already vegetated with these trees. Replacement trees will fill in between the existing trees. The Lemon gum eucalyptus is a drought tolerant species that grows to approximately 80-feet tall and will provide even more large bird (raptor) roosting areas. Trees removed at the HSSB/Lot 29 site will be replaced in the same location with Quercus mongolica or acutissima. Trees removed at the PSB site will be replaced at the same location with Afrocarpus gracilior. The Corymbia citriodora, Afrocarpus gracilior, and Quercus Mongolica or acutissima are all drought tolerant and not listed as invasive on the Cal-IPC Inventory (Cal-IPC 2006).
Tree Mitigation Plan Goals. The replacement trees will be three (3) 60-inch box Afrocarpus gracilior, 12 7-foot tall Quercus acutissima/Quercus mongolica, and 16 24-inch box Corymbia citriodora and assigned an identification code in the campus’ tree database. Tree spacing at HSSB/Lot 29 and PSB locations will be approximately 25 feet. Diameter at breast height in inches will be recorded for all trees. Tree vigor will be observed at initial planting. Vigor will be recorded on a scale of 1 to 4; one (1) being very Excellent, (2) being Good, (3) being Poor and four (4) being deceased. The trees will be maintained as part of the campus landscaping and will be irrigated with reclaimed water. Campus Physical Facilities Grounds Department will monitor replacement trees for 5 years and beyond to ensure success and will be responsible for replacing any deceased trees.

Performance Standards. Replacement trees will be maintained as part of Main Campus grounds services. Replacement tree vigor will be monitored annually by Campus grounds staff. In the event that poor tree vigor is observed, adjustments will be made to fertilizing, watering, and maintenance routines; to improve vigor to a rating of good or better. If one or more of the trees dies, it will be replaced in kind. Monitoring will be recorded and reported annually for five years.

SCHEDULE:
Phase 1 of the proposed project, including the removal and planting of the 31 trees, is expected to commence in December 2019 and will take approximately one month complete. Tree replacement will be immediately following removals. The tree removal areas are heavily travelled areas and the trees will be removed during campus holidays or weekends while a majority of the campus population is gone and there is less vehicle, pedestrian, and bicycle traffic.

III. PROCEDURE
This Notice of Impending Development is being distributed to local governments, community groups, and interested parties pursuant to California Code of Regulation Section 13549-51. A list of interested parties and the NOID public notice is included as Appendix C Section 30606 of the Coastal Act and Article 14, Section 13547 through Section 13550 of the California Code of Regulations govern the Coastal Commission’s review of subsequent development where there is a certified LRDP. Section 13549(B) requires the Executive Director or his designee to review the Notice of Impending Development within ten days of receipt and determine whether it provides sufficient information to determine if the proposed development is consistent with the certified LRDP. The Notice is deemed filed when all necessary supporting information has been received.

Within thirty days of filing the Notice of Impending Development, the Executive Director shall report to the Commission and make a recommendation regarding the consistency of the proposed development with the certified LRDP. After a public hearing, by a majority of its members present, the Commission shall determine whether the development is consistent with the certified LRDP and whether conditions are required to bring it into conformance with the LRDP. No construction shall commence until after the Commission votes to render the proposed development consistent with the certified LRDP.

ENVIRONMENTAL REVIEW:
Based on the project assessment, the proposed project is classified as exempt from the provisions of CEQA under Section 15304, Minor Alterations to Land. None of the exceptions cited in
Section 15300.2 apply to this project. A Notice of Exemption was filed concurrent with Chancellor approval.

IV. CONSISTENCY WITH THE 1990 LONG RANGE DEVELOPMENT PLAN

CONSISTENCY WITH THE LRDP:
The project site area land use for both removal and replacement is currently designated as Academic and Support or Housing in the 2010 LRDP. Tree removal and maintenance is permitted in both Academic and Support and Housing land uses and therefore the proposed project is consistent with the LRDP. Land use designations and the land use will not change when the work is complete. The project is also consistent with LRDP Policies SCEN-7, ESH-11, ESH-27, ESH-28 A and Appendix 2, Tree Trimming and Removal Program. See attached LRDP consistency analysis.

V. REFERENCES

2019 Cook. Personal communication with Jon Cook, Associate Director, Grounds and Custodial.


CAMPUS HAZARDOUS TREE REPLACEMENT PLAN - PHASE I

- ONE TREE REPLACEMENT
Eucalyptus *globulus*, Blue Gum
Risk Assessment

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Assignment

Consultant is to provide an ANSI A300 (Part 9) - Level 2 Tree Risk Assessment for all trees requested to be assessed. The maximum number to be assessed is 75, but campus may assess fewer than 75 under the Professional Services Agreement that will be executed with consultant.

Consultant shall submit a written report for each of up to 75 trees examined that must include a likelihood of failure determination, a likelihood of impact determination, and a risk rating determination.

If the results of the Level 2 Assessment indicate to the consultant that further work is required to properly determine tree risk, the consultant shall include in the assessment the need for a Level 3 Assessment and a firm quote for this same work.

Limits

I visited the site on 7-2, 7-26 and 7-31-2019 to inspect the trees and took measurements using a measuring tape, measuring wheel and a clinometer. I used a digital camera to take the photos used in my report. I did not alter those images in any way other than to fit them on the page. I used a nylon mallet to sound the trunks, root collars and buttress roots to check for hollows and decay. If surface decay was detected, I used a metal probe to determine the extent of that decay.

Summary

The assessed trees were numbered sequentially as 1 thru 41 and tagged with aluminum markers. Under normal environmental conditions, the eucalyptus in the assessed group pose a “low risk” to the campus infrastructure, employees and students. However regarding trees 28 thru 32, a Level 3 Assessment is recommended for further evaluation. Tree 35 also warrants a Level 3 Assessment. However, the overall condition of tree 35 is so poor, it may not warrant the cost.

All of the trees assessed, (except #21) are in a state decline. This is due to poor growing conditions and old age. The best trees were in fair condition and the worst trees were in very poor condition. It is unlikely that the condition of any of these trees will significantly improve.

Background and History

Background:
With a sample size of (268) *Eucalyptus globulus*, Blue gum tree failure reports, the Western Tree Failure Database/California Tree Failure Report Program, reported that 44% were root failures, meaning total tree failure, 42% were branch failures and 14% were trunk failures. The mean age of the trees was 62 years, the mean DSH was 43 inches and the mean height was 81 feet.

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Twenty-eight percent of the most commonly associated structural defects were heavy lateral limbs, 12% were multiple trunks or codominant trunks and 12% dense crowns. Decay was reported in 61% of root failures, 60% of trunk failures and 41% of branch failures. Among branch failures, 48% failed at the point of attachment and 42% failed from 1 to 6 feet away from the point of attachment.

**History provided by UCSB:**
The Eucalyptus *globulus* on the UCSB campus were originally planted as agricultural windbreaks between 1915 and about 1927. The area was managed as crop land, and this windbreak system was common throughout Santa Barbara and Ventura Counties.

On the UCSB campus, the trees were mostly left in place when the entire property was converted to a military training base during World War II. After the war, the property became the second campus location when the institution left the Riviera neighborhood of Santa Barbara City.

The growing campus built up around the trees, quite literally, as buildings were sited entirely around the trees, such as Phelps Hall, which still has several very large Eucalyptus trees within its courtyard.

Between the beginning of the campus at its current location and the present, tree management has consisted primarily of periodic trimming and clean-up of debris when trees failed. There were several spectacular failures in 1985 and 1997 and again in 2017 and 2019 when several large trees fell in the core of campus. The 2017 failures at the west end of Academic Green occurred at about 8:30 AM on a weekday, and narrowly avoided striking students going to class. The February 2, 2019 failures occurred on that Saturday, and totaled a car, and did significant damage to exterior lighting and buildings.

Many of the trees show significant basal trunk decay, and when the trees fail in stormy weather, the lifted root plates show very poor structural root condition, and extensive fungal wood decay across the entire trunk diameter and the major buttress roots.

**Discussion**

As mentioned, the eucalyptus trees that were assessed in this report, posed a “low risk” to campus infrastructure, employees and students. However, there are other factors that should be considered, regarding the fate of these trees.

**Senescence:** Under native conditions, the lifespan of these eucalyptus trees is up to 250 years or more. However according to Craig Dawson, the executive director of Sutro Stewards, a 100-plus acre, Blue gum forest owned by the University of San Francisco; the lifespan of the average Blue gum in California, is about 100 years. The reduced lifespan is due to the poor growing conditions, compacted soil, impermeable surfaces, poor irrigation and construction impacts.
This group of eucalyptus is one-hundred years old and although they may survive for years or even decades to come, there is no question, they are in decline. Over-senescence has compromised their ability to obtain enough resources for healthy growth, which makes them more susceptible to diseases and insect pests and more likely to experience branch failures or tree failure due to decay and/or a retracted root plate. Continuing the current pruning practices will help prevent those limb failures. However there are no cures or maintenance practices that will prevent their continued overall health decline or the ultimate demise of these trees.

**Branch failure:**
Eucalyptus are known for branch failures and there are numerous reasons as to why. Branches can fail because they are weakly attached, cracked or split, decayed, cankered, have cavities or nest holes. Some trees have inherently weaker wood. Sometimes branches are poorly formed or have been improperly pruned. When one or more of these faults are present, the affected branch can fail at any time. Even with no apparent faults, a branch can fail during inclement weather, when the stress load on the wood exceeds its strength.

“Summer or sudden branch drop” is not related to wind or visual faults and it often occurs in the afternoon on hot, calm days. The branches that break are usually long and horizontal, as opposed to upright and they frequently extend to or beyond the average tree canopy. Older, less vigorous trees seem to be more prone to this problem and while some limbs may show evidence of wounds or decay, many of these failed limbs appear to be sound.

As alluded to, the evidence suggests that the Blue gums at U.C.S.B., or at least those that were assessed have been maintained. The crowns have been cleaned and thinned and the larger branches have been reduced in length, so as not to extend beyond the average tree canopy. This maintenance practice has likely prevented or at least reduced the likelihood of branch failure.

**Tree failure:**
Although branch failure can cause significant damage or even loss of life; this group of overly-senescent trees fits the profile in the Western Tree Failure Database/California Tree Failure Report Program, for the trees where total failure should be a greater concern. There are several variables that can compromise a tree’s structural stability and contribute to its total failure. In this group, canopy die-back or deadwood may indicate that a loss of lateral and descending roots due to old age and/or drought stress has occurred. Some trees had damage or decay to exposed lateral roots. There was evidence of soil compaction and/or other construction impacts in the critical root zone. Grade changes and impermeable surfaces have also negatively impacted the existing root systems. Unfortunately, those below-ground impacts and issues are not detectable.

Total tree failure is most likely to occur during the winter. If the soil becomes saturated, it loses the ability to provide solid anchorage for the root system. In this case, the loss of anchorage combined with diminished root systems, especially while being subjected to winds, significantly increases the likelihood of failure. This is what occurred on campus, in February of 2019.
Acceptable risk:
The risk evaluation used in this report for branch or limb failure or total tree failure for a specific tree and a specified target uses the terms, low, moderate, high and extreme. The specific categorization is determined by using a matrix that combines the likelihood of failure, the likelihood of impacting the target and the consequences of the failure (see ISA definitions).

Assessing the probability of branch failure is based on visual faults, defects or damage to said branch. Assessing the probability of trunk failure is also based on visual faults, defects or damage. However, strength loss of the trunk can also be calculated, based on its shell-wall thickness, the size of the hollow opening, plus the size of the cavity.

Unfortunately, assessing the probability of complete tree failure is an educated guess. Decayed, damaged, declining or retracting root systems are below ground, which makes them very difficult if not impossible to accurately assess and therein lies the problem. If I say that the likelihood of the tree failing is “improbable,” that means “the tree is not likely to fail during normal weather conditions and may not fail in extreme weather conditions within the specified time frame.” This is the term I chose for the eucalyptus trees that I assessed at UCSB. However, had I determined that the likelihood of the tree failing is “possible,” which means “failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame;” the risk level in most cases would be moderate instead of low. Although I used “improbable” instead of “possible” to describe the majority of the trees that were assessed, I believe a valid argument could be made for either term.

It is worth noting that the probability of failure under certain circumstances can also be estimated. As of 2013, the population of historic Blue gums on UCSB properties was (762) trees. On February 2, 2019, (59) trees failed, (20) of which were Blue gums. Given the same set of circumstances, (soils close to saturation and the wind gusts reaching (47) mph), we must assume that all of the historic eucalyptus trees are at risk and we can estimate that (2.6) percent of the population is likely to fail. As of today and for the next three to five years, the risk is low. However, if the potential target is of high value and the consequences of failure are severe, keeping a tree that presents even a low risk may be unacceptable. Furthermore, as these trees continue to decline and are subjected to extreme weather conditions in the future, the sum total of complete tree failures will also increase.

Replacement strategy:
Under those circumstances, it would be prudent to develop a replacement strategy for these Blue gums. Although it may not be feasible or politically acceptable to replace all of the trees at once; priority could be given to those trees that would potentially cause the most damage. Numbers 5, 10, 12, 15, 20, 22, 25-33 and 35 would be good subjects for review. If tree preservation is a priority, a few of the assessed trees, for example, numbers, 6, 17-19 and 39 could be significantly lowered in height, rather than removed altogether (see appendix 1 & 2). This would significantly reduce the likelihood of failure and/or place the target(s) out of range of the tree failure.

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Individual Tree reports:

Tree #1  
Location: Northeast corner Phelps Hall Courtyard  
Distance from potential targets: North-wing Phelps Hall = 48 feet  East-wing Phelps Hall = 28 feet  Benches and courtyard 15 feet west of trunk.  
Target Protection: Tree #1 is located in a row of three similarly sized eucalyptus.  
Height & Spread: 100’ x 48’  DSH= 43”  Condition: normal

Observations:  
- The subject tree has codominant trunks. However the two trunks have developed in a manner that the probability of failure is not as significant as codominant trunks with included bark.  
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet.  
- There were signs of leaf notching; most likely due to eucalyptus tortoise beetle.

Likelihood of total tree failure: improbable  
Likelihood of impacting the target: high  
Risk rating: low  
Likelihood of branch or limb failure: possible  
Likelihood of impacting the target: medium  
Risk rating: low

Photo taken 7-2-19

The arrow in the photo is pointing to the subject tree.  
Phelps Hall is in the background.  
The yellow arrow is pointing to the location of one of the benches and an occupant wearing a blue shirt.  
The courtyard cannot be seen in the photo would be in the foreground.  
Tree number 1 is protected from the wind.  
The potential targets are at least partially protected by the entanglement of the limbs with the neighboring trees.
Individual Tree reports:

Tree #2
Location: Northwest corner Webb Hall
Distance from potential targets: Webb Hall = 54 feet Bike path = 40 feet Walkway is adjacent
Target Protection: Tree #2 is located in a row of five similarly sized eucalyptus.
Height & Spread: 105’ x 48’ DSH= 43” Condition: fair

Observations:
- The subject tree has codominant trunks, which may include included bark.
- The canopy has a southerly lean. The trunks extend over Webb Hall and the adjacent driveway.
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable
Likelihood of impacting the target: high
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the target: high
Risk rating: moderate to walkway and Webb Hall

Photo taken 7-2-19
The photo on the left is the subject tree. It shows the co-dominant trunks and its southerly lean.
The insert photo shows a close-up view of the codominant trunks.
The bottom photo shows the subject tree relative to the neighboring trees. The
arching or lean in the trunks is natural due to the group’s configuration.

