

# CITY OF COSTA MESA

## Urban Canopy and Land Assessment



**West Coast Arborists, Inc.**  
Anaheim, California

# TABLE OF CONTENTS

**01**

## **INTRODUCTION**

**3**

1.1 Executive Summary

4

1.2 Costa Mesa Boundary

5

**02**

## **METHODOLOGY**

**6**

2.1 Data Sources

7

2.2 Land Classification

7

2.3 Pervious vs Impervious

7

2.4 Suitable vs Unsuitable

8

**03**

## **KEY FINDINGS**

**9**

3.1 City Wide

10

3.2 Council District

11

3.3 Census Group

13

3.4 Land Use

14

3.5 Parks

16

**04**

## **TREE BENEFITS**

**17**

4.1 Ecological Benefits

18

4.2 Tree Characteristics

19

4.3 Composition and Risk Assessment

20

**05**

## **RECOMMENDATIONS & CONCLUSIONS**

**21**

5.1 Summary

22

## **APPENDIX**

**23**





# 1: INTRODUCTION



**1,408 Acres of  
Canopy Cover**

**13.88% Urban  
Canopy Cover**

## 1.1 EXECUTIVE SUMMARY

### Purpose of This Analysis

The City of Costa Mesa, located in Orange County, California, spans approximately 15.7 square miles. The city's urban forest consists of trees along streets, within parks, residential areas, and natural spaces, forming an essential component of Costa Mesa's green infrastructure. These trees contribute significantly to environmental quality, public health, water management, economic stability, and overall aesthetics. The primary goal of this assessment is to provide a baseline evaluation of Costa Mesa's tree canopy, analyze its distribution, and guide future strategies for urban forestry development across various geographic areas.

### Urban Tree Canopy in Costa Mesa

The City of Costa Mesa currently has 13.88% Tree Canopy Cover citywide. Additionally, 5.63% of the city consists of areas suitable for future tree planting, while 80.49% of land is unsuitable due to existing land use constraints such as buildings, roads, and water bodies.

The percentages for UTC and possible planting areas are based on total land area.

- Non-canopy vegetation: 13.37%
- Soil/dry vegetation: 2.01%
- Impervious surfaces: 66.62%
- Water coverage: 0.79%

Further analysis of Costa Mesa's urban tree canopy reveals that 42.2% of the tree population is deciduous, while 57.8% consists of evergreen species. This classification informs strategic planning efforts for tree diversity, climate resilience, and future planting initiatives.

### Assessment Boundaries

This study evaluated Urban Tree Canopy (UTC) and Possible Planting Areas (PPA) across multiple geographic scales to provide relevant insights for different stakeholders. By identifying the distribution of tree canopy and planting opportunities across these scales, the City can take a more strategic and data-driven approach to urban forestry management. The assessment considered several geographic boundaries, including the citywide boundary(1), six city council districts (6), thirty-seven census tracts (37), twenty land-use groups (20), and thirty-four designated park areas(34). This multi-scale approach allows for targeted decision-making to enhance Costa Mesa's urban forest.



# Comparison

In 2024, Costa Mesa’s tree canopy cover was measured at 13.88%. While direct comparisons are limited due to differences in data collection years, figures from the CAL FIRE and USDA Forest Service’s California Urban Tree Canopy project provide helpful regional context. Neighboring cities reported the following canopy coverage based on earlier assessments: Newport Beach (12.6%), Irvine (12.7%), Santa Ana (11.6%), Huntington Beach (8.8%), and Tustin (10.1%). For broader context, the City of Los Angeles reported an overall canopy cover of 21%, with district-level variation ranging from 7% to 37%.

These figures indicate that many Southern California cities maintain canopy coverage around a regional average of approximately 15%. While this reflects typical conditions for the region, organizations such as American Forests recommend a minimum urban canopy cover of 20% in arid and semi-arid climates to promote environmental resilience, mitigate urban heat, and enhance overall livability. Costa Mesa’s current canopy cover underscores ongoing progress and helps identify opportunities for future urban forestry efforts.

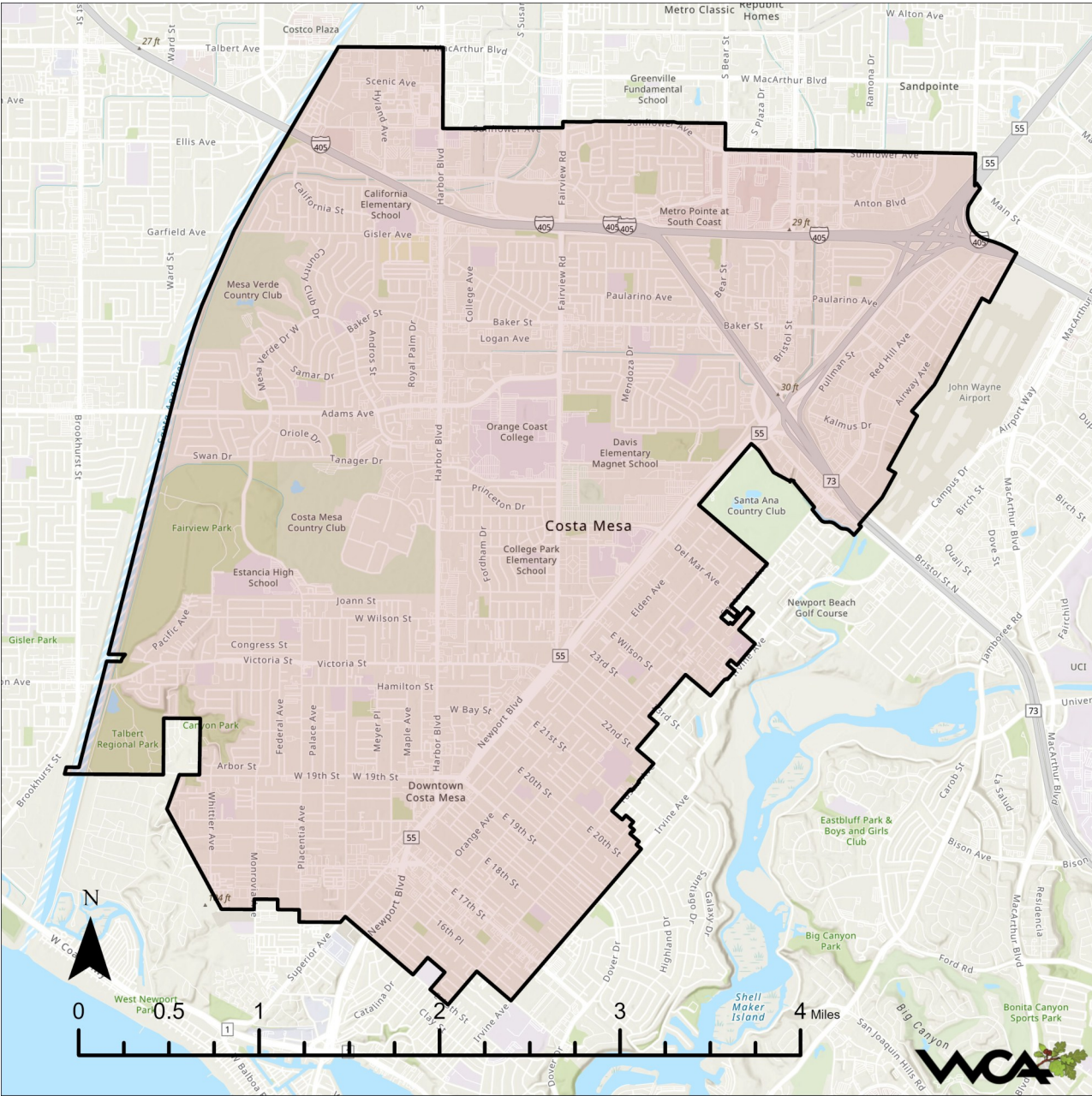


Figure 1.1a. City of Costa Mesa’s boundary.