*The risk rating to the walkway and Webb Hall could be reduced from “moderate” to
“low” through some crown reduction of the overarching limbs.
Individual Tree reports:

Tree #3
Location: Northernmost tree on the west end of parking lot #9
Distance from potential targets: Life Sciences building = 100’ Psychology east = 120’ Santa Rosa Hall = 85’
Parking lot #9, University Center Rd. and bike racks = adjacent
Target Protection: Tree #3 is located in a row of six similarly sized eucalyptus.
Height & Spread: 114’ x 60’ DSH= 49” Condition: fair

Observations:
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet.
- The main limbs and branches appeared to have good attachments.
- The canopy was thinner than normal. There was some die-back but lots of adventitious shoots.

Likelihood of total tree failure: improbable
Likelihood of impacting the target: high
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

The arrows in the photos are pointing to the subject tree. The likelihood of impacting the buildings is low. The likelihood of impacting the parking lot, bike rack and University Center Road is medium.
Individual Tree reports:

Tree #4
Location: Second tree from the south end of the row on the western side of parking lot #9
Distance from potential targets: Santa Rosa Hall = 68’ Adjacent to parking lot #9 and the bike racks
Target Protection: Tree #4 is located in a row of six similarly sized eucalyptus.
Height & Spread: 110’ x 50’  DSH= 32” Condition: fair

Observations:
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet. The trunk has a slight lean that is corrected in the top third of the canopy.
- The main limbs and branches appeared to have good attachments.
- The canopy was thinner than normal.

Likelihood of total tree failure: improbable
Likelihood of impacting the target: high
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-2-19

The arrows in the photos are pointing to the subject tree. The likelihood of impacting Santa Rosa Hall is low. The likelihood of impacting the parking lot and the bike rack is medium.
Individual Tree reports:

Tree #5
Location: West of Chancellor’s residence, east of parking lot #5
Distance from potential targets: Chancellor’s residence = 33’ Parking lot #5 = 28’ Bike path and sidewalk are adjacent and Channel Islands Rd. is 53’ away.
Target Protection: Tree #5 is the center tree in a row of three similarly sized eucalyptus which provide partial protection for the road.
Height & Spread: 108’ x 57’ DSH= 36” Condition: fair

Observations:
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet. The trunk has a slight lean towards the road. The limbs appear to have good attachments.
- The canopy was thinner than normal.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: high
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-12-19
The arrow in the photo is pointing to the subject tree.
The bottom photo shows the root collar of the subject tree.
The lean and canopy of the subject tree has developed away from the Chancellor’s residence and the most likely target would be the bike path, sidewalk and parking lot.
Individual Tree reports:

Tree #6  
**Location:** Southeast corner of parking lot #5  
**Distance from potential targets:** Adjacent to parking lot #5 and the bike path/running path.  
**Target Protection:** none  
**Height & Spread:** 93’ x 32’  
**DSH=** 45”  
**Condition:** fair

**Observations:**
- There were no signs of decay in the trunk and buttress roots and they sounded solid when tested with a mallet. The subject tree has codominant trunks. However the limbs appear to have good attachments.
- The top half of the canopy was thin. The bottom half was full.

<table>
<thead>
<tr>
<th>Likelihood of total tree failure:</th>
<th>improbable</th>
<th>Likelihood of branch or limb failure:</th>
<th>possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood of impacting the targets:</td>
<td>high</td>
<td>Likelihood of impacting the targets:</td>
<td>medium</td>
</tr>
<tr>
<td>Risk rating:</td>
<td>low</td>
<td>Risk rating:</td>
<td>low</td>
</tr>
</tbody>
</table>

**Photos taken 7-12-19**

The bottom photo shows the codominant trunks of the subject tree.

Although the risk rating for this tree and its parts is low; it could lowered even further by reducing the codominant trunks by 50% as illustrated by the red line in the photo on the left.
Individual Tree reports:

Tree #7
Location: Southernmost eucalyptus east of the Rec. Center
Distance from potential targets: Rec. center = 49’ Sidewalk = 23’ Ocean Rd. 26’.
Target Protection: Rec Center is partially protected; the sidewalk and road are not.
Height & Spread: 65’ x 51’  DSH= 52” Condition: fair

Observations:
- There was a small pocket of decay on the southeast section of the root collar. The other portions of the root collar, trunk and buttress roots sounded solid when tested with a mallet.
- The trunk has codominant stems but the limbs appear to have good attachments.
- The canopy has been thinned and reduced.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: high
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-12-19
The arrow in the largest photo is pointing to the subject tree.
The bottom photo shows the decay in the root collar. The white patch pointed to by the arrow is where solid wood was encountered.
The insert photo shows the codominant trunks.
Individual Tree reports:

Tree #8
Location: East of Rec. Center

Distance from potential targets: Restricted parking = 62’ southeast corner of Rec Center = 80’.
Target Protection: none

Height & Spread: 110’ x 49’  DSH= 47”  Condition: fair

Observations:
- There were no signs of decay in the trunk or buttress roots and they sounded solid when tested with a mallet. The limbs appear to have good attachments.
- The subject tree has a slight westerly lean, which has corrected itself in the top third of the canopy.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: low
Risk rating: low  Risk rating: low

Photos taken 7-12-19

The photos were taken from two different angles of the subject tree.
**Individual Tree reports:**

**Tree #9**  
**Location:** Northeast corner of the Rec. Center, south of Mesa Road  
**Distance from potential targets:** Rec. Center = 96’ Mesa Rd. 12’.  
**Target Protection:** Rec. Center is protected; the Mesa Road is not.  
**Height & Spread:** 83’ x 65’  
**DSH=** 60”  
**Condition:** fair

**Observations:**  
- The trunk and buttress roots sounded solid when tested with a mallet.  
- The main limbs have narrow angles where they are attached but it appears there is no included bark.  
- The canopy has been thinned and reduced.

**Likelihood of total tree failure:** improbable  
**Likelihood of impacting the targets:** road high  
**Risk rating:** low

**Likelihood of branch or limb failure:** possible  
**Likelihood of impacting the targets:** medium  
**Risk rating:** low

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**Photos taken 7-12-19**  
The photo on the left is an overall view of the subject tree. The photo on the right shows the narrow angles branch attachments.
Individual Tree reports:

Tree #10
Location: Northside of parking lot 16
Distance from potential targets: parking lot 16 adjacent
Target Protection: none
Height & Spread: 60’ x 21’  DSH= 26”  Condition: poor  Structural condition: poor

Observations:
- The root collar has a cavity 28” deep with an opening 7 x 8” (photo 3). There is a disease column in the trunk at 8.5’ above the ground that is 18” deep. The trunk diameter in that location is 22” wide (photo 2). Ground squirrels have excavated a burrow under the root collar, further destabilizing the subject tree (photo 3).
- The canopy has been heavily thinned and the crown has been reduced (photo 1).

Likelihood of total tree or trunk failure: probable
Likelihood of impacting the target: high
Risk rating: high

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Note: This tree should be removed.

Photos taken 7-12-19
Individual Tree reports:

Tree #11
Location: North side of parking lot 16, south of Mesa Road
Distance from potential targets: Parking lot 16 = 10’ Mesa Rd. 22’.
Target Protection: parking lot 16 is partially protected; the Mesa Road none
Height & Spread: 110’ x 33’ DSH= 37” Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The branch attachments are good. The canopy has been thinned.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #12
Location: Northernmost tree on the Academic green
Distance from potential targets: walkways are adjacent, Physical Science North Building = 85’.
Target Protection: none
Height & Spread: 80’ x 60’  DSH= 65”    Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet. The subject tree has codominant stems with included bark. Those codominant trunks have been cabled for additional support.
- The branch attachments are good. The canopy has been thinned. There is some dieback; the largest dead branch is 4” in diameter.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-12-19
The photo on the left is an overall view of the subject tree. The yellow arrow is pointing to a dead limb in the tree.

The photo below is a close-up view of the trunk. The arrow points out the included bark.
Individual Tree reports:

Tree #13
Location: Center tree on the Academic green
Distance from potential targets: walkways to the west = 23’, walkway to the north = 39’.
Target Protection: none
Height & Spread: 50’ x 36’  DSH= 22”  Condition: fair

Observations:
• The trunk and buttress roots sounded solid when tested with a mallet.
• The branch attachments are good. The canopy has been thinned but it is unbalanced

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: low
Risk rating: low

Photo taken 7-26-19
The photo on the left is an overall view of the subject tree.
**Individual Tree reports:**

**Tree #14**  
**Location:** Southernmost tree on the Academic green  
**Distance from potential targets:** walkway west = 23’, walkway north = 20’, walkway south = 24’.  
**Target Protection:** none  
**Height & Spread:** 65’ x 40’  
**DSH:** 36”  
**Condition:** fair

**Observations:**
- The trunk and buttress roots sounded solid when tested with a mallet.
- The subject tree has codominant stems. The branch attachments are good.
- The canopy is full. There are some dead twigs and one hanger, one inch in diameter.

**Likelihood of total tree failure:** improbable  
**Likelihood of impacting the targets:** medium  
**Likelihood of branch or limb failure:** possible  
**Likelihood of impacting the targets:** medium  
**Risk rating:** low  
**Risk rating:** low

**Photos taken 7-12-19**

The photo on the left is an overall view of the subject tree.

The photo below is a close-up view of the codominant stems.
Individual Tree reports:

Tree #15
Location: West of trailer 937
**Distance from potential targets:** walkway to the west = 21’, walkway to the east and bike racks adjacent, trailer 937 = 23’, trailer 939 = 25’ Building 406 = 55’.
**Target Protection:** none
**Height & Spread:** 95’ x 56’ **DSH=** 50’
**Condition:** fair

**Observations:**
- The trunk sounded solid when tested with a mallet. There was a small pocket of decay in the root collar.
- The branch attachments are good and the canopy is thinner than normal for the species.

**Likelihood of total tree failure:** improbable

**Likelihood of impacting the targets:** medium

**Risk rating:** low

**Likelihood of branch or limb failure:** possible

**Likelihood of impacting the targets:** medium

**Risk rating:** low

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Photo taken 7-12-19

The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #16
Location: Southwest corner of Pacific Science North
Distance from potential targets: walkway to the west = 26’, walkway south = 16’, courtyard east = 11’ and Pacific Science North = 47’.
Target Protection: PCN partially protected by other trees, walkways and courtyard no protection.
Height & Spread: 52’ x 48’  DSH= 38”  Condition: fair

Observations:
- The trunk sounded solid when tested with a mallet. There was a small pocket of decay in the N/W section of the root collar.
- The branch attachments are good.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #17
Location: Raised planter northwest corner of Humanities and Social Sciences Building
Distance from potential targets: HSSB = 40’, Event Center = 65’ parking below = 15’
Target Protection: HSSB partially protected by tree 18, Event Center and parking no protection.
Height & Spread: 110’ x 69’  DSH= 69”  Condition: fair

Observations:
- The subject tree has (5) trunks, which sounded solid when tested with a mallet.
- The buttress roots and collar sounded solid when tested with a mallet.
- Branching is sparse, the attachments are good and the canopy is thin.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-12-19

The photo on the left is an overall view of the subject tree.

The bottom photo is a close-up showing the subject tree’s multiple trunks.
Individual Tree reports:

**Tree #18**

**Location:** Raised planter northwest corner of Humanities and Social Sciences Building

**Distance from potential targets:** HSSB = 37’, Event Center = 70’ parking below = 20’

**Target Protection:** HSSB no protection, Event Center and parking partially protected by tree 17.

**Height & Spread:** 65’ x 25’  
**DSH=** 24”  
**Condition:** fair

**Observations:**
- The trunk and buttress roots sounded solid when tested with a mallet.
- The subject tree has codominant stems with included bark.
- Branching is sparse, the attachments are good and the canopy is thin.

**Likelihood of total tree failure:** improbable  
**Likelihood of impacting the targets:** medium  
**Risk rating:** low

**Likelihood of branch or limb failure:** possible  
**Likelihood of impacting the targets:** medium  
**Risk rating:** low

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**Photo taken 7-12-19**

The photo is a bottom half view of the subject tree.

The red arrow in the background is pointing to tree #17.
Individual Tree reports:

Tree #19
Location: South of Event Center
Distance from potential targets: Event Center = 82’ walkway south = 23’
Target Protection: HSSB no protection, Event Center and parking partially protected by tree 17.
Height & Spread: 93’ x 61’ DSH= 52” Condition: fair

Observations:
- The subject tree has twin trunks with included bark, the smaller of the two is bowed towards the walkway.
- There is a decay pocket on the N/W corner of the root collar but the rest of the buttress roots and trunk sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #20
Location: Northwest corner Theater & Dance
Distance from potential targets: Theater & Dance Building = 33’ bike path north = 15’
Target Protection: none
Height & Spread: 95’ x 75’ DSH= 55”

Condition: fair

Observations:
- The subject tree has codominant limbs at 12 to 15’ height.
- The buttress roots and trunk sounded solid when tested with a mallet. The root collar has a burl.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-26-19

The photo on the left is an overall view of the subject tree.

The photo below is a close-up view of the codominant trunks. They developed roughly 12 to 15’ above ground level.
Individual Tree reports:

Tree #21 (is a different species of eucalyptus and not one of the historic blue gums)
Location: Southeast corner of HSSB
Distance from potential targets: sidewalk west, bike path east adjacent
Target Protection: none
Height & Spread: 32’ x 32’  DSH= 19”  Condition: good

Observations:
- The trunk has a lean but it has self-corrected. The buttress roots and trunk sounded solid when tested with a mallet. The canopy is full.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #22
Location: Southwest corner of Counseling and Career Services Building
Distance from potential targets: CCSB = 20’, Bike path west 10’, walkway south 15’
Target Protection: none
Height & Spread: 92’ x 64’  DSH= 47”  Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The subject tree has a slight lean but it has self-corrected in the canopy.
- Branching is sparse, the attachments are good and the canopy is thin.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #23
Location: West of parking lot #29
Distance from potential targets: parking lot 29 = 14’, Bike path west 18’, CCSB = 38’, HSSB = 77’
Target Protection: CCSB partially protected by other trees, other targets no protection
Height & Spread: 65’ x 58’ DSH= 32” Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- Branching is sparse, but the branch attachments are good. The canopy is thin.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-26-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #24
Location: West of parking lot #29
Distance from potential targets: parking lot 29 = 12’, Bike path west 22’
Target Protection: none
Height & Spread: 95’ x 35’  DSH= 29”  Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- Branching is sparse, the branch attachments are good and the canopy is very thin.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-31-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #25
Location: West of parking lot #29
Distance from potential targets: entrance to parking lot 29 = 8’, parking lot 29 = 20’, Bike path north 33’
Target Protection: Bike path north partially protected by other trees, other targets no protection
Height & Spread: 80’ x 56’  DSH= 44”  
Condition: poor

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- Three scaffold limbs are poorly attached at 15’ and the canopy is very thin and one-sided.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
The arrow points out the location where the single trunk forms (3) main scaffold limbs.
Individual Tree reports:

Tree #26
Location: Southeast corner of parking lot #27 in a small island
Distance from potential targets: parking lot 27 = 20’, road = 10’, Gervitz Graduate School = 87’
Target Protection: none
Height & Spread: 84’ x 55’  DSH= 28”    Condition: poor

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The branch attachments are good. The canopy is very thin.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-12-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #27
Location: El Colegio Median
Distance from potential targets: El Colegio southbound = 8’ El Colegio northbound = 12’
Target Protection: none
Height & Spread: 100’ x 35’  DSH= 31”  Condition: poor

Observations:
- The canopy of the subject tree is very thin and has very little new growth.
- The buttress roots and trunk sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-26-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #28  
Location: El Colegio Median  
Distance from potential targets: El Colegio southbound = 11’ El Colegio northbound = 13’  
Target Protection: none  
Height & Spread: 85’ x 37’  DSH= 28”  Condition: very poor

Observations:  
- The canopy of the subject tree is very thin and has very little new growth.  
- The trunk and root collar sounded solid when tested with a mallet. The buttress roots were decayed.

Likelihood of total tree failure: possible  
Likelihood of impacting the targets: medium  
Risk rating: low  
Likelihood of branch or limb failure: possible  
Likelihood of impacting the targets: medium  
Risk rating: low

Photo taken 7-26-19

The photo is an overall view of the subject tree.

Note: A level three inspection would be required to determine the level of decay in the buttress roots.
Individual Tree reports:

Tree #29
Location: El Colegio Median
Distance from potential targets: El Colegio southbound = 17’ El Colegio northbound = 11’
Target Protection: none
Height & Spread: 105’ x 37’ DSH= 33”  Condition: very poor

Observations:
- The canopy of the subject tree is very thin and has very little new growth.
- The trunk sounded solid when tested. The buttress roots and root collar had pockets of decay.

Likelihood of total tree failure: possible  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-26-19

The photo is an overall view of the subject tree.

Note: A level three inspection would be required to determine the level of decay in the buttress roots and root collar.
Individual Tree reports:

Tree #30
Location: El Colegio Median
Distance from potential targets: El Colegio southbound = 14’ El Colegio northbound = 11’
Target Protection: none
Height & Spread: 80’ x 44’ DSH= 28”  Condition: poor

Observations:
- The canopy of the subject tree is very thin and has very little new growth.
- The trunk, buttress roots and root collar all had pockets of decay.

Likelihood of total tree failure: possible  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photos taken 7-26-19
The photo is an overall view of the subject tree.
The photo below show a close-up view of the co-dominant trunks.

Note: A level three inspection would be required to determine
the level of decay in the trunk, buttress roots and root collar.
Individual Tree reports:

Tree #31  
Location: El Colegio east side by Pauly track
Distance from potential targets: El Colegio southbound = 55’ El Colegio northbound = 10’, Stadium Rd. = 43’ pathway to the east = 12’.  
Target Protection: partial protection to southbound El Colegio, other targets none
Height & Spread: 112’ x 60’ DSH= 46”  
Condition: fair

Observations:
- The trunk has codominant stems. The branches appeared to be solidly attached.
- The trunk and root collar sounded when tested with a mallet. The buttress roots had pockets of decay.

Likelihood of total tree failure: possible  
Likelihood of impacting the targets: medium  
Risk rating: low

Likelihood of branch or limb failure: possible  
Likelihood of impacting the targets: medium  
Risk rating: low

Photos taken 7-26-19
The photo on the left is an overall view of the subject tree. The photo below show a close-up view of the co-dominant trunks.

Note: A level three inspection would be required to determine the level of decay in the buttress roots.
Individual Tree reports:

Tree #32
Location: El Colegio east side by Pauly track
Distance from potential targets: El Colegio southbound = 62’ El Colegio northbound = 10’, pathway to the east = 10’.
Target Protection: partial protection to southbound El Colegio, other targets none
Height & Spread: 100’ x 50’ DSH= 52”  Condition: fair
Observations:
- The trunk has codominant stems with included bark. The branches appeared to be solidly attached.
- The trunk and root collar had pockets of decay.

Likelihood of total tree failure: possible  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photos taken 7-26-19
The photo on the left is an overall view of the subject tree. The photo below show a close-up view of the co-dominant trunks.

Note: A level three inspection would be required to determine the level of decay in the buttress roots.
Individual Tree reports:

Tree #33  
Location: El Colegio east side by Pauly track  
Distance from potential targets: El Colegio southbound = 70’ El Colegio northbound = 12’, pathway to the east = 13’.  
Target Protection: none  
Height & Spread: 95’ x 22’ DSH= 36’’  
Condition: very poor  
Observations:  
- The trunk has codominant stems with included bark. The canopy is predominantly adventitious shoots.  
- The trunk, root collar and buttress roots sounded solid when tested with a mallet.  

Likelihood of total tree failure: improbable  
Likelihood of impacting the targets: medium  
Likelihood of branch or limb failure: possible  
Likelihood of impacting the targets: medium  
Risk rating: low  
Risk rating: low

Photos taken 7-26-19

The photo on the left is an overall view of the subject tree.  
The photo below show a close-up view of the co-dominant trunks.  
Adventitious shoots indicate the tree is severely stressed.
Individual Tree reports:

Tree #34
Location: El Colegio east side by Pauly track
Distance from potential targets: El Colegio southbound = 75’ El Colegio northbound = 12’, pathway to the east = 10’.
Target Protection: partial protection to southbound El Colegio, other targets none
Height & Spread: 120’ x 40’ DSH= 33”  Condition: poor

Observations:
- The canopy is very sparse with very little new growth.
- The trunk, root collar and buttress roots sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-26-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #35
Location: El Colegio east side by Pauly track
Distance from potential targets: El Colegio southbound = 75’ El Colegio northbound = 12’, pathway to the east = 12’.
Target Protection: partial protection to southbound El Colegio, other targets none
Height & Spread: 90’ x 25’  DSH= 19”  Condition: very poor
Observations:
- The canopy is very sparse with very little new growth.
- The trunk has a hollow at 9’ from ground level. There are no buttress roots and the root collar sounded hollow when tested with a mallet. A level three inspection would be required to determine strength loss.

Likelihood of total tree failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-26-19
The photo on the left is an overall view of the subject tree. The photo below shows the trunk hollow that may extend all the way to the base of the tree.

Note: The subject tree may not be worth the cost of a level three inspection. It will never regain healthy status.
Individual Tree reports:

Tree #36
Location: El Colegio between building 275 and Lot 27
Distance from potential targets: El Colegio southbound = 13’ El Colegio northbound = 14’, parking lot 27 = 60’ and Koger Autism Center = 70’. 
Target Protection: partial protection to parking lot 27, other targets none 
Height & Spread: 80’ x 52’  DSH= 32’’  Condition: fair

Observations:
- The canopy is very sparse. The branch attachment appeared to be solid.
- The trunk, buttress roots and the root collar sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-26-19
The photo on the left is an overall view of the subject tree.
Individual Tree reports:

Tree #37
Location: El Colegio between building 275 and Lot 27
Distance from potential targets: El Colegio southbound = adjacent, building 275 = 49’, bike path to S/W 67’.
Target Protection: partial protection to El Colegio southbound and bike path, building 275 none.
Height & Spread: 83’ x 53’ DSH= 47”  Condition: fair

Observations:
- The canopy is sparse. The branch attachment appeared to be solid.
- The trunk, buttress roots and the root collar sounded solid when tested with a mallet.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-26-19
The photo on the left is an overall view of the subject tree.
Individual Tree reports:

Tree #38
Location: North side of parking lot #27
Distance from potential targets: parking lot 27 = 19’, sidewalk = adjacent, Ocean Rd. westbound = 48’
Ocean Rd. eastbound = 6’
Target Protection: none
Height & Spread: 95’ x 68’  DSH= 30’’  Condition: poor

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- Branching is sparse, the branch attachments are good and the canopy is very thin with die-back.

Likelihood of total tree failure: improbable  Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium  Likelihood of impacting the targets: medium
Risk rating: low  Risk rating: low

Photo taken 7-31-19
The photo is an overall view of the subject tree.
Individual Tree reports:

Tree #39
Location: West side of Stadium Rd. near the tennis courts
Distance from potential targets: parking lot 30 = 56’, sidewalk east = 9 tennis courts west = 60’
Bike path west = 6’, Stadium Rd. east = 16’
Target Protection: Parking lot 30 has partial protection, the other targets none
Height & Spread: 75’ x 53’ DSH= 46”  Condition: poor

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The branch attachments appeared good and the canopy is very thin with die-back.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photos taken 7-31-19
The photo on the left is an overall view of the subject tree.
The bottom photo show a close-up view of the codominant trunks.
This tree could be significantly reduced to lower the risk of failure.
Individual Tree reports:

Tree #40
Location: AS Recycling “Euc Grove” and southeast of EH & S
Distance from potential targets: road to west = 89’, walkway south = 30, tennis courts south = 41’
Target Protection: partially protected by other trees
Height & Spread: 120’ x 50’ DSH= 38”    Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The branch attachments appeared good. Top third of the canopy is thin.

Likelihood of total tree failure: improbable
Likelihood of impacting the targets: medium
Risk rating: low

Likelihood of branch or limb failure: possible
Likelihood of impacting the targets: medium
Risk rating: low

Photo taken 7-31-19
The photo on the left is an overall view of the subject tree.
Individual Tree reports:

Tree #41
Location: AS Recycling “Euc Grove” and southeast of EH & S
Distance from potential targets: road to west = 89’
Target Protection: partially protected by other trees
Height & Spread: 95’ x 40’ DSH= 32”  Condition: fair

Observations:
- The trunk and buttress roots sounded solid when tested with a mallet.
- The branch attachments appeared good. Top third of the canopy is thin.

<table>
<thead>
<tr>
<th>Risk rating: low</th>
<th>Likelihood of total tree failure: improbable</th>
<th>Likelihood of branch or limb failure: possible</th>
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<tbody>
<tr>
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<td>Likelihood of impacting the targets: medium</td>
<td>Likelihood of impacting the targets: medium</td>
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<td>Risk rating: low</td>
<td>Risk rating: low</td>
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</table>
Glossary:

Canker- are dead sections of bark on branches or main trunks of trees. Bark may be killed by mechanical injuries or by plant pathogens, especially fungi and bacteria. Most plant pathogens are unable to penetrate bark directly but will quickly colonize wounded tissue.

Clinometer- an instrument used for measuring the angle or elevation of slopes. Arborist use it to determine the height of a tree.

Codominant trunks- is a term used to describe two or more main stems that are about the same diameter and emerge from the same location on the main trunk. As the tree grows older, the stems remain similar in size without any single one becoming dominant.

Diameter at Standard Height or DSH- Trunk diameter measured at four feet above the ground.

Red gum lerp- a sucking insect pest specific to eucalyptus.

Root plate- That part of the root system (excluding the small outermost roots) needed to keep a tree wind firm.

Root zone- is the area of oxygen and soil surrounding the roots of a plant. With trees, it is typically defined as the area under the drip line.

Topped or topping- tree topping is the practice of removing whole tops of trees or large branches and/or trunks from the tops of trees, leaving stubs or lateral branches that are too small to assume the role of a terminal leader. Other common names for the practice include hat-racking, heading, rounding over, and tipping.

ISA Risk Assessment Matrix Definitions:

The likelihood of failure can be categorized using the following guidelines:

**Improbable**—the tree or tree part is not likely to fail during normal weather conditions and may not fail in extreme weather conditions within the specified time frame.

**Possible**—failure may be expected in extreme weather conditions, but it is unlikely during normal weather conditions within the specified time frame.

**Probable**—failure may be expected under normal weather conditions within the specified time frame.

**Imminent**—failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load. This is an infrequent occurrence for a risk assessor to encounter, and it may require immediate action to protect people from harm.

The likelihood of impacting a target can be categorized using the following guidelines:

**Very low**—the chance of the failed tree or tree part impacting the specified target is remote. Likelihood of impact could be very low if the target is outside the anticipated target zone or if occupancy rates are rare. Another example of very low likelihood of impact is people in an occasionally used area with protection against being struck by the tree failure due to the presence of other trees or structures between the tree being assessed and the targets.
Low—there is a slight chance that the failed tree or tree part will impact the target. This is the case for people in an occasionally used area with no protection factors and no predictable direction of fall, a frequently used area that is partially protected, or a constant target that is well protected from the assessed tree. Examples are vehicles on an occasionally used service road next to the assessed tree, or a frequently used street that has a large tree providing protection between vehicles on the street and the assessed tree.

Medium—the failed tree or tree part could impact the target, but is not expected to do so. This is the case for people in a frequently used area when the direction of fall may or may not be toward the target. An example of a medium likelihood of impacting people could be passengers in a car traveling on an arterial street (frequent occupancy) next to the assessed tree with a large, dead branch over the street.

High—the failed tree or tree part is likely to impact the target. This is the case when there is a constant target with no protection factors, and the direction of fall is toward the target.

The consequences of failure can be categorized using the following guidelines:

**Negligible**—no personal injury, low-value property damage, or disruptions that can be replaced or repaired.

**Minor**—minor personal injury, low-to-moderate value property damage, or small disruption of activities.

**Significant**—substantial personal injury, moderate- to high-value property damage, or considerable disruption of activities.

**Severe**—serious personal injury or death, high-value property damage, or major disruption of important activities.

**Bibliography:**


Loose Leaf: The Official Blog of American Forests Scenes of Senecense Inside the Life and Death of a Tree JULY 10TH, 2017| By Melanie Friedel


**Level 3 Risk Assessment:**

Tree numbers, 28 thru 32 and number 35 are recommended for a Level 3 Risk Assessment. The cost for a Level 3 Assessment and the accompanying report would be $500.00 per tree.
Tree #6

Tree 6 is located at the southeast corner of parking lot 5.

This tree is an example where if the height were significantly lowered, failure where the codominant trunks meet would be eliminated. Additionally, the leverage and stress the codominant leaders create on the root plate would be significantly reduced and the potential targets would be taken out of play.
Tree 39 is located on the west side of Stadium Rd. near the tennis courts.

This tree is another example where if the height were significantly lowered, failure where the codominant trunks meet would be eliminated. Additionally, the leverage and stress the codominant leaders create on the root plate would be significantly reduced and the potential targets would be taken out of play.
Subject: Coastal Breeding Season Raptor Surveys and Raptor Habitat Assessment for University of California, Santa Barbara, Tree Removal, Main Campus and West Campus.

Dear Ms. Hammond:

At your request, Dudek has conducted breeding season raptor surveys and a raptor habitat assessment for designated areas on Main Campus and West Campus at the University of California, Santa Barbara (U.C. Santa Barbara). Dudek surveyed 19 designated areas within Main Campus and a large stand of eucalyptus along the boundary between West Campus and Isla Vista, to observe raptor use of these areas for nesting, perching, and roosting and assess the raptor habitat values of these areas. This letter reports the methods and results of the surveys and habitat assessment, conducted from April to June 2019.

1 Background

Potential project impacts and mitigation measures pertaining to raptors are presented in the U.C. Santa Barbara (2010) LRDP Final Environmental Impact Report (FEIR). The 2019 surveys did not pertain to development projects, but to U.C. Santa Barbara’s plans to remove trees that are unhealthy and otherwise pose a danger of falling, resulting in risk of injury or damage to property. However, because removal of trees potentially constitutes an impact to raptor habitat, U.C. Santa Barbara requested that Dudek conduct raptor surveys according to the California Coastal Commission (CCC) breeding season protocol (CCC 2004) and to assess raptor habitat within the proposed tree removal areas. Most trees in these areas are blue gums (Eucalyptus globulus), but several other species are also present. Dudek conducted surveys within the tree removal areas and noted raptor habitat features of these areas, but also observed raptor activities within 500 feet of the designated tree removal areas.