## **2: METHODOLOGY**

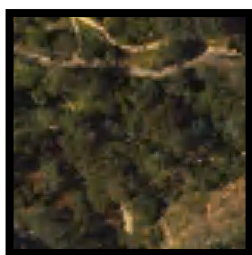


## 2.1 Data Sources

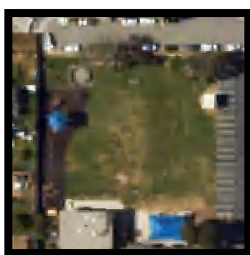
This assessment used high-resolution 4-band multispectral imagery from the U.S. Department of Agriculture's National Agriculture Imagery Program (NAIP), collected in Summer of 2024, to generate the land cover dataset. The NAIP imagery facilitated the classification of all major land cover types, allowing for an accurate evaluation of Costa Mesa's urban tree canopy and potential planting areas. To improve spatial accuracy and ensure consistency with local land use classifications, additional GIS layers provided by the City of Costa Mesa were also integrated into the analysis.

## 2.2 Land Classification

Following the initial classification process, manual refinement and quality control measures were applied to enhance the accuracy of the remote sensing products. To further refine the dataset and improve classification precision, additional GIS layers provided by the city—including buildings, water bodies, and wetlands—were incorporated. These supplemental data sources ensured greater spatial accuracy and alignment with local land use characteristics.



**Canopy**



**Vegetation**



**Soil**



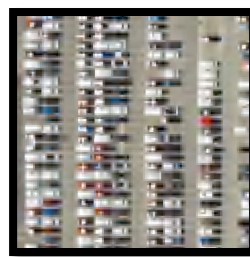
**Water**



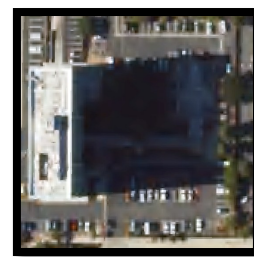
**Building**



**Road**



**Other**



**Shadow**

## 2.3 Pervious vs Impervious

Land cover is classified as Pervious or Impervious based on water absorption and vegetation support.

Pervious Land allows water infiltration and includes Canopy, Vegetation, Soil, and Water, which contribute to stormwater management and ecological health. Impervious Land prevents water absorption and includes Buildings, Roads, and Other Impervious Surfaces, leading to increased runoff and heat retention.

## 2.4 Suitable vs. Unsuitable Planting Areas

In the context of urban forestry and strategic canopy expansion, suitable planting areas refer to land classifications where tree establishment is both feasible and beneficial. These areas typically include vegetated spaces and exposed soil that are not obstructed by existing infrastructure. They present optimal conditions for tree growth, allowing for improved canopy expansion, enhanced stormwater absorption, and increased environmental resilience.

Conversely, unsuitable planting areas are locations where tree planting is impractical or conflicts with existing land functions. These include impervious surfaces such as roads, buildings, and other developed infrastructure, as well as ecologically or functionally restricted areas, such as water bodies, transportation corridors, and utility easements. Additionally, certain open spaces that might otherwise be considered plantable—such as sports fields, school tracks, designated recreational fields, and maintained open lawns in parks—have been classified as unsuitable to preserve their intended use. These areas are essential for community recreation, athletics, and public events, and as such, are excluded from tree planting initiatives to maintain their functional integrity.

Of Costa Mesa's approximately 441.9 million square feet of total land area, 1.87% has been specifically designated as *unsuitable sports areas*, while an additional 12.31% falls under other types of *unsuitable planting area*. This includes large community spaces such as Fairview Park, the Costa Mesa Golf Course, and Talbert Regional Park, as well as open space associated with schools and maintained park lawns.

By distinguishing between suitable and unsuitable planting areas, this assessment ensures that urban forest expansion efforts are strategically placed in locations where they will provide the greatest ecological, social, and economic value while respecting existing land use priorities.







## **3: KEY FINDINGS**

### 3.1 City Wide

This urban tree canopy assessment used a detailed land cover classification to determine potential planting areas across Costa Mesa. Additional data layers identifying unsuitable planting areas, such as developed infrastructure and designated open-use spaces, were incorporated into the analysis. It is important to note that this study evaluates land area, to provide a more accurate representation of possible planting opportunities.

The results indicate that 61,314,990 SqFt (13.88%) of Costa Mesa's total land area is covered by tree canopy, while 24,897,493 SqFt (5.63%) consists of suitable planting areas, including existing vegetation and soil where trees could be planted. The remaining 355,630,861 SqFt (80.49%) is classified as unsuitable for planting, encompassing impervious surfaces such as buildings, roads, and developed infrastructure, as well as designated open-use spaces like athletic fields and recreational areas. This analysis provides a foundation for targeted tree planting efforts to enhance Costa Mesa's urban forest while maintaining the functionality of existing land uses.

#### Suitable vs Unsuitable

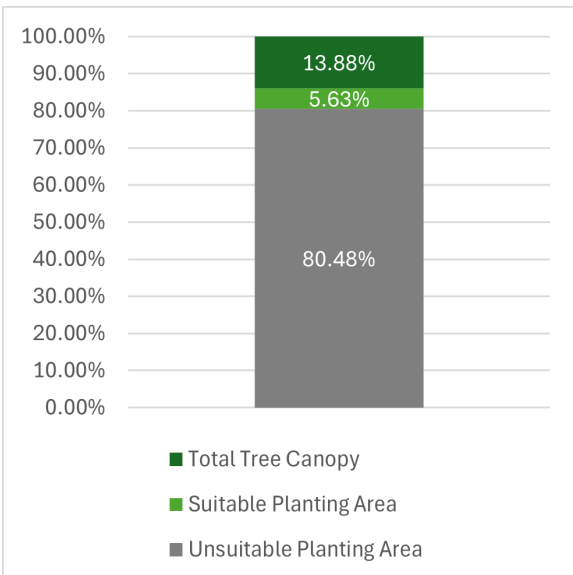


Figure 3.1b. This chart illustrates the proportions of total tree canopy, suitable planting areas, and unsuitable planting areas within the city boundary.

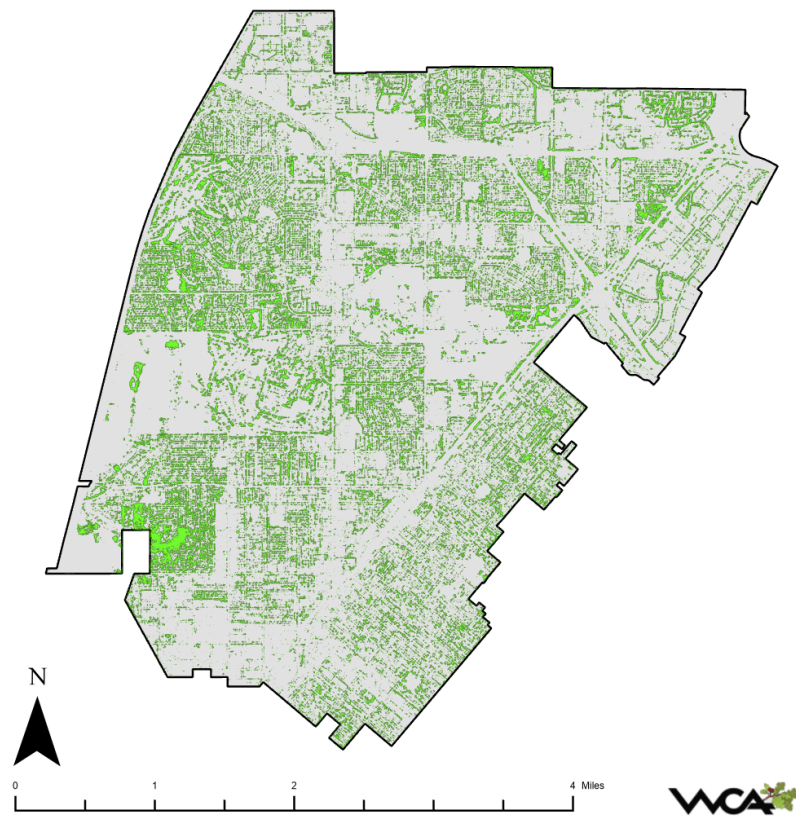


Figure 3.1a. Tree canopy (in green) distributed across the city's boundary.