2 Methodology

The CCC (2004) protocol states that breeding season raptor surveys shall:

- Be conducted between March 15 and June 15
Consist of at least five visits
- Be spaced at least one week apart
- Consist of at least two hours on-site between dawn and 10:00 am
- Include three visits immediately before nightfall, if habitat for ground-nesting owls is present
- Specifically involve searches for nests, foraging birds, and birds using trees for nesting, perching, or roosting.

No habitat for ground-nesting owls is present in the areas surveyed, so Dudek did not conduct evening surveys. The potential tree removal areas occur on West Campus and Main Campus. Because of the size of the area encompassing tree removal locations, Dudek split the entire area into three survey areas: two on Main Campus and one on West Campus (Figure 1, Figure 2). Splitting all the locations among three survey areas, which could be covered on different days, permitted coverage of all areas before 10:00 am. Below are descriptions of the survey areas:

**Main Campus Survey Area 1.** This survey area generally encompasses the northern portion of Main Campus, including trees in 10 of the 19 areas on Main Campus where tree removal may occur (tree removal areas 1, 2, 3, 4, 5, 8, 9, 13, 14, and 16) and a combined 500-foot buffer around all of the 10 areas (Figure 2).

**Main Campus Survey Area 2.** This survey area generally encompasses the southern part of Main Campus that lies north of Campus Lagoon, including 9 of the 19 Main Campus tree removal areas (6, 7, 10, 11, 12, 15, 17, 18, and 19) and a combined 500-foot buffer around the nine areas (Figure 2).

**West Campus.** The West Campus survey area includes one large tree removal area along the east boundary of West Campus, adjacent to Isla Vista (Figure 3). This is a long north-south row of blue gums and other trees bordering the West Campus Open Space and West Campus Point Faculty Housing.

Dudek biologists Dave Compton and Melissa Blundell, who have extensive experience with raptors and raptor surveys in Santa Barbara County, conducted all surveys, including five morning surveys for each survey area (Table 1, Table 2). During each survey, a Dudek ornithologist spent between 2.5 and 4.0 hours searching for and observing raptors, raptor nests, other raptor breeding evidence, and raptor foraging. At least two hours prior to 10:00 am, per CCC (2004) protocol, were spent observing within each survey area during each survey pass. Survey routes permitted inspection of all suitable trees for raptor nests, through either close-up examination or scanning a group of trees at a distance. In addition to walking over the entire area, the biologist stopped at locations that offered good vantage points over potential nesting or roosting trees, as well as areas where raptors might forage.

### 2.1 Nesting, Perching, and Roosting

The ornithologist searched for raptor nests in mature trees within each of the survey areas (including the 500-foot buffer), especially if a raptor in the area displayed behavior indicating potential breeding or nest building. Trees of interest included eucalyptus (Eucalyptus spp.), ornamental pines (Pinus spp.), Monterey cypress (Hesperocyparis
Ms. Shari Hammond, U.C. Santa Barbara  

Subject: Coastal Raptor Surveys for Main Campus and West Campus Tree Removal

Macrocarpa), other large ornamentals, and mature oaks (Quercus spp.), cottonwoods (Populus spp.), and willows (Salix spp.). The ornithologist also examined all suitable raptor perching areas and listened for raptor calls. Locations of any raptor perches or nests were noted on a printed field map depicting an aerial photograph of the area. In addition, the locations of other breeding-related behaviors or of raptor fledglings were noted on the aerial field map. Locations recorded in the field were later digitized by a Geographical Information System (GIS) technician.

Although the term “roosting” may be applied to multiple behaviors, and the meaning of this term overlaps with “perching,” roosting may refer specifically to occupying a location during the night-time hours, or night roosting. Some species, such as white-tailed kite (Elanus leucurus), a state fully protected species, may roost communally at night, especially during winter. White-tailed kite roosts typically occur in dense vegetation in riparian habitat, orchards, oaks (Quercus spp.), and other trees. Dudek noted the suitability of the tree removal areas for such roosting. However, the timing of the surveys as dictated by the protocol (CCC 2004), which is during the spring and during daytime hours, does not permit direct observations of communal night roosting for most species.

2.2 Hunting and Foraging

As impacts of the proposed tree removal are limited to the trees being removed, surveys focused on nesting and perching rather than foraging, which for most raptors in the region occurs mostly in more open habitats. However, the presence of adjacent foraging habitat is an important component of nesting habitat. Red-tailed hawks, for example, tend to establish nests in locations where they have views over adjacent foraging habitat. In general, raptors will nest in locations where they have ready access to foraging habitat. Therefore, Dudek noted any foraging activities observed and the presence of nearby foraging habitat, during surveys.

3 Results

Dudek ornithologists conducted five morning surveys each for Main Campus Survey Area 1, Main Campus Survey Area 2, and the West Campus Survey Area, between April 30 and June 11, 2019 (Table 1, Table 2). The sections below describe habitat characteristics for Main Campus and West Campus, as well as raptor observations during surveys.

3.1 Raptor Observations

Several species of raptors were observed in the tree removal areas or within 500 feet (Table 1, Table 2). Most raptor species observed were relatively common species that are present year-round. No species listed as threatened or endangered under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA), and no species designated as California Species of Concern (CSC) were observed. Two species observed, the white-tailed kite and peregrine falcon (Falco peregrinus), are designated as Fully Protected (FP) by the California Department of Fish and Wildlife (CDFW). In addition, all raptor species discussed below are protected under California Fish and Game Code Section 3503.5, which prohibits take of any bird of prey.
3.1.1 Main Campus

During surveys, three species of raptors were observed in the Main Campus survey areas: Cooper’s hawk (*Accipiter cooperii*), red-tailed hawk, and peregrine falcon (Table 1, Figure 4). Observations are summarized by survey in Table 1 and by species below.

Cooper’s hawk. The Cooper’s hawk is an uncommon to fairly common resident in southern Santa Barbara County (Lehman 2019). This species was observed once on Main Campus during surveys. An adult was observed perched in *Eucalyptus* sp. at the northern end of tree removal area 16, in Survey Area 1, on May 8, 2019, before leaving the area to the east. No evidence of nesting on Main Campus was observed during the surveys. Suitable habitat occurs along the north bluffs of campus and in adjacent Goleta Slough Ecological Reserve, Basin I.

Red-tailed hawk. The red-tailed hawk is a common year-round resident in southern Santa Barbara County (Lehman 2019). One or more of this species was observed within 500 feet of all three survey areas during each survey, and this species nested in all three survey areas, including successful nesting on Main Campus in tree removal areas 13 and 18. In Survey Area 1 on Main Campus, red-tailed hawks nested successfully in tree removal area 13, a previously known nesting location (Holmgren and O’Loghlen 2019) within the Associated Students Recycling “Eucalyptus Grove,” directly southeast of the Environmental Health and Safety Building and north of tennis courts. Adults were first observed visiting the nest on April 25, 2019, during a separate raptor survey. The pair remained active in this area from May 1 through May 28, 2019, and were often observed circling around Goleta Slough or perched on stadium lights at Harder Stadium. The young were detected as nestlings and were frequently calling on May 20, 2019, and as fledglings perched outside the nest on May 28 and June 12, 2019. The two fledglings were observed on June 12, 2019, perched and calling near both adults on the Harder Stadium lights (Table 2, Figure 4).

In Survey Area 2 on Main Campus, red-tailed hawks nested successfully in a blue gum at a previously known nest site (Holmgren and O’Loghlen 2019; Table 1, Figure 4) within tree removal area 18, adjacent to San Miguel Hall. One nestling was detected during the first survey of this area, on May 2, 2019, and two were detected on May 8, 2019. The young were detected as fledglings, perching at various locations near the nest site and frequently calling, during each of the last three surveys, on May 24, June 4, and June 11, 2019. Both of the pair associated with this nest were active and perching in the nest vicinity on May 8, 2019, but only one adult was observed on the other four occasions. Adult and fledgling red-tailed hawks perched at various locations within tree removal area 18 and at other locations nearby, including at Storke Tower and several trees on the south side of Campus Lagoon (Table 2, Figure 4).
Table 1

Summary of Conditions and Survey Results for Main Campus Tree Removal Raptor Survey

<table>
<thead>
<tr>
<th>Survey No.</th>
<th>Date / Time</th>
<th>Site Conditions2</th>
<th>Biologists</th>
<th>Survey Area</th>
<th>Observations1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>May 1, 2019 7:02–10:45 A.M.</td>
<td>Clear with very slight (0-1 mph) winds. Temperatures ranged from 58ºF to 63ºF.</td>
<td>Melissa Blundell</td>
<td>1</td>
<td>RTHA – pair nesting in Eucalyptus sp. in area 13 (historic nest site), but remaining away from the nest for long periods. A third adult was observed flying through the area occupied by this pair.</td>
</tr>
<tr>
<td>2</td>
<td>May 2, 2019 7:44–10:44 A.M.</td>
<td>Partly cloudy with light (1-5 mph) winds. Temperatures ranged from from 53ºF to 63ºF.</td>
<td>Dave Compton</td>
<td>2</td>
<td>RTHA – nest in blue gum in area 18 (historic nest site), with at least one nestling. Adult perching in nest tree and active in vicinity.</td>
</tr>
<tr>
<td>3</td>
<td>May 8, 2019 7:37–11:03 A.M.</td>
<td>Cloudy with light (0-2 mph) winds from the northwest. Temperatures ranged from 60.1ºF to 66.5ºF.</td>
<td>Melissa Blundell</td>
<td>1</td>
<td>RTHA – pair nesting in Eucalyptus sp. in area 13, with nestlings likely but not visible. Adults perching on stadium lights west of the nest. COHA – Adult perched in Eucalyptus sp. at the northern end of area 16, before leaving the area well to the east.</td>
</tr>
<tr>
<td>4</td>
<td>May 15, 2019 7:29–10:30 A.M.</td>
<td>Clear with moderate (4-9 mph) west winds. Temperatures ranged from 57ºF to 60ºF.</td>
<td>Dave Compton</td>
<td>2</td>
<td>RTHA – pair nesting in Eucalyptus sp. in area 18. Two large nestlings calling frequently, and one perching on branch above nest. Pair active near nest, including over Campus Lagoon Island and Campus Lagoon, perching in trees north and south of nest tree, and on Storke Tower.</td>
</tr>
<tr>
<td>5</td>
<td>May 20, 2019 7:40–10:27 A.M.</td>
<td>Clear with light (0-5 mph) winds. Temperatures ranged from 56ºF to 60ºF.</td>
<td>Melissa Blundell</td>
<td>1</td>
<td>RTHA – Individual observed flying northwest of Mesa Road. Pair observed perching on and flying over Davidson Library. One nestling calling from nest in area 13, near fledging. PEFA – One adult observed soaring over Davidson Library, from the NW to SE.</td>
</tr>
<tr>
<td>6</td>
<td>May 24, 2019 7:32–10:39 A.M.</td>
<td>Clear with light (0-5 mph) winds. Temperatures ranged from 56ºF to 60ºF.</td>
<td>Dave Compton</td>
<td>2</td>
<td>RTHA – Two fledglings perching in nest tree and nearby trees in area 18, including one flying from nest area to nearby tree. Adult near nest, calling, flying over Campus Lagoon, and perching in tree near nest.</td>
</tr>
</tbody>
</table>
Table 1

Summary of Conditions and Survey Results for Main Campus Tree Removal Raptor Survey

<table>
<thead>
<tr>
<th>Survey No.</th>
<th>Date / Time</th>
<th>Site Conditions²</th>
<th>Biologists</th>
<th>Survey Area</th>
<th>Observations¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>May 28, 2019</td>
<td>Sunny with light (0-3.5 mph) winds from the south and southeast. Temperatures ranged from 58°F to 66°F.</td>
<td>Melissa Blundell</td>
<td>1</td>
<td>RTHA – Two fledglings perched and calling outside of the nest within area 13, up to 100 feet from nest. An adult flew in from the west toward the fledglings and perched in area 13.</td>
</tr>
<tr>
<td></td>
<td>7:05–9:34 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>June 4, 2019</td>
<td>Overcast, with heavy precipitating fog early, and light (0-3 mph) winds. Temperatures ranged from 57°F to 60°F.</td>
<td>Dave Compton</td>
<td>2</td>
<td>RTHA – Two fledglings perching in trees within area 18 and on San Miguel Hall. Adult perching within area 18 and on dead tree on south side of Campus Lagoon.</td>
</tr>
<tr>
<td></td>
<td>7:42–10:22 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>June 12, 2019</td>
<td>Low overcast with light (1-4 mph) south and southwest winds. Temperatures ranged from 63°F to 66°F.</td>
<td>Melissa Blundell</td>
<td>1</td>
<td>RTHA – Two adults and two fledglings observed perching on stadium lights, adjacent trees, and flying over Harder Stadium. One adult later observed briefly perching in trees along El Colegio Road.</td>
</tr>
<tr>
<td></td>
<td>7:25 – 10:14 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>June 11, 2019</td>
<td>Mostly cloudy with light (1-4 mph) winds. Temperatures ranged from 64°F to 69°F</td>
<td>Dave Compton</td>
<td>2</td>
<td>RTHA – 1 adult and 2 fledglings perching at several locations near the nest, on both sides of Campus Lagoon.</td>
</tr>
<tr>
<td></td>
<td>7:41-10:45 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COHA = Cooper’s hawk  
PEFA = peregrine falcon  
RTHA = red-tailed hawk
Table 2
<table>
<thead>
<tr>
<th>Survey No.</th>
<th>Date / Time</th>
<th>Site Conditions</th>
<th>Biologists</th>
<th>Observations</th>
</tr>
</thead>
</table>
| 1          | April 30, 2019 7:35–10:35 A.M. | Overcast to mostly cloudy with light (1-2 mph) winds. Temperatures ranged from 56ºF to 60ºF. | Dave Compton | RTHA – Nest in eucalyptus, with incubating or brooding adult, in northeast part of the survey area; 2nd adult nearby, perching NW of horse corals and in nest tree.
WTKI – one F south over Camino Corto Creek, West Campus Point faculty housing, and to West Campus Open Space.
COHA – calling (but unseen) from within West Campus Housing development. |
| 2          | May 9, 2019 7:30–10:27 A.M. | Overcast, with light (0-4 mph) winds. Temperatures ranged from 59 to 61ºF | Dave Compton | RTHA – Nest in eucalyptus, with at least one fuzzy, white nestling, in northeast part of the survey area. Calling heard in the area, but no adults seen.
WTKI – one flying northeast over West Campus Point housing, and then turned east and flew over Camino Corto Creek, within Camino Corto Open Space. |
| 3          | May 16, 2019 7:38–10:16 A.M. | Overcast early and mostly clear later, with light to moderate (7-12 mph winds). Temperatures ranged from 54ºF to 63ºF. | Dave Compton | RTHA – Nest in eucalyptus with 2 still fluffy white nestlings; 1 frequently calling adult perching at several locations and flying within the area immediately surrounding the nest. |
| 4          | May 29, 2019 7:32–10:06 A.M. | Sunny with offshore fog bank and light (1-6 mph) variable winds. Temperatures ranged from 59ºF to 62ºF | Dave Compton | RTHA – 1 adult perching and flying in immediate vicinity of previously observed nest, where 2 large nestlings present. |
| 5          | June 7, 2019 7:35–10:22 A.M. | Overcast with light to moderate (0-5 mph) south winds. Temperatures ranged from 57ºF to 63ºF. | Dave Compton | RTHA – 1 adult perching, flying, and calling in immediate vicinity of nest. No evidence of nestlings or fledglings in area.
COHA – 1 calling at northwestern edge of survey area. |

COHA = Cooper's hawk
RTHA = red-tailed hawk
WTKI – white-tailed kite
Peregrine Falcon. The peregrine falcon is a CDFW fully protected (FP) species that is uncommon to rare along the coast of southern Santa Barbara County during the breeding season, and has been recorded nesting at several locations in the adjacent Santa Ynez Mountains during the 2010s (Lehman 2019). This species was observed once within 500 feet of the tree removal sites on Main Campus in 2019. One adult was flying in a northwest to southeast direction over the Davidson Library, southwest of tree removal area 5 in Survey Area 1, on May 20, 2019 (Figure 4). This individual was not observed perching, and no location is recorded. Some birds that are suitable prey items occur in the area, so this individual may have been foraging over the area. This species nests on ledges on cliff faces, occasionally on varies types of structures, and only very rarely on trees. Those that do nest in trees nest in large nests built by other large birds such as bald eagles (Haliaeetus leucocephalus) or cormorants (Phalacrocorax spp.) (White et al. 2000). This species, therefore, is not expected to nest in any trees at U.C. Santa Barbara, although it likely forages on campus on occasion.

3.1.2 West Campus

Three raptors species were detected visually or aurally at West Campus: Cooper’s hawk, red-tailed hawk, and white-tailed kite (Figure 1, Table 1). Observations are summarized by survey in Table 1 and by species below.

Cooper’s hawk. This species was detected on two occasions, both times by call and outside the tree removal area. One was calling from within the West Campus Point facility, probably west of the survey area, on April 30, 2019. One was heard calling subsequently, on June 7, 2019, from the northern edge of the survey area, north of the West Campus Point faculty housing. As no Cooper’s hawks were seen on either occasion, the locations were not recorded. The call that was heard is typically given during the nesting season, but Dudek detected no evidence this species was nesting in the tree removal area or within 500 feet. Suitable habitat occurs along Camino Corto Creek (which crosses the north edge of the tree removal area) in the vicinity of the second detection, but searches of this area over multiple surveys failed to result in a nest detection. No suitable nest were anywhere within the tree removal areas.

Red-tailed Hawk. This species nested within the survey area, but outside the tree removal area. The nest site was in a blue gum at Camino Corto Open Space, just east of the northern end of the tree removal area (Table 2, Figure 5), in an area where other raptor species have been recorded nesting successfully in the past (Dudek 2012, 2013; Holmgren and O’Loghlen 2019). Prior to initiation of surveys, this nest had been observed earlier in the month, when the adult was reported to be feeding very small nestlings (Holmgren and O’Loghlen 2019). Dudek first observed an adult here on April 30, 2019, sitting low on the nest, and a second adult perching in the area. A single adult was subsequently observed on May 16, May 29, and June 7, 2019. A single downy nesting was first observed in the nest on May 9, 2019, and two nestlings were observed during the two subsequent surveys, on May 16 and May 29, 2019. However, during the final survey, on June 7, 2019, the nest was empty and no evidence of fledglings could be found. Fledgling red-tailed hawks are often highly vocal and easy to detect, but no vocalizations were heard. Dudek examined the trees and structures throughout the survey area, and even outside the survey area, searching for evidence of fledglings, but none was found, and it was assumed the nesting attempt had failed. Perching locations for the adults were mostly in the immediate vicinity of the nest, either just east of the tree removal area or within the far northern portion of the area (Figure 5).

White-tailed kite. This species was observed twice during surveys, both times in flight only (Table 2). Both observations, on April 30 and May 9, 2019, were of birds in transit over Camino Corto Creek and West Campus Point Housing, so no foraging was observed. Despite thorough searches for nests within the survey area during
each survey, none were found. Also, the flight paths for both observations indicated the species may have been foraging in the open spaces near the West Campus Bluffs between Isla Vista and Coal Oil Point. But, despite extended observation periods with this area in view during each survey, no kites were seen in this area. In addition, no kites were observed foraging in other suitable open areas in the vicinity, or in the Camino Corto Open Space or horse corral areas north of West Campus Point housing.

3.2 Habitat Characteristics

Raptor habitat is influenced by a number of factors, and habitat varies by raptor species. Those species potentially nesting at U.C. Santa Barbara include several that have been documented nesting on campus in the past, including red-tailed hawk, red-shouldered hawk, white-tailed kite, Cooper’s hawk, American kestrel, great horned owl (*Bubo virginianus*), and barn owl (*Tyto alba*). Other species have the potential to perch and hunt over portions of campus. Some of these are species that winter in the area, such as northern harrier (*Circus hudsonius*), or that may forage over campus at any time of year, such as peregrine falcon, but are very unlikely to nest on campus. Species such as bald eagle and Osprey (*Pandion haliaetus*) may be attracted on occasion to fish resources at Campus Lagoon, but have little attraction to other parts of campus. In addition, the latter species are not known to nest along the coast of southern Santa Barbara County.

Therefore, the assessment of trees as raptor habitat focuses on the nesting potential for the above known nesting species, and the potential for perching and roosting by a greater variety of species. Additional factors that influence raptor habitat are the level of human disturbance, such as from pedestrian and vehicular traffic; the ability of a tree’s branches to support the nests of larger species such as red-tailed hawk; the visual cover provided by a tree’s branches and foliage (especially important for a species such as white-tailed kite); whether foraging habitat occurs adjacent to the trees; and whether the trees provide prominent perches with views of foraging habitat.

3.2.1 Main Campus

Both Main Campus raptor survey areas are characterized by high levels of urbanization and human disturbance (pedestrian and vehicular traffic). The 19 tree removal areas (Figure 3) consist of mostly non-native, planted trees. Most trees occurring within the 500-foot buffer of the tree removal areas are also non-native species, with most native vegetation occurring along Campus Lagoon in Survey Area 2 and in portions of Goleta Slough that are adjacent to tree removal areas in Survey Area 1. Open areas in the vicinity (again, except at Campus Lagoon and Goleta Slough) mostly consists of lawns and areas otherwise not supporting a significant prey base for most raptors. Therefore, foraging habitat is limited over most of Main Campus due to the lack of prey. Birds species that nest in the ornamental vegetation and feed on resources, such as insects, that these areas support are suitable prey for raptor species such as Cooper’s hawk. However, as this species relies on cover from vegetation as it hunts, this habitat is of limited value for foraging. None of the tree removal areas on Main Campus support habitat suitable for night-roosting by white-tailed kites, as none of the trees provide suitably dense foliage.

Although Main Campus Survey Area 1 and Survey Area 2 are generally very similar in terms of overall habitat, differences exists between the two survey areas, particularly with respect to the various specific tree removal areas and the habitat they support.
Survey Area 1. As noted above, this area includes 10 of the 19 tree removal areas (Figure 2). These areas and the 500-foot buffer encompass an area that captures the southwestern edge of Goleta Slough, extends south to Noble Hall, and northwest to Storke Field and Harder Stadium. With the exception of Goleta Slough, this area is characterized by high levels of urbanization and human disturbance (pedestrian and vehicular traffic). Eucalyptus are the dominant trees, but pines and other ornamentals are also present. Shrub cover is limited to ornamental hedges. Areas not occupied by ornamental trees and shrubs, buildings, and pavement are largely occupied by maintained, grassy lawns. With the exception of Goleta Slough and tree removal area 13, Survey Area 1 is generally low quality nesting habitat for raptors, due to the high disturbance level and limited foraging habitat. In addition, because of the disturbance from human presence and the lack of suitable foraging habitat, these areas are generally poor for perching and roosting.

1. This area is located in the interior courtyard of Phelps Hall and includes four tall Eucalyptus sp. trees. Structurally, the lower branches of the trees are sufficient for supporting nests of red-tailed hawks, red-shouldered hawks, and Cooper’s hawks. Foliage is probably not dense enough to provide needed cover for white-tailed kites, especially given the high level of human presence in the area. The trees are located in an area that would provide poor visibility to foraging grounds. The disturbance level from human activity in this area is high due to pedestrian traffic, and the area supports buildings and pavement substrates (therefore, not foraging habitat for some species and poor habitat for others). Overall, these trees provide poor habitat value for raptors, and no raptors were observed here during surveys.

2. Located near the southwestern corner of the Physical Science Building – North, this area includes three Eucalyptus sp. trees of moderate size that have been subject to past trimming. These trees occur in an area subject to high levels of pedestrian traffic and that supports mostly buildings, pavement, and maintained lawns (therefore, very poor foraging habitat). The trees are located in an area that would provide poor visibility to foraging grounds. These trees provide little foliage cover for species, such as white-tailed kite, and the structure is poor for supporting nests of larger raptor species. Overall, these trees provide little habitat value for raptors, and no raptors were observed here during surveys.

3. This area is located directly south of the Physical Science Building – North and northwest of Physical Sciences Building – South. This location includes three Eucalyptus sp. trees of varying size. This area is subject to high levels of pedestrian traffic and adjacent to academic buildings, pavement, and maintained lawns. The branches of the tallest and adjacent smaller tree are not structurally suitable for supporting raptor nests, and these tree provides little foliage cover for species such as white-tailed kite. Although the most southerly tree of this group is more densely foliated, the branch structure is marginally suitable for supporting raptor nests. Overall, this location provides poor raptor habitat, and no raptors were observed here during surveys.

4. This area is located directly northwest of Physics Trailer 2 and east of El Centro. It includes three medium height to tall Eucalyptus sp. trees with few to no branches in the lower half of the trees. This area is subject to high levels of pedestrian traffic and is adjacent to academic buildings, pavement, and maintained lawns. The branch structures are marginally suitable to support nests of larger raptors, such as red-tailed hawks and red-shouldered hawks, and foliage cover would provide some cover for Cooper’s hawks. Raptors are unlikely to nest here, given the human disturbance level and the lack of adjacent suitable foraging habitat. As a result, this location provides poor raptor habitat. No raptors were observed here during surveys.
5. Located directly northwest of Webb Hall, this area includes five taller *Eucalyptus* sp. trees with remaining branches concentrated in the northern half. Like other areas in the center of Main Campus, this area is subject to high levels of pedestrian traffic and is situated among academic buildings, pavement, and maintained lawns. Structurally, the trees are suitable for species such as red-shouldered hawk and Cooper’s hawk, but only marginally suitable for supporting nests of red-tailed hawk. Because of disturbance levels and the absence of suitable foraging habitat in the immediate vicinity, these trees provide poor habitat for nesting, perching, and roosting raptors. One peregrine falcon was observed in the vicinity of these trees during surveys, but this individual was only soaring over the area. A red-tailed hawk perched on the Davidson Library on May 20, 2019, was approximately 500 feet from this area, so also was not using the trees located here.

8. This area is located directly east and northeast of the Recreation Center at the intersection of Mesa Road and Ocean Road. It includes 17 *Eucalyptus* sp. trees, including a mix of smaller, more slender trees and larger, more mature trees. The area includes three separate groups of trees. A group of six at the southern end includes four larger, more mature trees that provide structure suitable for nesting by almost any raptor species, as well as perching opportunities. Two trees in the center of this area are similar. The remaining trees, grouped together near Mesa Road, at the northern end of this area, vary in size and structure. The northernmost tree is the most suitable tree for raptor nesting in this northern group. Vehicular traffic from Mesa and Ocean Roads is significant in tree removal area 8, and pedestrian traffic is relatively high near the southern group of trees. Although the location of this area is subject to high disturbance levels from human presence, it is also directly south of Goleta Slough, providing roosting or nesting raptors opportunities for direct views and access to foraging habitat, particularly in trees closer to Mesa Road. One red-tailed hawk nesting in nearby tree removal area 13 (see below) perched in the southern group of trees on one occasion during surveys, and perching was also observed just north of this area. Overall, the level of disturbance may dissuade raptors from nesting in tree removal area 8, although a higher potential for nesting occurs at the far northern end of this area than in most other locations in Survey Area 1, due to the proximity of good foraging habitat. Also, this area is in the immediate vicinity of two known red-tailed hawk nesting sites from past years and near an area of the Campus North Bluff where’s Cooper’s hawk has been observed nesting. It is highly likely raptors regularly use the northern part of this survey area for perching, and red-tailed hawk use for this purpose was confirmed during surveys, While the mature, more southerly trees provide good structure for perching, nesting, and roosting, being more removed from foraging habitat and nearby known nesting locations, and being nearer pedestrian traffic, they are less suitable as raptor habitat overall.

9. This area is located at the southwest corner of the Arts and Lectures building and includes one relatively mature *Eucalyptus* sp. tree. It is located adjacent to Parking Lot 12 and adjacent to a bike path. In addition, the construction of Henley Hall is currently underway in Parking Lot 12 and the entire area is subject to high levels of noise and pedestrian and vehicular traffic. Structurally, the single tree is suitable for nesting, perching, and roosting by most raptor species. Although this tree provides views to natural habitat on the North Bluff, only 300 feet away, and Goleta Slough is just beyond the bluffs, the high levels of disturbance in the immediate area would likely dissuade raptors from roosting and nesting. Overall, this tree provides poor habitat value for raptors. No raptor activity was observed here during surveys.

13. This area is located within the Associated Students Recycling “Eucalyptus Grove,” which is directly southeast of the Environmental Health and Safety Building and north of tennis courts. The area supports
24 *Eucalyptus* sp. trees, many of which are relatively large. The trees provide good structure to support large raptor nests, such as red-tailed hawk, red-shouldered hawk, and Cooper’s hawk. As noted in Section 3.1, red-tailed hawks nested successfully here in 2019. This species has also nested at this location previously, dating back to 2016 (Holmgren and O’Loghlen 2019). The tree structure is likely not suitable for supporting white-tailed kite nests. This location is directly south of Goleta Slough, and roosting individuals have views over and access into foraging habitat. Both adult and juvenile red-tailed hawks were observed perching within this area in 2019. Although this location is subject to moderate levels of human disturbance and occasional vehicular activity, the location of the grove within a fenced area limits human activity below or within the grove. Overall, these trees provide moderate to high roosting, perching, and nesting habitat value for raptor species, and raptor nesting is known to occur here.

14. Located along the west side of Stadium Road, adjacent to tennis courts that are between Harder Stadium and the San Clemente Housing parking structure, this area includes six *Eucalyptus* sp. trees of moderate height. Parking Lot 30 and Cesar Uyesaka Stadium are across Stadium Road, to the east. This area supports a particularly high volume of pedestrian and vehicular traffic on school days and occasionally supports intense levels of pedestrian and noise disturbance during events. The surrounding area is highly urbanized and isolated from foraging habitats. The trees provide poor structure to support nests of any of the expected species. Overall, this location does not provide suitable habitat for raptor nesting and roosting, and is even poor habitat for occasional perching.