#### Land Classification

| Classification                   | Area SqFt             | %            |
|----------------------------------|-----------------------|--------------|
| Impervious Unsuitable - Building | 144,651,840.44        | 32.74        |
| Impervious Unsuitable - Other    | 1,534,901.56          | 0.35         |
| Impervious Unsuitable - Road     | 148,154,875.53        | 33.53        |
| Pervious Suitable - Canopy       | 55,825,374.74         | 12.63        |
| Pervious Suitable - Soil         | 2,193,413.22          | 0.50         |
| Pervious Suitable - Vegetation   | 22,704,080.40         | 5.14         |
| Pervious Unsuitable - Canopy     | 5,489,616.23          | 1.24         |
| Pervious Unsuitable - Soil       | 6,696,583.24          | 1.52         |
| Pervious Unsuitable - Vegetation | 36,365,538.24         | 8.23         |
| Pervious Unsuitable - Water      | 3,473,248.37          | 0.79         |
| Shadow                           | 14,753,873.52         | 3.34         |
| <b>Grand Total</b>               | <b>441,843,345.50</b> | <b>99.99</b> |

#### Summary

Costa Mesa currently has approximately 13.88% total tree canopy coverage citywide, with an additional 5.63% of land area identified as suitable for future tree planting. The remaining 80.49% of land is considered unsuitable due to existing uses like roads, buildings, or other hard surfaces. While overall canopy coverage is modest, the presence of plant-able areas indicates room for strategic expansion, especially in zones where trees could support heat mitigation, walkability, and neighborhood greening.



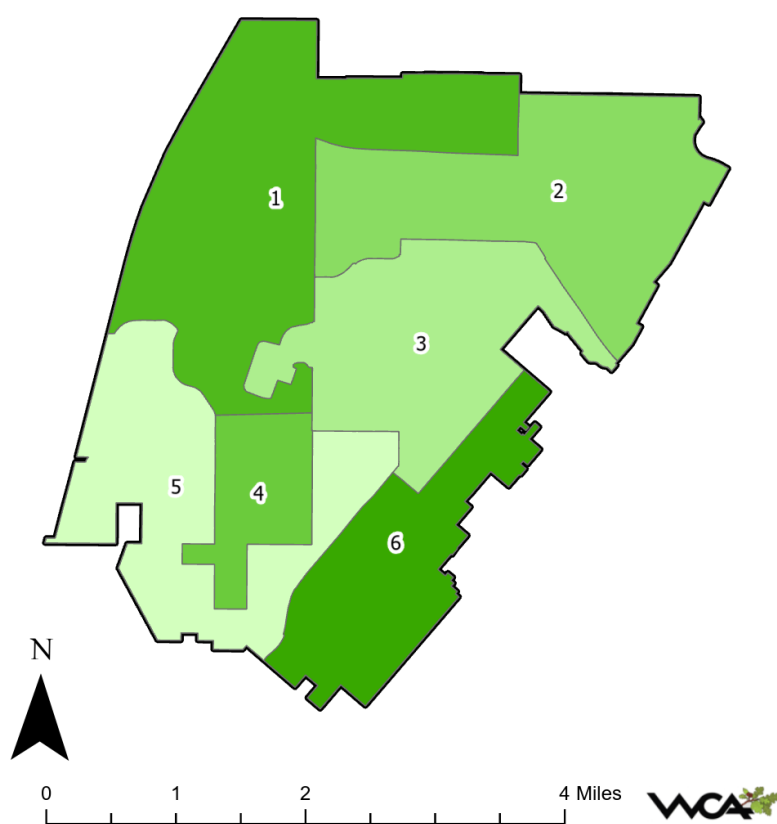


Figure 3.2a. Tree canopy distributed across Council Districts.

## 3.2 Council District

The assessment of Urban Tree Canopy (UTC) and Possible Planting Area (PPA) across Costa Mesa's six council districts highlights key differences in canopy coverage and planting potential. District 1 has the highest tree canopy at 16.34%, while District 5 has the lowest at 12.73%, with the other districts falling within a 4% range. In terms of planting opportunities, District 1, while having a lower percentage of PPA, possesses the most square foot of land with 146.9 acres of plant-able space. Conversely, District 4, with just 19.78 acres available, presents fewer opportunities for tree expansion. These findings provide valuable insights for prioritizing future tree planting efforts and enhancing Costa Mesa's urban forest.

## Suitable vs Unsuitable Percentage

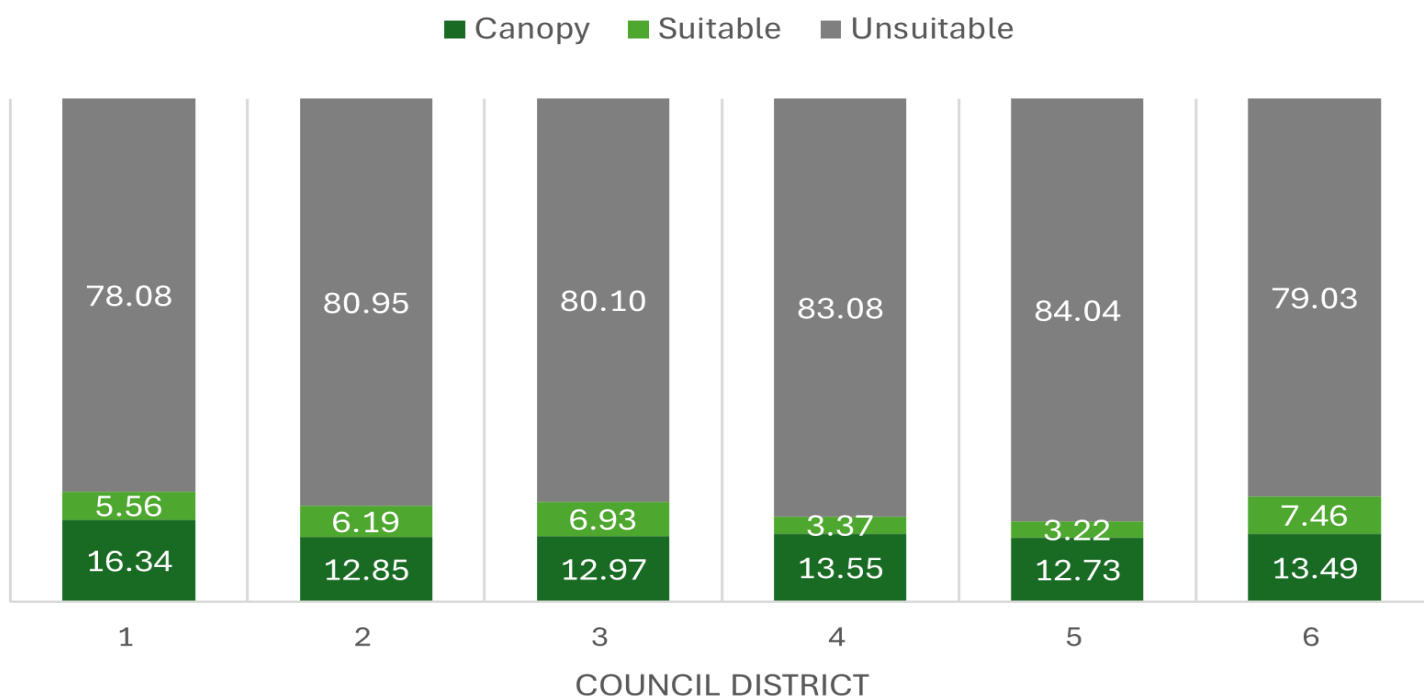


Figure 3.2b. This chart illustrates the proportions of total tree canopy, suitable planting areas, and unsuitable planting areas within each council district .

| District | Canopy (Sqft) | Suitable (Sqft) | Unsuitable (Sqft) | Total Area (Sqft) |
|----------|---------------|-----------------|-------------------|-------------------|
| 1        | 18,789,743.95 | 6,400,041.64    | 51,731,990.22     | 115,026,391.30    |
| 2        | 12,009,395.78 | 5,790,041.72    | 33,642,265.02     | 93,479,583.35     |
| 3        | 9,802,908.63  | 5,237,125.25    | 27,502,277.33     | 75,596,229.03     |
| 4        | 3,464,911.76  | 861,709.18      | 10,990,825.62     | 25,574,421.83     |
| 5        | 9,770,084.24  | 2,475,327.11    | 41,432,486.49     | 76,767,708.46     |
| 6        | 7,475,158.18  | 4,132,294.40    | 27,411,033.16     | 55,405,142.28     |

Figure 3.2c. This table shows canopy cover, suitable planting area, and Unsuitable planting area in relation to each council district in square feet.