16. This area is located within Parking Lot 16, south of Mesa Road, and east of Parking Structure 18. It includes 12 relatively tall *Eucalyptus* sp. trees. The trees are located in an area of high vehicular and pedestrian disturbance. Structurally, these trees are only marginally suitable to support red-tailed hawk nests, and suitable for supporting nests of species such as red-shouldered hawk and Cooper’s hawk. The structure and lack of dense foliage in the upper portions of the tree make them unsuitable for nesting by white-tailed kites. Regardless, the location of all trees in this area within a parking lot and in an area of high human activity severely limit the suitability for nesting by any raptor species. However, these trees, particularly those in the north, are located directly south of Goleta Slough and near suitable foraging habitat for several species of raptor, and these species may perch here on occasion. Dudek observed one Cooper’s hawk perched in a tree in this area on May 8, 2019. Overall, this location provides suitable perching opportunities and poor nesting and night-roosting habitat.

Survey Area 2. Nine of the nineteen Main Campus tree removal areas occur in Survey Area 2. These areas and the 500-foot buffer encompass an area that extends eastward from near the Isla Vista boundary, to nearly the eastern edge of Main Campus at Goleta Bay. The area lies principally north of Campus Lagoon, but a portion of the 500-foot buffer extends across Campus Lagoon, to the Lagoon Island. As noted in the introduction to this section, the survey area is mostly urbanized and supports high levels of pedestrian and vehicular traffic, and generally limited foraging habitat. Most trees are ornamentals. The nine tree removal areas are as follows:

6. Located along the east side of Lot 5, this area includes three moderately tall *Eucalyptus* sp. trees that that have been subject to significant past trimming. They occur in an area subject to high levels of pedestrian traffic, between Lot 5 and University House, and supporting mostly buildings and pavement (therefore, very poor foraging habitat). These trees provide little foliage cover for species, such as white-tailed kite, that prefer to conceal their nests, and the structure is poor for supporting nests of larger
raptor species. Overall, these trees provide little habitat value for raptors. No raptors were observed here during surveys.

7. This area supports four relatively mature blue gums on the south side of Lot 5, above the Campus Lagoon. Structurally, the trees are suitable to support nests of red-tailed hawk, red-shouldered hawk, and Cooper’s hawk. They provide a vantage point over the eastern part of Campus Lagoon and to Lagoon Island beyond. However, the disturbance from pedestrian traffic is high here, and nesting raptors would be exposed visually because of relatively little cover from foliage. This would likely deter Cooper’s hawks from nesting here and may lessen the possibility of nesting by red-tailed hawk. Therefore, these trees provide only marginally suitable habitat for raptors. No raptors were observed here during surveys.

10. Located immediately south of the south entrance to the Events Center, this area supports three relatively large blue gums and one that is significantly smaller. Although the taller trees are structurally suitable for supporting nests of red-shouldered hawks and Cooper’s hawks, the disturbance level is high, as the area supports a particularly high volume of pedestrian and bicycle traffic on school days and occasionally supports intense levels of pedestrian and noise disturbance during events. The surrounding area is highly urbanized and therefore is very poor raptor foraging habitat, except potentially for Cooper’s hawk. Overall, this location provides marginal to poor raptor habitat. No raptors were observed in this area during surveys.

11. This area supports a single tall blue gum proposed for removal and a single pine tree of moderate height. The trees are located at the intersection of two bike paths that support high levels of bicycle traffic on school days, and are only approximately 15 meters (50 feet) from tree removal area 10, and therefore very near the Events Center. Some of the lower bluegum branches have the potential to support nests of larger species such as red-tailed hawk and red-shouldered hawk, but the likelihood that these species would nest here is extremely low, given the human disturbance level and the lack of adjacent suitable foraging habitat. The lack of visual cover is likely to deter nesting by somewhat smaller species such as white-tailed kite and Cooper’s hawk. Overall, these trees provide poor habitat for raptors. No raptors were observed in the area during surveys.

12. Along the east side of the Humanities and Social Sciences Building, and west of Lot 28 and the Counseling and Career Services Building, this area supports approximately 19 trees, mostly blue gums. As with many of the other locations on Main Campus, this is a highly urbanized area largely lacking foraging habitat. The trees within this area are of variable height, with some that are relatively tall, and several are heavily trimmed. Four taller trees adjacent to the Counseling and Career Services Building provide the best structure for supporting raptor nesting, but like the rest of the trees in this area are immediately adjacent to buildings and not close to good foraging habitat. The trees in this area are all marginal habitat for nesting, perching, and roosting raptors. No raptors were observed in this area during surveys.

15. This area supports a single taller, mature blue gum. The tree is not excessively trimmed, and some of its branches touch the northwest side of the Events Center, the main entrance of which is 30 to 40 meters (100 to 130 feet) to the east. The tree provides good structure for supporting nests of white-tailed kite and Cooper’s hawk, but is poorly located, among parking lots, a parking structure, and touching the Events Center, and is unlikely to support nesting by any species. It is also an unlikely location to support
perching during the day time or night roosting by any species, because of its location. No raptors were observed here during surveys.

17. This area includes five moderate-sized to smaller blue gums along the southwest side of El Colegio Road, southeast of its intersection with Ocean Road and adjacent to Lot 27. U.C. Santa Barbara plans to remove only three of the five trees. The branch structure is relatively poor for supporting species such as Cooper’s hawk and red-shouldered hawk, and unsuitable for red-tailed hawk. The relatively sparse foliage would not provide adequate cover for a white-tailed kite nest. Also, situated between El Colegio Road and the parking lot, along a busy bike path, and next to bicycle parking area, the trees are subject to high levels of pedestrian and vehicular activity. Given all these factors, these trees are poor raptor habitat overall, including as perching and roosting sites, and are not suitable for nesting by raptor species. No raptors were observed in this area during surveys.

18. Encompassing a relatively long row of 26 trees between Campus Lagoon on one side and San Nicolas Hall and San Miguel Hall on the other side, this area supports mature blue gums and other eucalyptus trees. The areas supports suitable nesting habitat for several raptor species, including red-tailed hawk, red-shouldered hawk, and Cooper’s hawk, although the density of the foliage generally is not suitable or is marginally suitable as cover for white-tailed kite nesting. Pedestrian traffic is lower here compared with elsewhere on campus, and the trees provide good views and accessibility to suitable foraging habitat on the Lagoon Island, across Campus Lagoon to the west and south. A red-tailed hawk pair successfully raised two young to fledging age in 2019, and this location has been known to support nesting by this species annually since at least 2016 (Holmgren and O’Loghlen 2019). Red-tailed hawk adults and fledglings perched at various locations within tree removal area 18 during surveys, from the northern extreme of this area to nearly the southern extreme (Figure 4).

19. Two distinct groups of trees that are in close proximity to one another occupy this area. A group of six taller Eucalyptus sp. trees within Lot 9 (south of University Center Road) occupies the southern part of this area. Most of these trees are structurally suitable for nesting by red-shouldered hawks and Cooper’s hawks, but only marginally suitable for nesting red-tailed hawks. However, the surrounding area is highly developed, supporting high levels of pedestrian activity and moderate vehicular traffic, and provides poor to unsuitable foraging habitat. Therefore, these trees are poor raptor habitat. The remaining trees in this area are on the north side of University Center Road, along the south edge of the Psychology Building. The eight lemon-scented gum (Eucalyptus citriodora) trees in this area are tall but provide poor structure for nesting raptors, with relatively thin branches, few crooks for nesting, and sparse foliage. Given this, and the human disturbance level in this area, which is similar to that in the southern portion of tree removal area 19, these trees are poor raptor habitat. No raptors were observed in either the southern or northern group of trees during surveys.

3.2.2 West Campus

Although the West Campus tree removal area is located between West Campus Point faculty housing and residential development in Isla Vista, the long row of trees in this area is subject to lower disturbance levels from pedestrian activity and vehicular traffic, compared to Main Campus. Although trails along the eucalyptus row and through both West Campus Open Space and Camino Corto Open Space provide pedestrian access through much of the survey area, and although significant residential develop is near the trees, substantial open space and
natural habitat areas are present as well (Figure 3). This area also has a history of documented raptor breeding, by great horned owl, red-shouldered hawk, and the Fully Protected white-tailed kite. Adjacency to human activity, adjacency to foraging habitat, and suitability of the habitat in terms of tree size and structure all vary for different parts of the tree removal area and the survey area in general. This habitat assessment addresses the suitability of habitat in three segments: southern, or the area from the ocean bluff north to the southeast corner of West Campus Point housing; middle, or the section adjacent to the West Campus Point housing on the west and Isla Vista residential development on the east, north to Fortuna Rd; and northern, or the area north of Fortuna Road.

The southern portion of the tree removal area is adjacent to grasslands associated with West Campus Open Space on the west and residential development associated with Isla Vista on the east. Most of the trees are relatively tall and possess branch structure suitable for supporting nests of red-shouldered hawk, Cooper’s hawk, and white-tailed kite. Some of the trees may be marginally suitable for supporting nests of red-tailed hawk. Some trees support denser foliage suitable for concealing nests of white-tailed kite, and this species nested just south of West Campus Housing in 2012 (Figure 5; Dudek 2012). Relatively frequent pedestrian traffic may suppress the potential for the above species to nest in this area somewhat, but most of these species are relatively tolerant of human presence at moderate levels. In addition, the trees here are adjacent to suitable foraging habitat for locally breeding raptor species. No raptor activity was detected in this portion of the tree removal area during surveys in 2019 (Figure 5).

Residential development borders the middle section of the tree removal area on both sides: West Campus Point on the west and residences along Trigo, Pasado, and Fortuna Roads in Isla Vista on the east. This section includes many blue gums, some of which are relatively mature, several Monterey cypress, and at least one lemon-scented gum. Overall, the trees in this section have been more heavily trimmed than elsewhere in the row, many are smaller, and some are recruits (naturally occurring, rather than planted, and generally relatively small). Structurally and in their overall smaller size, the trees in this area are less suitable for raptor nesting than trees in other parts of the tree removal area. The higher level of human presence adjacent to residential development probably also limits the suitability of this area. But some trees are suitable for species such as red-shouldered hawk, Cooper’s hawk, and to a lesser extent, white-tailed kite. No raptor activity was detected in this portion of the tree removal area during surveys (Figure 5).

North of Fortuna Road, and especially where the row of trees, at its northern extreme, crosses Camino Corto Creek, is the best raptor habitat in the West Campus tree removal area. Adjacent trees in Camino Corto Open Space and along Camino Corto Creek combine with this area to form a more natural grove of eucalyptus trees, with naturally growing recruits, forming a larger woodland area with willows and other trees along the creek. Although many trees in this area are the smaller recruits that have grown up relatively recently, many of the largest trees along the whole row occur here, especially north of West Campus Lane. Nearly all expected species of tree-nesting raptors in the area have the potential to nest here, and several have been recorded nesting here. Red-tailed hawks nested here (although unsuccessfully) in 2019, and white-tailed kites (2010), red-shouldered hawks, and great horned owls have all been recorded nesting in the area (Table 2, Figure 5). Cooper’s hawks also have the potential to nest here. Although no suitable cavities for nesting were observed here in 2019, American kestrels may potentially nest in the area. In addition to supporting suitable nesting habitat for a variety of nesting raptor species, the trees in this area include perching opportunities for adult raptors keeping watch over their nests, and for fledglings practicing flight and moving from perch to perch. The trees in this area also support foliage suitable for night roosting for a variety of species occurs in the area.
4 Discussion

Trees suitable as raptor habitat occur in almost all of the tree removal areas on Main Campus and West Campus. However, several factors limit the suitability of habitat in many cases, particularly on Main Campus, where heavy pedestrian traffic, vehicular traffic, and the lack of adjacent foraging habitat likely deter raptor nesting and perching in many cases. However, where trees are closer to suitable foraging habitat, especially in places where pedestrian traffic and vehicular traffic occur in lower levels, raptor activity is more likely to occur, and has been observed in 2019 and in the past (but note that the definition of “close” varies by species and with the presence or absence of visual obstructions between the trees and the foraging habitat). For Main Campus, places that may be considered close enough to foraging habitat to influence the suitability for nesting and perching are those near Campus Lagoon (tree removal area 18) and near Mesa Road where it borders Goleta Slough (13 and, to a lesser extent 8 and 16). In addition to habitat conditions within and surrounding the tree removal areas, observed raptor occurrences should influence how trees are viewed as raptor habitat. At West Campus, habitat overall is capable of supporting raptor nesting anywhere along the row of trees. The best habitat, and nearly all of the past nesting occurrences, are near the northern extreme of this row of trees. The more natural woodland habitat occurring north of West Campus Point housing, the size of the largest trees, the relative isolation from persistent human presence (compared to other areas surveyed), and the proximity to good foraging habitat all make this area a priority for preservation, to the extent that tree hazards permit. The southern portion of the row (south of West Campus Point housing) is a secondary priority, especially in the area near where white-tailed kites nested in 2012 (Figure 5). But note that even the middle portion of this area supports suitable raptor habitat.

In general, where suitable habitat occurs, it is not just the trees suitable for nesting, perching, and roosting that should be considered priorities for preservation, where hazard levels permit. Removal of adjacent trees can potentially limit the future suitability of nesting trees by reducing shading of nest sites and vegetative cover for species requiring it. Also, as some raptor species use different nesting trees from year to year within a nesting territory, reducing the number of suitable trees in the area may also reduce the likelihood that the raptors will continue to occupy the nesting territory. This and all of the above-mentioned factors should be considered when removing potentially hazardous trees, when the level of hazard may permit flexibility in decisions about removal.

5 Recommendations

Several measures are recommended to avoid potential impacts to raptors:

- To the extent feasible, avoid removal and trimming of trees where red-tailed hawks nested in 2019, as well as adjacent trees, especially those that provide shading or vegetative cover for the nesting trees.

- Avoid removal of trees, where feasible, within Main Campus tree removal area 13, within the northern group of trees in tree removal area 8, and near the northern portion of tree removal area 16.

- Avoid removal and trimming of the red-tailed hawk nest tree within tree removal area 18 and adjacent trees. In addition, prioritize only the most hazardous trees within tree removal area 18, to avoid reducing the overall habitat value of this area and potentially eliminating this area as a red-tailed hawk nesting territory.
Ms. Shari Hammond, U.C. Santa Barbara  

Subject: Coastal Raptor Surveys for Main Campus and West Campus Tree Removal

- Avoid removing trees within 50 feet of any locations where white-tailed kites have been observed nesting in past years (at West Campus; Figure 5).

- Minimize removal of trees in general within the West Campus tree row, based on hazard priority.

- At West Campus, avoid removal of trees north of West Campus Lane, particularly those within the slopes above Camino Corto Creek. Note, however, that 2 of 11 trees scheduled to be removed along West Campus Lane (Tierra Verde Tree Care 2019) and slightly west of the row of trees are poor raptor habitat and do not contribute substantially to the overall habitat quality within the row of trees. Therefore, Dudek makes no recommendation to avoid removal of these trees, if they are regarded as hazardous. And Dudek makes no recommendations with regard to removing the other 9 trees recommended for removal in Tierra Verde Tree Care (2019).

- To the extent feasible, at West Campus and at Main Campus tree removal areas 13 and 18, replace trees removed with tree species suitable for raptor activities. If trees are replaced at or in the immediate vicinity of removed trees whenever removal occurs, newly planted trees may have the potential to provide suitable raptor habitat in the future, before removal of additional trees significantly reduces overall suitability. Tree species should be chosen for their ability to grow fast, and for their suitability, when mature, to support raptor activities.

Dudek does not recommend restrictions on the removal of trees within Main Campus tree removal areas 1-7, 9-12, 14-15, 17, or 19, for trees that are considered hazardous. These trees occur in areas of high pedestrian or vehicular activity and are, to different degrees, removed from suitable foraging habitat.

Should you have any questions regarding this report, please do not hesitate to contact me at (805) 308-8536 (office) or 252-0557 (cell). I may also be reached by email at dcompton@dudek.com.

Sincerely,

Dave Compton
Senior Ornithologist

Melissa Blundell
Ornithologist

Att:  
A. References  
B. Figures  
C. Photo Documentation  
D. Bird List

cc: John Davis IV, Dudek


Tierra Verde Tree Care. 2019. Tree Risk Analysis for West Campus Point. Letter to West Campus Point HOA. February 18, 2019.


FIGURE 2
UCSB Boundary
Main Campus Survey Areas 1 and 2
Tree Removal Areas
FIGURE 4

U.C. Santa Barbara Tree Removal/Raptor Surveys and Habitat Assessment

Main Campus Results

UCSB Boundary
Main Campus Survey Areas 1 and 2
Tree Removal Areas

Survey Results
- Red-tailed hawk Nest
- Red-tailed hawk Perch
- Coopers hawk Perch
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Photo 10. Main Campus tree removal area 10, June 4, 2019.

Photo 11. Main Campus tree removal area 11, June 4, 2019.

Photo 12. Main Campus tree removal area 12, June 4, 2019.
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APPENDIX C
PHOTOGRAPHIC DOCUMENTATION

**Photo 17.** Main Campus tree removal area 16, May 20, 2019.

**Photo 18.** Main Campus tree removal area 17, June 4, 2019.

**Photo 19.** Main Campus tree removal area 18, June 4, 2019.

**Photo 20.** Red-tailed hawk fledglings near tree removal area 18, June 4, 2019.
**Photo 21.** Main Campus tree removal area 19, southern group, May 15, 2019.

**Photo 22.** Main Campus tree removal area 19, northern group, June 4, 2019.

**Photo 23.** Southern portion of West Campus tree removal area, with West Campus Open Space in foreground, May 9, 2019.

**Photo 24.** Middle portion of West Campus tree removal area.
APPENDIX D
BIRD SPECIES OBSERVED

MAIN CAMPUS BIRD LIST

ICTERIDAE—BLACKBIRDS
   Agelaius phoeniceus—red-winged blackbird
   Euphagus cyanocephalus—Brewer's blackbird
   Icterus bullockii—Bullock's oriole
   Icterus cucullatus—hooded oriole
   Molothrus ater—brown-headed cowbird*

AEGITHALIDAE—LONG-TAILED TITS & BUSHTITS
   Psaltriparus minimus—bushtit

CARDINALIDAE—CARDINALS & ALLIES
   Pheucticus melanocephalus—black-headed grosbeak
   Piranga ludoviciana—western tanager

PHALACROCORACIDAE—CORMORANTS
   Phalacrocorax auritus—double-crested cormorant
   Phalacrocorax penicillatus—Brandt's cormorant (possible)

FALCONIDAE—CARACARAS & FALCONS
   Falco peregrinus anatum—American peregrine falcon

FRIGILLIDAE—FRINGILLINE & CARDUELINE FINCHES & ALLIES
   Haemorhous mexicanus—house finch
   Haemorhous purpureus—purple finch
   Spinus psaltria—lesser goldfinch
   Spinus tristis—American goldfinch

TYRANNIDAE—TYRANT FLYCATCHERS
   Sayornis nigricans—black phoebe
   Tyrannus vociferans—Cassin's kingbird

ACCIPITRIDAE—Hawks, Kites, Eagles, & Allies
   Accipiter cooperii—Cooper's hawk
   Buteo jamaicensis—red-tailed hawk

ARDEIDAE—HERONS, BITTERNS, & ALLIES
   Ardea alba—great egret
   Ardea herodias—great blue heron
   Egretta thula—snowy egret

TROCHILIDAE—HUMMINGBIRDS
   Calypte anna—Anna's hummingbird
   Selasphorus sasin—Allen's hummingbird
APPENDIX D

BIRD SPECIES OBSERVED

CORVIDAE—CROWS & JAYS
   Aphelocoma californica—California scrub-jay
   Corvus brachyrhynchos—American crow

ALCEDINIDAE—KINGFISHERS
   Megaceryle alcyon—belted kingfisher

MIMIDAE—MOCKINGBIRDS & THRASHERS
   Mimus polyglottos—northern mockingbird
   Toxostoma redivivum—California thrasher

PASSERIDAE—OLD WORLD SPARROWS
   Passer domesticus—house sparrow*

PELECANIDAE—PELICANS
   Pelecanus occidentalis—brown pelican

COLUMBIDAE—PIGEONS & DOVES
   Zenaida macroura—mourning dove
   Streptopelia decaocto—Eurasian collared-dove*

CHARADRIIDAE—LAPWINGS & PLOVERS
   Charadrius vociferus—killdeer

STURNIDAE—STARLINGS
   Sturnus vulgaris—European starling*

HIRUNDINIDAE—SWALLOWS
   Petrochelidon pyrrhonota—cliff swallow
   Stelgidopteryx serripennis—northern rough-winged swallow
   Tachycineta bicolor—tree swallow

LARIDAE—GULLS, TERNs, & SKIMMERS
   Hydroprogne caspia—Caspian tern
   Larus delawarensis—ring-billed gull
   Larus occidentalis—western gull
   Thalasseus elegans—elegant tern

TURDIDAE—THRUSHES
   Sialia mexicana—western bluebird
   Turdus migratorius—American robin

PARIDAE—CHICKADEES & TITMICE
   Baeolophus inornatus—oak titmouse
APPENDIX D
BIRD SPECIES OBSERVED

VIREONIDAE—VIREOS
Vireo gilvus—warbling vireo
Vireo huttoni—Hutton's vireo

ANATIDAE—DUCKS, GEESE, & SWANS
Anas platyrhynchos—mallard
Mergus serrator—red-breasted merganser
Oxyura jamaicensis—ruddy duck
Mareca strepera—gadwall

BOMBYCILLIDAE—WAXWINGS
Bombycilla cedrorum—cedar waxwing

PARULIDAE—WOOD-WARBLERS
Geothlypis trichas—common yellowthroat
Oreothlypis celata—orange-crowned warbler
Setophaga petechia—yellow warbler

PICIDAE—WOODPECKERS & ALLIES
Melanerpes formicivorus—acorn woodpecker
Dryobates nuttallii—Nuttall's woodpecker
Dryobates pubescens—downy woodpecker

TROGLODYTIDAE—WRENS
Thryomanes bewickii—Bewick’s wren

ESTRILDIDAE—WAXBILLS
Lonchura punctulata—scaly-breasted munia*

PASSERELLIDAE—NEW WORLD SPARROWS
Junco hyemalis—dark-eyed junco
Melospiza melodia—song sparrow
Melozone crissalis—California towhee
Pipilo maculatus—spotted towhee
WEST CAMPUS BIRD LIST

ICTERIDAE—BLACKBIRDS
   Agelaius phoeniceus—red-winged blackbird
   Icterus bullockii—Bullock's oriole
   Icterus cucullatus—hooded oriole
   Molothrus ater—brown-headed cowbird

AEGITHALIDAE—LONG-TAILED TITS & BUSHTITS
   Psaltriparus minimus—bushtit

CARDINALIDAE—CARDINALS & ALLIES
   Pheucticus melanocephalus—black-headed grosbeak
   Piranga ludoviciana—western tanager

PHALACROCORACIDAE—CORMORANTS
   Phalacrocorax auritus—double-crested cormorant

FRINGILLIDAE—FRINGILLINE & CARDUELLINE FINCHES & ALLIES
   Haemorhous mexicanus—house finch
   Haemorhous purpureus—purple finch
   Spinus psaltria—lesser goldfinch

TYRANNIDAE—TYRANT FLYCATCHERS
   Contopus sordidulus—western wood-pewee
   Empidonax difficilis—Pacific-slope flycatcher
   Empidonax hammondii—Hammond's flycatcher
   Sayornis nigricans—black phoebe
   Sayornis saya—Say's phoebe
   Tyrannus vociferans—Cassin's kingbird

ACCIPITRIDAE—HAWKS, KITES, EAGLES, & ALLIES
   Accipiter cooperii—Cooper's hawk
   Buteo jamaicensis—red-tailed hawk

ARDEIDAE—HERONS, BITTERNS, & ALLIES
   Ardea herodias—great blue heron

TROCHILIDAE—HUMMINGBIRDS
   Calypte anna—Anna's hummingbird
   Selasphorus sasin—Allen's hummingbird

CORVIDAE—CROWS & JAYS
   Aphelocoma californica—California scrub-jay
   Corvus brachyrhynchos—American crow
MIMIDAE—MOCKINGBIRDS & THRASHERS
Mimus polyglottos—northern mockingbird

ODONTOPHORIDAE—NEW WORLD QUAIL
Callipepla californica—California quail

CATHARTIDAE—NEW WORLD VULTURES
Cathartes aura—turkey vulture

SITTIDAE—NUTHATCHES
Sitta carolinensis—white-breasted nuthatch

PASSERIDAE—OLD WORLD SPARROWS
Passer domesticus—house sparrow*

PELECANIDAE—PELICANS
Pelecanus occidentalis—brown pelican

COLUMBIDAE—PIGEONS & DOVES
Zenaida macroura—mourning dove
Columba livia—rock pigeon (rock dove)*
Streptopelia decaocto—Eurasian collared-dove*

STURNIDAE—STARLINGS
Sturnus vulgaris—European starling*

HIRUNDINIDAE—SWALLOWS
Hirundo rustica—barn swallow
Petrochelidon pyrrhonota—cliff swallow
Stelgidopteryx serripennis—northern rough-winged swallow

LARIDAE—GULLS, TERNS, & SKIMMERS
Hydroprogne caspia—Caspian tern
Larus californicus—California gull
Larus occidentalis—western gull

TURDIDAE—THRUSHES
Catharus ustulatus—Swainson’s thrush
Sialia mexicana—western bluebird
Turdus migratorius—American robin

PARIDAE—CHICKADEES & TITMICE
Baeolophus inornatus—oak titmouse
APPENDIX D
BIRD SPECIES OBSERVED

VIREONIDAE—VIREOS
Vireo gilvus—warbling vireo
Vireo huttoni—Hutton’s vireo

ANATIDAE—DUCKS, GEESE, & SWANS
Branta canadensis—Canada goose

BOMBYCILLIDAE—WAXWINGS
Bombycilla cedrorum—cedar waxwing

PARULIDAE—WOOD-WARBLERS
Cardellina pusilla—Wilson’s warbler
Geothlypis trichas—common yellowthroat
Oreothlypis celata—orange-crowned warbler
Setophaga petechia—yellow warbler

PICIDAE—WOODPECKERS & ALLIES
Colaptes auratus—northern flicker
Melanerpes formicivorus—acorn woodpecker
Dryobates nuttallii—Nuttall’s woodpecker
Dryobates pubescens—downy woodpecker
Dryobates villosus—hairy woodpecker

TROGLODYTIDAE—WRENS
Thryomanes bewickii—Bewick’s wren
Troglodytes aedon—house wren

ESTRILDIDAE—WAXBILLS
Lonchura punctulata—scaly-breasted munia

PASSERELLIDAE—NEW WORLD SPARROWS
Melospiza melodia—song sparrow
Melozone crissalis—California towhee
Pipilo maculatus—spotted towhee

ICTERIIDAE—YELLOW-BREASTED CHAT
Icteria virens—yellow-breasted chat
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November 2019

Notice of Impending Development
For the Campus Hazardous Tree Replacement Program
Phase 1

Pursuant to the California Coastal Act the University of California, Santa Barbara (UC Santa Barbara) has prepared and submitted a Notice of Impending Development for Phase 1 of the Campus Hazardous Tree Replacement Program.

This Notice of Impending Development has been prepared for the removal and replacement of 31 mature Eucalyptus *globulus* (Tasmanian blue gum) trees at various locations around the University of California, Santa Barbara (University) Main Campus.

The Notice of Impending Development is available at:

[https://www.facilities.ucsb.edu/departments/campus-planning-design/current-projects](https://www.facilities.ucsb.edu/departments/campus-planning-design/current-projects)  Main Campus tab

or upon request at the UC Santa Barbara Office of Campus Planning and Design. For more information, please contact Shari Hammond at 805-893-3796 or send email to shari.hammond@ucsb.edu.

Shari Hammond, Principal Planner
University of California, Santa Barbara
Office of Campus Planning and Design
Santa Barbara, California 93106-2032
Notice of Exemption

To: Office of Planning and Research
PO Box 3044, 1400 Tenth Street, Room 222
Sacramento, CA 95812-3044

From: University of California
Santa Barbara
Office of Campus Planning and Design
Campus Design and Facilities
Santa Barbara, CA 93106-1030

Project Title: Campus Hazardous Tree Replacement Program

Project Location – Specific – University of California, Santa Barbara, Main Campus, Various Locations, Santa Barbara County

Project Description: There are approximately 290 aging and unhealthy *Eucalyptus globulus* (Tasmanian blue gum) on the University of California, Santa Barbara’s (University) Main Campus. The blue gum eucalyptus were planted as agricultural windbreaks between 1915 and about 1927 and are approximately 87 to 97 years old. The trees are approaching the end of their lifespan and have been determined to be unhealthy and unsafe to persons and property in their vicinity. Several of these trees fell and damaged property during storms in February 2019 and earlier years as well. The Santa Barbara Campus proposes to remove approximately 290 aging and unhealthy *Eucalyptus globulus* (Tasmanian blue gum), in phases over approximately 2 to 3 years, at various locations on the University’s Main Campus (see attached maps). Tree removal and replacement areas are primarily developed with buildings, sidewalks, bicycle paths, bicycle parking, and courtyards. All of the removed trees will be replaced 1:1 at a minimum and trees within Environmentally Sensitive Habitat buffers or those determined to be raptor habitat will be replaced 3:1 with native species (Table 1). Tree replacement would take place immediately after tree removal. Campus-wide eucalyptus removal will take place in phases. Each phase may include the removal of 30 to 50 trees at a time and the exact number has not been determined. Phase 1 will include the removal of 31 trees on the Main Campus, will commence in December 2019, and will take approximately one month.

Name of Public orAgency Approving Project: University of California

Name of Person or Agency Carrying Out Project: University of California, Santa Barbara

Exempt Status: (check one)
☐ Ministerial (Sec. 21080 (b)(1); 15268);
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a);
☐ Emergency Project (Se. 21080(b)(4); 15269 (b) (c));
☒ Categorical Exemption. State type and section number: Section 15304, Minor Alterations to Land

Reason why project is exempt: The project is located in an urban setting and includes removal of unhealthy non-native trees. The trees pose a life safety hazard to persons and property and require removal.