## 3.2 Council District (cont'd)

### Summary

Canopy coverage varies between Costa Mesa's six council districts, ranging between 12.73% to 16.34%. The highest canopy coverage was found in District 1, while District 5 had the lowest. Potential planting space also differs across districts, with the highest amount of suitable planting area in District 1, suggesting strong opportunities for future expansion. Conversely, District 4 and 5 have the least amount of suitable space, reinforcing the need to prioritize protection and maintenance of its existing canopy.





### 3.3 Census Tracts

Tree canopy and potential planting areas were analyzed across Costa Mesa's 37 Census Tracts. Canopy cover ranged notably between tracts, with the highest concentration found in Tract 636.01 at 24.26%, and the lowest in Tract 525.01 at 3.6%. Similarly, suitable planting areas (vegetation and soil combined) varied, with Tract 525.01 offering the greatest opportunity at 23.71%, while Tract 636.05 had the least at only 1.38%. Most Census Tracts fell within a middle range of canopy coverage, between 10% and 15%, showing a relatively even distribution of established trees across neighborhoods. However, disparities in available planting areas highlight key opportunities for expanding canopy in under-resourced tracts, especially where space exists in grassy or soil-rich zones. Shadow and water classifications were minimal across tracts and do not significantly impact overall trends.

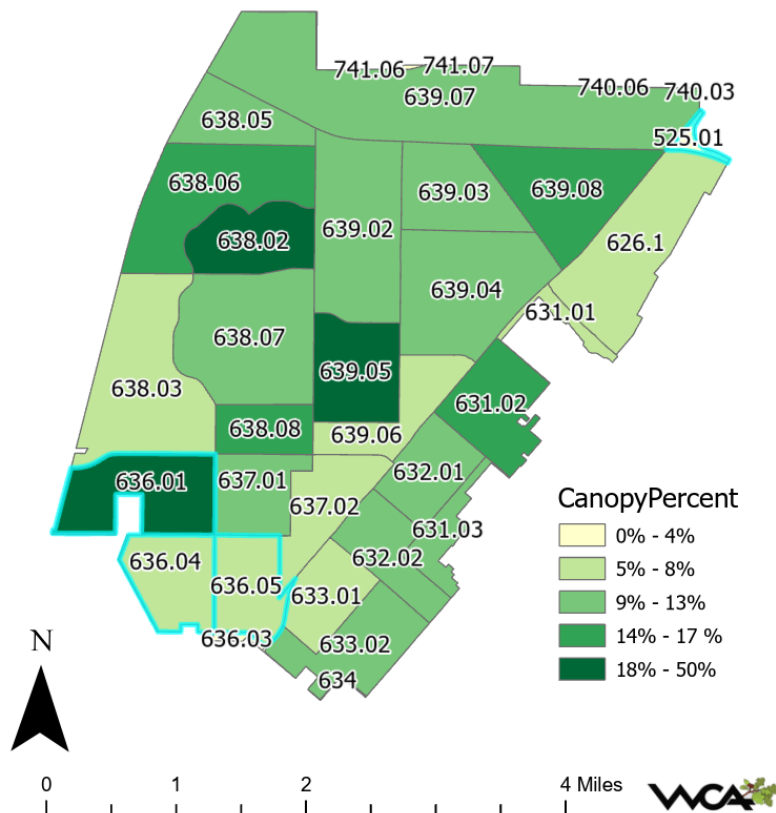


Figure 3.3a. Shows Canopy in Costa Mesa by Census Tracts

### Suitable vs Unsuitable Square Footage

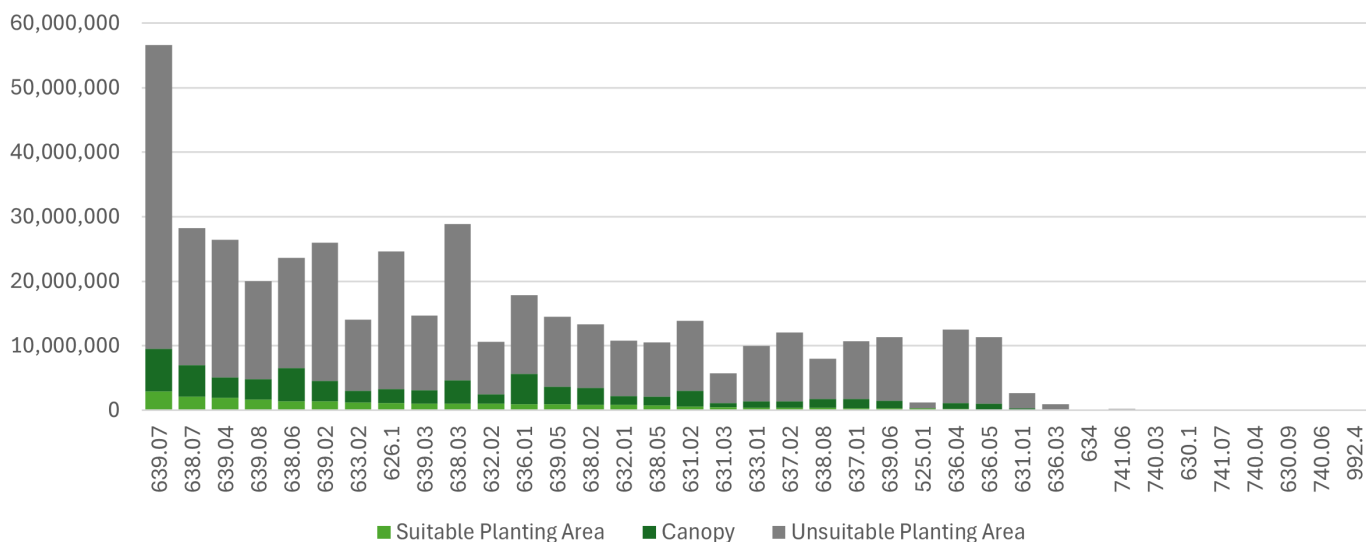


Figure 3.3b. Graph displays the distribution of suitable planting areas, existing canopy, and unsuitable planting areas across census tracts, sorted from highest to lowest suitable planting area. See Appendix A, Table A.1 for full dataset

### Summary

Canopy cover across Costa Mesa's Census Tracts ranged from 3.6% to 24.26%, while suitable planting opportunities varied from 1.38% to 23.7%. The most promising tracts for expansion include Tract 525.01, due to its high percentage of suitable space. Tracts with lower canopy and available area, such as 636.04 and 636.05, may require alternative strategies for greening efforts.