Lead Agency: Contact Person: Shari Hammond Area Code/Telephone/Extension: 805 893-3796

If filed by applicant:
1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?  X Yes _No

Signature: Shari Hammond Date: 11.15.2019

cc: Renee Bahl, UCSB Design, Facilities, and Safety Services
Jon Cook, UCSB Physical Facilities
Brian Harrington, UCOP Planning, Construction and Design
Alissa Hummer, UCSB Campus Planning and Design

Title: Principal Planner
Campus Planning and Design
DATE: November 15, 2019

CAMPUS: Santa Barbara

PROJECT TITLE: Campus-Wide Hazardous Tree Replacement Program

PROJECT LOCATION: University of California, Santa Barbara, Main Campus various locations (see attached site map).

BACKGROUND:

There are approximately 290 aging and unhealthy Eucalyptus globulus (Tasmanium blue gum) on the University of California, Santa Barbara’s (University) Main Campus. The blue gum eucalypts were planted as agricultural windbreaks between 1915 and about 1927 and are approximately 87 to 97 years old. The trees are approaching the end of their lifespan and have been determined to be unhealthy and unsafe to persons and property in their vicinity. Several of these trees fell and damaged property during storms in February 2019 and earlier years as well.

The mature trees are located in heavily travelled and populated areas around the University and residential and academic buildings surround the trees. Tree failure could potentially result in damage to property and persons and therefore need to be removed. There were several tree failures in 1985 and 1997 and again in 2017 and 2019 when several large trees fell in the core of campus. The 2017 failures at the west end of Academic Green occurred at about 8:30 AM on a weekday and narrowly avoided striking students going to class. The February 2, 2019 failures occurred on a Saturday, totaled a car, and did significant damage to an office building and area lighting (See photos of fallen trees). Blue gum fell along the Ocean Road windrow as well in February 2019 narrowly missing an apartment building and the Isla Vista Foot Patrol building.

With upwards of 30,000 people on campus at any given weekday and over 10,000 on weekends, the campus has a responsibility to provide a safe environment and remove weak and hazardous trees.

In July 2019 an arborist survey was completed to evaluate the remnant windrow trees on the Main Campus. A sample of 20 percent of the total trees on the Main Campus were evaluated: 41 out of a maximum of 290 trees. These mature eucalyptus trees are nearing the end of their lifespan, are diseased, or have poor structure. A majority of the trees received a fair or poor rating and a few a very poor rating (primarily along El Colegio Road near Pauley Track). One tree received a “good” rating and one received a “normal” rating. One tree was recommended to be removed.

A coastal raptor habitat survey was conducted in June 2019 and determined the trees in the Main Campus core are not raptor habitat. Raptor nesting was observed in trees at the AS Recycling Grove and below and west of the San Nicolas dorms. The trees adjacent to San Nicolas dorms are within ESHA buffer and are also adjacent to the Campus Lagoon. These trees are considered raptor habitat. Trees removed in those two areas will require a tree replacement and restoration plan restoring the raptor habitat either in the same location or an offsite location.
Approximately 70 of the blue gum eucalyptus in the campus-wide hazardous tree removal project are located along the Isla Vista-University border along Ocean Road. These trees are located within an area designated for Housing. The Ocean Road Housing project, including removal of the eucalyptus windrow, was analyzed in the 2010 Long Range Development Plan (LRDP) Environmental Impact Report and is designated in the University’s LRDP (Policy LU-15) as allowed development. The Ocean Road Housing project is currently in planning stages and an Addendum to the LRDP EIR is being prepared as of this writing. It is anticipated the Addendum will be approved by the UC Regents in March 2020.

TREE REMOVAL AND REPLACEMENT PROJECT DESCRIPTION

The Santa Barbara Campus proposes to remove approximately 290 aging and unhealthy *Eucalyptus globulus* (Tasmanian blue gum), in phases over approximately 2 to 3 years, at various locations on the University’s Main Campus (see attached maps). Tree removal and replacement areas are primarily developed with buildings, sidewalks, bicycle paths, bicycle parking, and courtyards. Two areas, below San Nicolas Dorms and adjacent to the Campus Lagoon and the AS Recycling Grove adjacent to the Multipurpose Activity Center and Environmental Health and Safety office are more natural areas though still adjacent to development as well.

The trees are parts of remnant windrows of non-native blue gum eucalyptus and are approximately 100 feet in height. Numerous other species of large ornamental trees are found in the landscaped areas that surround the blue gum eucalyptus around the Main Campus. Other areas located adjacent to the trees are developed with hardscape (bicycle paths, sidewalks, buildings), landscaped with ornamental plant species, or are composed of bare dirt.

Campus-wide eucalyptus removal will take place in phases. Each phase may include the removal of 30 to 50 trees at a time and the exact number has not been determined. Phase 1 will include the removal of 31 trees on the Main Campus (see map) and will take commence in December 2019.

The campus will hire a contractor to remove the trees. Trees would be removed outside of bird nesting season. If work takes place within bird nesting season a pre-construction nesting survey will be conducted.

All of the trees will be replaced 1:1 at a minimum and trees within Environmentally Sensitive Habitat buffers or those determined to be raptor habitat will be replaced 3:1 with native species (Table 1). Tree replacement would take place immediately after tree removal.

All of the trees would be replaced either at the on-site location or off-site with trees that would grow to similar heights and size as the blue gum eucalyptus. Trees considered as replacement trees include and are not limited to: Corymbia citriodora (Lemon-scented gum), Dombeya caucumun (Strawberry Snowball Tree)/Brachychiton diversifolius (northern kurrajong), afrocarpus gracilior (East African yellowwood)/Brachichytot acerofolius (illawarra flame tree), Lophostermon confertus (brush box), Quercus agrifolia (Coast live oak), Erythrina fusca (purple coral tree) or Erythrina latissima (Broad-leaved coral tree), Quercus acutissima (sawtooth oak) or Quercus mongolica (Mongolian oak), Liquidambarr styraciflua (Sweet gum)/Magnolia grandiflora (Southern magnolia), Quercus virginiana (Southern live oak)/Quercus engelmannii (Engelmann oak), Cupressus macrocarpa (Monterey cypress), Ulmus parvifolia ‘Tree Green’ (Chinese elm), or Sophora japonica ‘Regent’ (Japanese pagoda), and Spathodea campanulata – yellow form (African tulip tree) (Table 1).

The offsite replacement trees would be planted either within the Mesa Road median or at pre-determined locations on North or West Campuses. *Corymbia citriodora* (Lemon scented gum) would be planted within the Mesa Road median to match the existing trees. Trees planted on North or West campuses would be Coast Live Oak, Monterey cypress, or another locally native species. Replacement trees will be species that
will grow to similar heights and size of the blue gum. In some cases replacement trees would already be large, for example, approximately 7-feet tall or in 60-inch boxes.

Phase 1 includes removal of 31 trees all with a 1:1 replacement ratio. Nineteen of the Phase 1 replacement trees would be planted in the Mesa Road median. The remaining 12 would be replaced onsite. The three trees removed near PSB-North near SW corner would be replaced 1:1 with a 60-inch box Afrocarpus gracilior (East African yellowwood) and the 12 trees removed between Lot 29 and HSSB S of the bicycle path would be replaced 1:1 with 7-foot tall B&B Quercus acutissima (sawtooth oak)/Quercus mongolica (Mongolian oak) (Table 2).
<table>
<thead>
<tr>
<th>Trees Removed</th>
<th>Trees Replaced</th>
<th>Location</th>
<th>Replant</th>
<th>Suggested Replacement Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>Phelps Hall Interior Courtyard</td>
<td>On site</td>
<td>Brachychiton acerifolius/Brachychiton discolor</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>PSB - North near SW Corner</td>
<td>On site</td>
<td>Afrocarpus gracilior</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Academic Green</td>
<td>Off site</td>
<td>Corymbia citiodora</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Trailer 937 Near Broida</td>
<td>Off site</td>
<td>Corymbia citiodora</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Webb Hall NW Corner</td>
<td>Off site</td>
<td>Corymbia citiodora</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Parking Lot 9</td>
<td></td>
<td>Agonis flexuosa/Banksia integrofloria/Casuarina equisetifolia</td>
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<tr>
<td>3</td>
<td>3</td>
<td>West Side of Chancellor's</td>
<td>On Site</td>
<td>Agonis flexuosa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>South of Pkng Lot 5</td>
<td>On site</td>
<td>Quercus agrifolia</td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>RecCen NE</td>
<td>On site</td>
<td>Erythrina fusca or E. latissima</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Arts &amp; Lectures West Side</td>
<td>On site</td>
<td>Corymbia citiodora</td>
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<tr>
<td>4</td>
<td>4</td>
<td>South of the Events Center</td>
<td>Off site</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>NW Corner of Theater &amp; Dance</td>
<td>Off site</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>19</td>
<td>Between Lot 29 and HSSB S</td>
<td>On site</td>
<td>Quercus acutissima or Q. mongolica</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of the Bike Path</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>El Colegio between Bldg 275</td>
<td>On site</td>
<td>Liquidambar styraciflua/Magnolia grandiflora</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Lot 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>41</td>
<td>El Colegio East Side by Pauley</td>
<td>On site</td>
<td>Quercus lobata or Q. engelmannii</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Track</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>El Colegio Median</td>
<td>Off site</td>
<td>Median may be eliminated-Corymbia citiodora</td>
</tr>
<tr>
<td>24</td>
<td>72</td>
<td>AS Recycling &quot;Euc Grove&quot;</td>
<td>Off site</td>
<td>Future development of FM pit as an HDAE site may put a loop road thru here. Timeline?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and SE of EHS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Stadium Rd West side by</td>
<td>On site</td>
<td>Monterey Cypress as per theme on this road, or Quercus agrifolia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tennis courts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>NW of HSSB on Raised</td>
<td>On site</td>
<td>Ulmus parvifolia 'True Green' or Sophora japonica 'Regent'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Landscape Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>Parkng Lot 16</td>
<td>On site</td>
<td>Spathodea campanulata - yellow form</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Parkng Lot 27</td>
<td>Off site</td>
<td>Corymbia citiodora</td>
</tr>
<tr>
<td>71</td>
<td>213</td>
<td>I. V. Windrow</td>
<td>On and off site</td>
<td>Monterey cypress and other as shown in Ocean Road Housing landscape plan</td>
</tr>
<tr>
<td>26</td>
<td>78</td>
<td>S &amp; W of San Nic Dorm</td>
<td>On site</td>
<td>Coast Live Oak, Sycamore, Monterey cypress</td>
</tr>
<tr>
<td><strong>294</strong></td>
<td><strong>536</strong></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Phase 1 Tree Removal and Replacement

<table>
<thead>
<tr>
<th>Location</th>
<th>#Trees Removed</th>
<th>#Trees Replaced</th>
<th>Replacement Trees</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSB Near SW Corner</td>
<td>3</td>
<td>3</td>
<td>Afrocarpus gracilior 60”box onsite</td>
</tr>
<tr>
<td>Academic Green</td>
<td>2</td>
<td>2</td>
<td>Corymbia citriodora-Mesa Road median</td>
</tr>
<tr>
<td>Trailer 397 Near Broida</td>
<td>2</td>
<td>2</td>
<td>Corymbia citriodora Mesa Road median</td>
</tr>
<tr>
<td>Webb Hall NW Corner</td>
<td>3</td>
<td>3</td>
<td>Corymbia citriodora-Mesa Road median</td>
</tr>
<tr>
<td>Parking Lot 9</td>
<td>4</td>
<td>4</td>
<td>Corymbia citriodora-Mesa Road median</td>
</tr>
<tr>
<td>El Colegio Median</td>
<td>5</td>
<td>5</td>
<td>Corymbia citriodora</td>
</tr>
<tr>
<td>Between Lot 29 and HSSB S of the Bike Path</td>
<td>12</td>
<td>12</td>
<td>7-foot tall Quercus acutissima/Quercus mongolica onsite</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>31</strong></td>
<td><strong>31</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Schedule:** Phase 1 of the proposed project, including the removal and planting of the 31 trees, is expected to commence in December 2019 and will take approximately one month complete. Removal of the remaining trees has not been scheduled at this time and will happen in phases, in the years to follow. The tree removal areas are heavily travelled areas and the trees will be removed during campus holidays or weekends while a majority of the campus population is gone and there is less vehicle, pedestrian, and bicycle traffic.

**Consistency with the LRDP:** The project site area land use is currently designated as *Academic and Support or Housing* in the 2010 LRDP. One of the removal areas is within ESHA Buffer. Tree removal and maintenance is permitted in both *Academic and Support* and *Housing* land uses and therefore the proposed project is consistent with the LRDP. Land use designations and the land use will not change when the work is complete. The project is also consistent with LRDP Policies SCEN-7, ESH-27, ESH-28 A, ESH-29 and LU-15.

The project is consistent with Policies SCEN-7, ESH-27, ESH-28, and ESH-29. A majority of the trees could be considered scenic however are not located along a scenic highway or scenic location, rather they are located in an urbanized area and the trees are non-native. 2019 raptor survey results show no raptor nesting activity at a majority of the trees on the Main Campus. The trees that are determined to be raptor habitat, such as those adjacent to the San Nicolas dorm and the Campus Lagoon, and the AS Recycling Grove, would adhere to LRDP Policy ESH-29 and require a 3:1 replacement ratio accompanied by a restoration plan. All of the blue gum eucalyptus in the remnant windrows have reached the end of their lifespan and have been determined to pose a substantial hazard to life or property and are allowed to be removed in accordance with LRDP Policies and Appendix 2, Tree Trimming and Removal Protocol.

Replacement trees would be either at the on-site location where the tree was removed or off-site with trees that would grow to similar heights and size as the blue gum. The objective is to replace raptor and bird perching and roosting habitat and nesting habitat where applicable.

In accordance with LRDP Policy LU-15 i. the eucalyptus windrow shall be replaced at a 3:1 ratio with Monterey Cyprus or similar trees suitable for raptor use, with 1:1 planted on-site in the form of a similar windrow with a north-south orientation and 2:1 planted off-site at a campus location(s) that is appropriate to support and create raptor habitat.

**Consistency analysis:** The campus-wide hazardous tree removal project includes the removal of 71 blue gum eucalyptus along the Ocean Road windrow where Ocean Road Housing would be developed. These
trees were evaluated by an arborist in 2010 and were determined to be of poor health at that time. Nineteen trees in the windrow were removed at that time. The trees would be replaced in accordance with Policy LU-151 which requires 3:1 replacement of the eucalyptus windrow.

CEQA COMPLIANCE:
This project is considered Categorically Exempt under CEQA Section 15304, Minor Alterations to Land. None of the exceptions cited in Section 15300.2 apply to this project and there are no unusual circumstances which would create an exception to the Exemption. The project is located in an urban setting and includes removal of unhealthy non-native trees. The trees pose a life safety hazard to persons and property and require removal.

All actions will be consistent with applicable federal, state, and local environmental permitting requirements.

Documents are available at the University of California Santa Barbara Office of Campus Planning and Design from Shari Hammond. Shari.hammond@ucsb.edu and 805-893-3796.

DETERMINATION: Based on the above project assessment, the proposed project is classified as exempt from the provisions of CEQA under Section 15304, Minor Alterations to Land. None of the exceptions cited in Section 15300.2 apply to this project.

Shari Hammond
Principal Planner

REFERENCES

2019 Cook. Personal communication with Jon Cook, Associate Director, Grounds and Custodial.