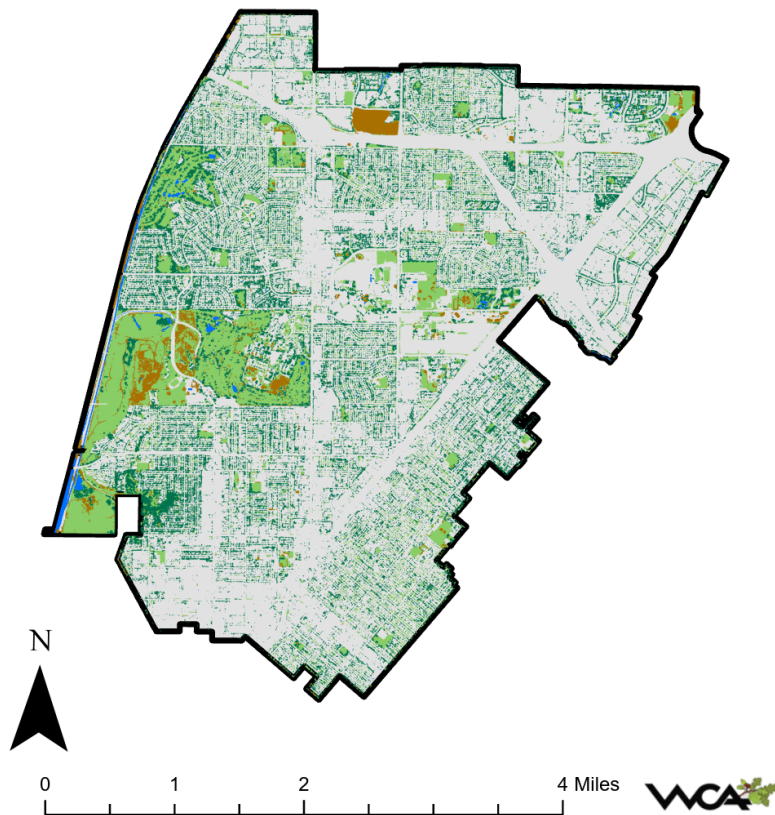


Figure 3.4a. This map shows all pervious features across Costa Mesa.

### 3.4 Land Use

Tree canopy, suitable planting areas, and land constraints were analyzed across Costa Mesa's land uses. Low-Density Residential areas, covering nearly 99 million square feet, contribute the most to the city's canopy at 23.82%, while Agriculture (0.47%) and Mobile Homes (1.34%) have minimal impact due to their small total areas.

Medical and Right-of-Way also offer significant planting potential, with 26.19% and 11.91% of their land suitable for canopy growth. In contrast, Mobile Homes (98.13% unsuitable) and Agriculture (93.72% Unsuitable) have limited space for new plantings.

### Tree Canopy Potential

| Land Use             | Acres   | Canopy % | Suitable % | Unsuitable % |
|----------------------|---------|----------|------------|--------------|
| Low Density Res      | 2281.01 | 23.82    | 9.13       | 67.05        |
| Golf                 | 379.72  | 17.85    | 0.16       | 81.99        |
| Medium Density Res   | 264.03  | 17.52    | 7.55       | 74.93        |
| Medical              | 114.39  | 17.32    | 26.19      | 56.49        |
| High Density Res     | 1115.17 | 15.78    | 4.47       | 79.75        |
| Open Space           | 746.66  | 14.66    | 8.02       | 77.33        |
| Senior Housing       | 21.92   | 12.38    | 5.58       | 82.04        |
| Private School       | 34.51   | 12.12    | 6.59       | 81.29        |
| Church               | 63.64   | 9.31     | 5.49       | 85.2         |
| Hotel / Motel        | 60.46   | 9.24     | 1.3        | 89.46        |
| College/University   | 209.80  | 8.59     | 5.19       | 86.22        |
| Mixed Use            | 5.99    | 8.58     | 5.11       | 86.3         |
| City Facilities      | 193.84  | 7.98     | 4.33       | 87.69        |
| Vacant               | 20.35   | 7.98     | 3.91       | 88.11        |
| Right-of-Way         | 83.22   | 6.92     | 11.91      | 81.17        |
| Commercial           | 1925.91 | 6.8      | 1.9        | 91.29        |
| School (non private) | 288.85  | 6.74     | 0.98       | 92.28        |
| Railroad             | 0.74    | 4.08     | 8.44       | 87.48        |
| Mobile Homes         | 33.70   | 1.34     | 0.53       | 98.13        |
| Agriculture          | 66.62   | 0.47     | 2.81       | 96.72        |



### 3.4 Land Use (cont'd)

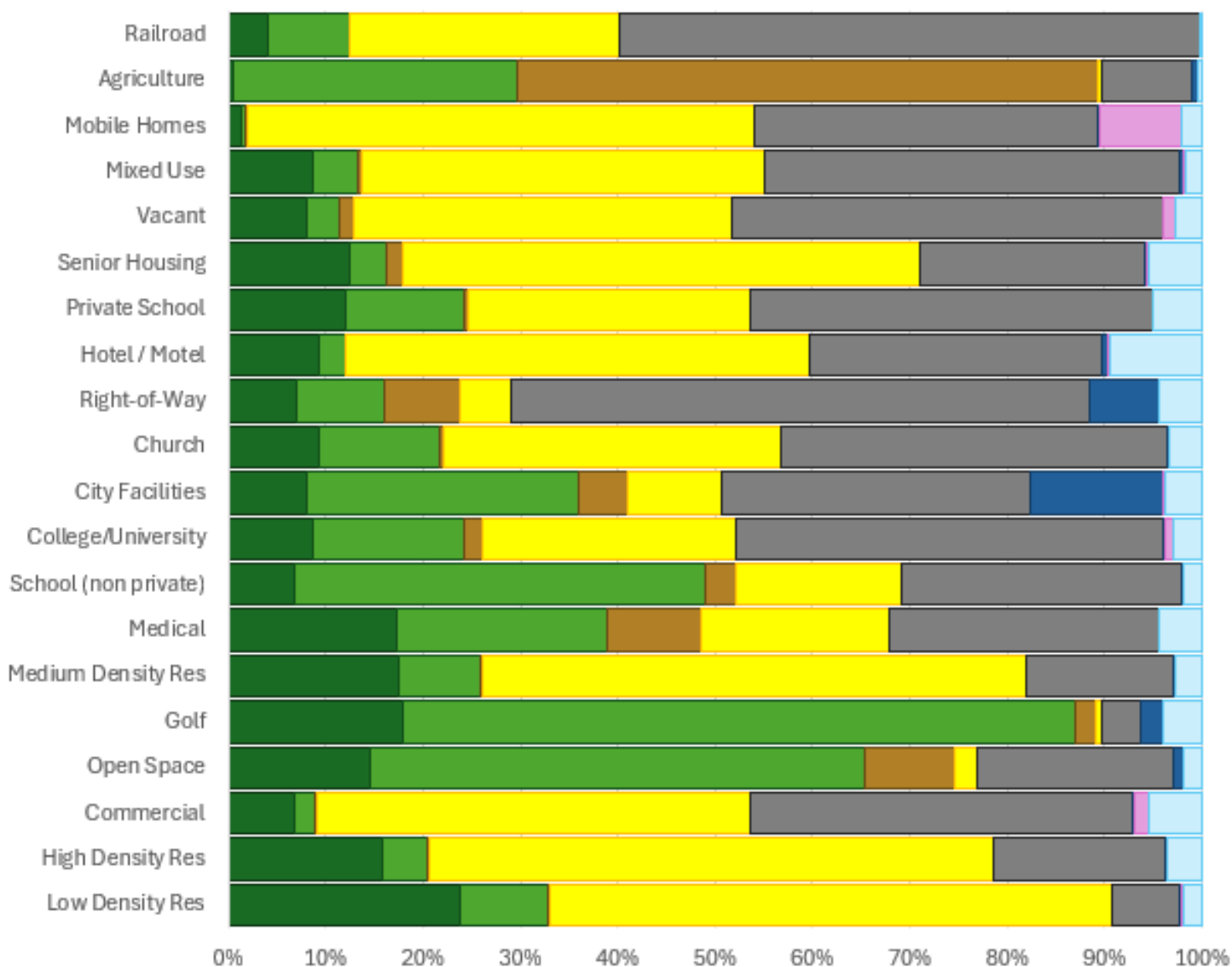


Figure 3.4b. This chart illustrates the proportions of total tree canopy, suitable planting areas, and unsuitable planting areas within the city boundary. See Appendix A, Table A.2 for the full dataset .

## Summary

Costa Mesa's tree canopy is highest in Low-Density Residential areas (23.82%) while the Agriculture (0.47%) and Mobile Homes (1.34%) contribute the smallest Canopy and have the highest unsuitable planting area. Planting efforts should be focused in Medical, Right-of-Way, and Low Density Residentials due to their high percentage of suitable planting area. Planting in Right-of-Way areas, which currently have the lowest canopy cover, would have a strong impact on increasing Costa Mesa's overall canopy due to the potential for significant gains.

### 3.5 Parks

Urban Tree Canopy (UTC) and Possible Planting Areas (PPA) were assessed across 34 parks in Costa Mesa, showing considerable variation in coverage.

Canyon Park had the highest UTC at 78.1%, while Fairview Park had the lowest at 4.48%. Suitable planting areas also varied widely, with Shalimar Park having the least at 0.74%, while Costa Mesa Bark Park had the highest at 75.36%. This doesn't prioritize Costa Mesa Golf Course, Fairview Park, and Talbert Regional Park due to unsuitable planting parks. Parks that offer significant opportunities for canopy expansion, based on the size of their suitable planting areas, include TeWinkle Park with approximately 270,000 sq ft of PPA, and Wakeham Park with 177,000 sq ft of PPA. These results help identify key locations for targeted tree planting efforts to enhance Costa Mesa's urban forest.

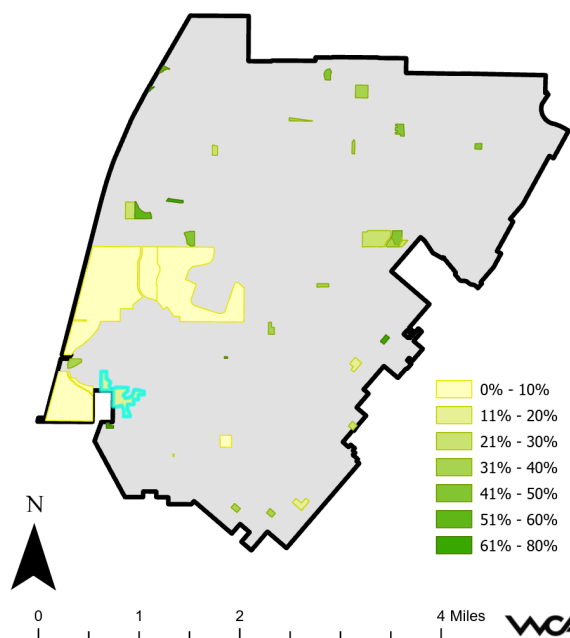


Figure 3.5a. This map shows the canopy percentage per park.

### Suitable vs Unsuitable

|                          | Canopy(%) | Suitable Planting Area(%) | Unsuitable Planting Area(%) |
|--------------------------|-----------|---------------------------|-----------------------------|
| Balearic Park            | 21.7      | 18.8                      | 59.4                        |
| Brentwood Park           | 60.1      | 31.0                      | 8.9                         |
| Canyon Park              | 78.1      | 17.0                      | 4.7                         |
| Costa Mesa Bark Park     | 21.9      | 75.4                      | 2.7                         |
| Costa Mesa Golf Course   | 13.6      | 0.0                       | 86.4                        |
| Costa Mesa Skate Park    | 36.2      | 25.1                      | 38.7                        |
| Costa Mesa Tennis Center | 42.3      | 13.4                      | 44.3                        |
| Del Mesa Park            | 49.2      | 29.5                      | 21.3                        |
| Estancia Park            | 54.9      | 23.1                      | 21.9                        |
| Fairview Park            | 4.5       | 0.0                       | 95.5                        |
| Gisler Park              | 37.5      | 54.6                      | 7.8                         |
| Harper Park              | 14.3      | 22.9                      | 62.8                        |
| Heller Park              | 39.0      | 31.8                      | 29.2                        |
| Jordan Park              | 29.4      | 29.2                      | 41.4                        |
| Ketchum-Libolt Park      | 53.8      | 13.5                      | 32.7                        |
| Lindbergh Park           | 11.3      | 23.9                      | 64.8                        |
| Lions Park               | 8.8       | 22.6                      | 68.7                        |
| Marina View Park         | 70.1      | 8.5                       | 21.4                        |
| Mesa Verde Park          | 65.4      | 21.1                      | 13.4                        |
| Moon Park                | 54.0      | 22.6                      | 23.5                        |
| Neath Park               | 31.0      | 62.8                      | 6.2                         |
| Paularino Park           | 39.8      | 53.3                      | 6.9                         |
| Pinkley Park             | 38.8      | 28.5                      | 32.7                        |
| Shalimar Park            | 23.0      | 0.7                       | 76.3                        |
| Shiffer Park             | 48.6      | 17.8                      | 33.6                        |
| Smallwood Park           | 21.8      | 47.2                      | 30.9                        |
| Suburbia Park            | 60.8      | 18.4                      | 20.8                        |
| Talbert Regional Park    | 6.9       | 0.0                       | 93.0                        |
| Tanager Park             | 47.9      | 30.3                      | 21.8                        |
| TeWinkle Park            | 29.5      | 23.7                      | 46.8                        |
| Vista Park               | 31.6      | 46.2                      | 22.3                        |
| Wakeham Park             | 32.3      | 40.7                      | 26.9                        |
| Wilson Park              | 32.4      | 43.9                      | 23.7                        |
| Wimbledon Park           | 46.5      | 21.5                      | 32.0                        |

### Summary

Urban tree canopy coverage in Costa Mesa's parks varies significantly, ranging from just 4.5% at Fairview Park to 78.1% at Canyon Park. While parks like Talbert Regional Park, Fairview Park, and the Costa Mesa Golf Course are not currently prioritized for new canopy planting due to limited suitable planting areas or specialized land use, several other parks present strong opportunities for expansion. For example, Costa Mesa Bark Park has over 75% of its area classified as suitable for planting, and Neth Park, Paularino Park, and Gisler Park each have more than 50% of their land available for potential tree canopy growth. These parks—many with low to moderate existing canopy—offer ideal conditions for targeted planting efforts that can enhance shade, environmental benefits, and overall park experience for the surrounding communities.





## **4: TREE BENEFITS**

## 4.1 Ecological Benefits

Understanding an urban forest's structure, function and value can promote management decisions that will improve human health and environmental quality. An assessment of the vegetation structure, function, and value of the City of Costa Mesa urban forest was conducted during 2025. Data from 23221 trees located throughout City of Costa Mesa were analyzed using the i-Tree Eco model developed by the U.S. Forest Service, Northern Research Station.

### How Costa Mesa's City Trees Benefit the Community



#### Pollution Removal

**12.61 tons/year (\$173 thousand/year)**

This value represents the amount of air pollutants that trees remove from the atmosphere through leaf surfaces. Common pollutants include ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and particulate matter (PM<sub>10</sub>). By intercepting these pollutants, trees help improve air quality and support public health.



#### Carbon Storage

**12.85 thousand tons (\$5.56 million)**

Carbon storage refers to the total amount of carbon currently held within a tree's biomass—its trunk, branches, leaves, and roots. As trees grow, they absorb carbon dioxide (CO<sub>2</sub>) from the atmosphere and store it as carbon in their tissue, helping to offset greenhouse gas emissions.



#### Carbon Sequestration

**556.9 tons (\$241 thousand/year)**

This is the rate at which trees absorb and store carbon from the atmosphere each year. Unlike carbon storage, which is a cumulative total, carbon sequestration is an annual measurement that reflects the ongoing environmental service of reducing atmospheric CO<sub>2</sub> levels.



#### Avoided Runoff

**2.327 million gallon/year (\$20.8 thousand/year)**

Avoided runoff quantifies the volume of stormwater that is intercepted or absorbed by trees, preventing it from flowing directly into storm drains or local waterways. Trees reduce surface runoff by capturing rainfall on their leaves and branches and by increasing soil infiltration through their root systems.



#### Oxygen Production

**1.485 thousand tons/year**

Oxygen production measures the amount of oxygen generated by trees during photosynthesis. As trees convert carbon dioxide and water into glucose, they release oxygen as a byproduct. This natural process is essential for maintaining breathable air and supporting life on Earth.

*Ton: short ton (U.S.) (2,000 lbs)*

*Monetary values \$ are reported in US Dollars throughout the report except where noted. Ecosystem service estimates are reported for trees. With Complete Inventory Projects, oxygen production is estimated from gross carbon sequestration and does not account for decomposition. Oxygen production in Plot Inventory Projects is estimated from net carbon sequestration.*

## 4.2 Tree Characteristics

The urban forest of City of Costa Mesa has 23,221 trees with the most common being Liquidambar. The three most common species are Liquidambar styraciflua (8.8 percent), Pyrus calleryana (7.5 percent), and Pinus canariensis (7.5 percent).

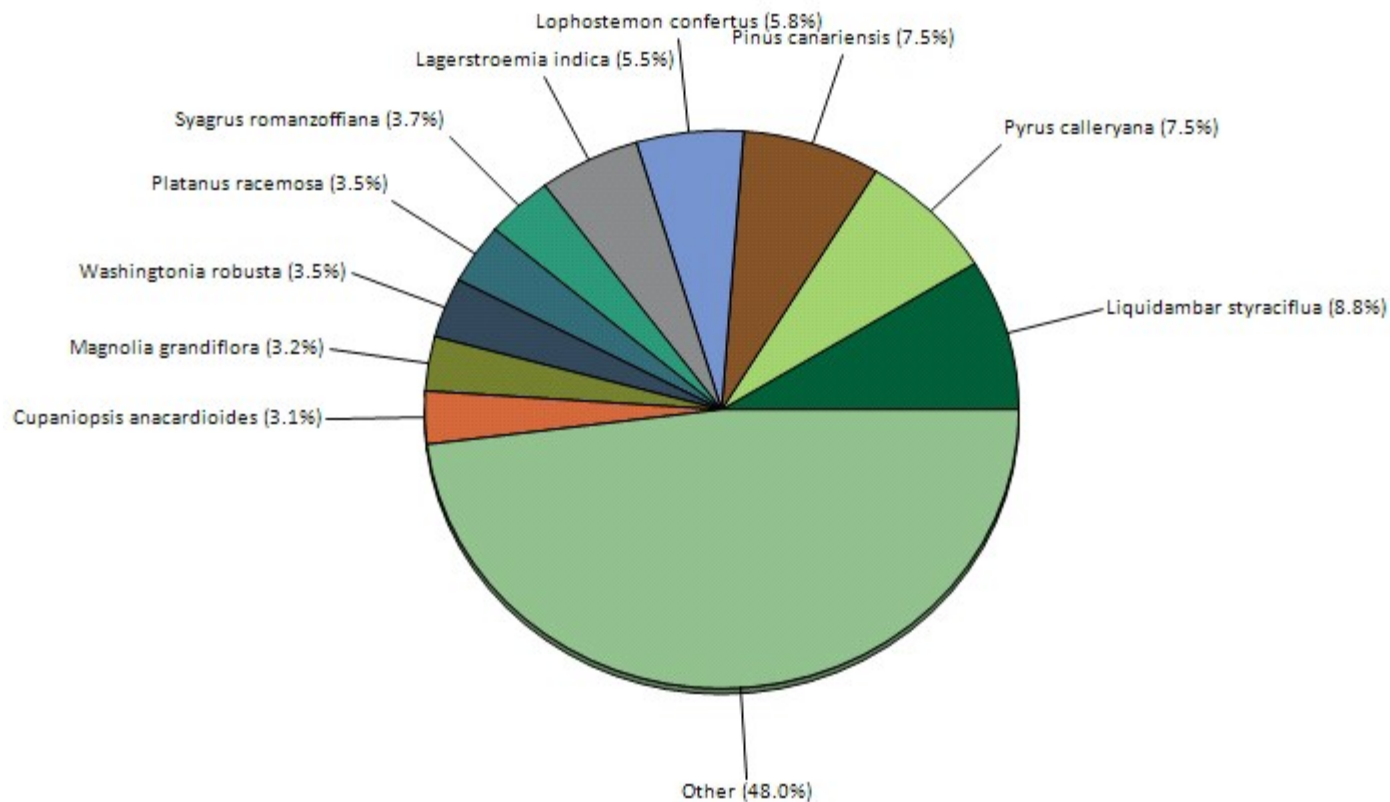


Figure 4.2a. Tree species composition in City of Costa Mesa

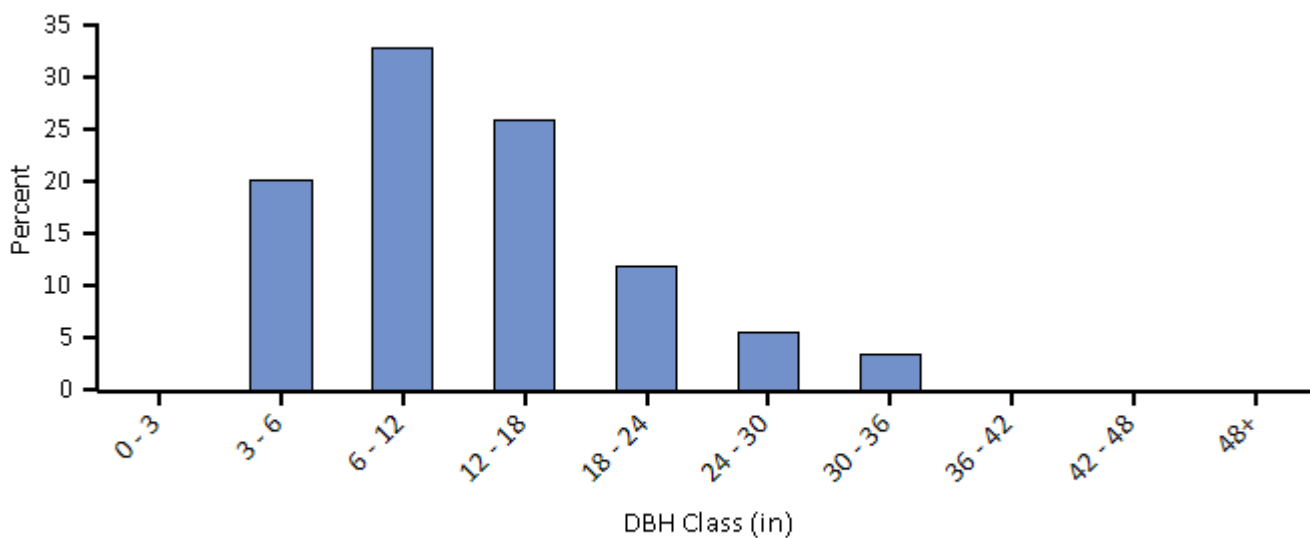


Figure 4.2b. Percent of tree population by diameter class (DBH—stem diameter at 4.5 feet)



### 4.3 Urban Forest Composition and Risk Assessment

In City of Costa Mesa, the most dominant species in terms of leaf area are *Pinus canariensis*, *Liquidambar styraciflua*, and *Platanus racemosa*. The 10 species with the greatest importance values are listed in Table 1. Importance values (IV) are calculated as the sum of percent population and percent leaf area. High importance values do not mean that these trees should necessarily be encouraged in the future; rather these species currently dominate the urban forest structure.

| Scientific Name                  | Common Name         | Percent Population | Percent Leaf Area | IV   |
|----------------------------------|---------------------|--------------------|-------------------|------|
| <i>Pinus canariensis</i>         | Canary island pine  | 7.5                | 14.8              | 22.3 |
| <i>Liquidambar styraciflua</i>   | Sweetgum            | 8.8                | 8.7               | 17.5 |
| <i>Pyrus calleryana</i>          | Callery pear        | 7.5                | 5.2               | 12.7 |
| <i>Lophostemon confertus</i>     | Vinegartree         | 5.8                | 4.7               | 10.5 |
| <i>Platanus racemosa</i>         | California sycamore | 3.5                | 6.1               | 9.6  |
| <i>Fraxinus uhdei</i>            | Shamel ash          | 2.4                | 4.7               | 7.1  |
| <i>Washingtonia robusta</i>      | Mexican fan palm    | 3.5                | 3.4               | 6.9  |
| <i>Lagerstroemia indica</i>      | Common crapemyrtle  | 5.5                | 0.9               | 6.4  |
| <i>Cupaniopsis anacardioides</i> | Carrotwood          | 3.1                | 2.7               | 5.7  |
| <i>Corymbia citriodora</i>       | Lemonscented gum    | 1.2                | 4.5               | 5.6  |

#### Potential Risk of Pests

Fifty-three insects and diseases were analyzed to quantify their potential impact on the urban forest. As each insect/ disease is likely to attack different host tree species, the implications for will vary. The number of trees at risk reflects only the known host species that are likely to experience mortality.

| Code | Scientific Name                  | Common Name                 | Trees at Risk (#) | Value (\$ millions) |
|------|----------------------------------|-----------------------------|-------------------|---------------------|
| PSHB | <i>Euwallacea nov. sp.</i>       | Polyphagous Shot Hole Borer | 11936             | 49.54               |
| PSB  | <i>Tomicus piniperda</i>         | Pine Shoot Beetle           | 2445              | 20.46               |
| SPB  | <i>Dendroctonus frontalis</i>    | Southern Pine Beetle        | 2445              | 20.46               |
| SW   | <i>Sirex noctilio</i>            | Sirex Wood Wasp             | 2445              | 20.46               |
| SOD  | <i>Phytophthora ramorum</i>      | Sudden Oak Death            | 2202              | 9.13                |
| ALB  | <i>Anoplophora glabripennis</i>  | Asian Longhorned Beetle     | 940               | 4.1                 |
| SLF  | <i>Lycorma delicatula</i>        | Spotted Lanternfly          | 836               | 3.16                |
| EAB  | <i>Agrilus planipennis</i>       | Emerald Ash Borer           | 620               | 5.8                 |
| BM   | <i>Euproctis chrysorrhoea</i>    | Browntail Moth              | 619               | 2.49                |
| WM   | <i>Operophtera brumata</i>       | Winter Moth                 | 444               | 1.52                |
| OW   | <i>Ceratocystis fagacearum</i>   | Oak Wilt                    | 443               | 1.56                |
| LWD  | <i>Raffaelea lauricola</i>       | Laurel Wilt                 | 399               | 1.61                |
| GSOB | <i>Agrilus auroguttatus</i>      | Goldspotted Oak Borer       | 343               | 1.17                |
| LAT  | <i>Choristoneura conflictana</i> | Large Aspen Tortrix         | 93                | 0.32                |
| RPS  | <i>Matsucoccus resinosae</i>     | Red Pine Scale              | 34                | 0.1                 |
| DED  | <i>Ophiostoma novo-ulmi</i>      | Dutch Elm Disease           | 16                | 0.09                |
| FTC  | <i>Malacosoma disstria</i>       | Forest Tent Caterpillar     | 15                | 0.13                |
| ARD  | <i>Armillaria spp.</i>           | Armillaria Root Disease     | 4                 | 0.03                |
| TCD  | <i>Geosmithia morbida</i>        | Thousand Canker Disease     | 3                 | 0.02                |
| AL   | <i>Phyllocnistis populiella</i>  | Aspen Leafminer             | 1                 | 0.01                |



## **5: RECOMMENDATIONS & CONCLUSIONS**

## 5.1 Summary

### Where Canopy is Lacking

Tree canopy is significantly lacking in Districts 2, 5, and 6, where canopy coverage falls between 12.73% and 13.49%, notably below the citywide average of 13.88%. This pattern is reflected in census tracts such as Tract 637.01 and 626.01, which show the lowest canopy percentages citywide, ranging from 9.8% to 11.7%. High-density residential zones and commercial corridors — such as those surrounding Harbor Boulevard, Bristol Street, and the South Coast Plaza area — are particularly short on possible planting area. These areas contain extensive impervious surfaces, minimal public green space, and limited planting within private parcels, all contributing to their reduced canopy footprint limitation. Prioritize prevention maintenance in these areas to ensure minimal loss in canopy cover.

### Where the Most Opportunity Lies

The most suitable areas for new tree planting are found in Districts 3 and 6, which contain the highest possible planting area percentages, at 6.93% and 7.46% respectively. Land use categories with the most available planting space include Right-of-Way (11.91% suitable area), Medical (26.2%), and Low-Density Residential (9.13%). Individual locations like TeWinkle Park (270,000 Sqft plant-able area) and Wakeham Park (177,000 Sqft plant-able area) have the largest amount of plant-able area within their boundaries. These spaces feature existing soil or vegetated ground and manageable impervious barriers, making them ideal for canopy expansion that supports cooling, aesthetics, and stormwater control.

### Areas Most in Need of Protection vs. Expansion

Neighborhoods such as Eastside Costa Mesa and parts of District 1 contain large residential lots with existing mature tree canopy — up to 16.34% in some districts — and should be prioritized for canopy protection through proactive maintenance and enforcement of preservation policies. In contrast, commercial zones (with only 6.8% canopy) and school properties (averaging under 8% UTC) require focused expansion efforts. Specific targets include public schools like Estancia High and Fairview Developmental Center, both of which have large pervious surfaces and poor canopy coverage. These land uses offer meaningful expansion potential with long-term environmental returns.

### General Citywide Trends or Disparities

Canopy coverage in Costa Mesa is unevenly distributed, favoring low-density residential areas (23.83% canopy) while under-serving high-density residential (15.77%) and commercial (6.73%) zones. Large parcels such as Talbert Regional Park, Fairview Park, and the Costa Mesa Golf Course contain extensive canopy and open space but offer limited benefit to street-level urban canopy goals, as they do not align with equity-driven or pedestrian-oriented planting strategies. In contrast, census tracts in central and west Costa Mesa — including Tracts 638.02 and 639.02 — show a combination of low existing canopy and high planting suitability, identifying them as key focus areas for bridging environmental disparities.





# APPENDIX A

Table A.1

| Census | Canopy       | Suitable Planting Area | Unsuitable Planting Area | Total Area    |
|--------|--------------|------------------------|--------------------------|---------------|
| 639.07 | 6,558,877.70 | 2,944,861.21           | 47,133,271.84            | 56,637,010.75 |
| 638.03 | 3,582,526.14 | 1,057,422.73           | 24,267,416.53            | 28,907,365.40 |
| 638.07 | 4,841,509.68 | 2,125,886.71           | 21,235,993.59            | 28,203,389.98 |
| 639.04 | 3,214,109.84 | 1,896,370.27           | 21,348,668.02            | 26,459,148.13 |
| 639.02 | 3,216,234.52 | 1,374,398.43           | 21,385,044.52            | 25,975,677.47 |
| 626.10 | 2,202,204.02 | 1,114,325.69           | 21,317,953.44            | 24,634,483.14 |
| 638.06 | 5,186,084.87 | 1,401,095.76           | 17,006,288.75            | 23,593,469.39 |
| 639.08 | 3,192,094.19 | 1,656,214.22           | 15,185,185.33            | 20,033,493.74 |
| 636.01 | 4,682,432.14 | 920,066.26             | 12,244,200.31            | 17,846,698.72 |
| 639.03 | 2,059,494.52 | 1,070,864.18           | 11,562,239.57            | 14,692,598.28 |
| 639.05 | 2,789,845.78 | 901,784.08             | 10,840,905.03            | 14,532,534.90 |
| 633.02 | 1,815,464.02 | 1,207,381.43           | 11,060,096.83            | 14,082,942.28 |
| 631.02 | 2,434,339.18 | 624,256.77             | 10,812,813.82            | 13,871,409.76 |
| 638.02 | 2,663,168.33 | 845,398.68             | 9,814,274.21             | 13,322,841.22 |
| 636.04 | 892,906.14   | 188,918.70             | 11,407,312.83            | 12,489,137.67 |
| 637.02 | 980,936.03   | 404,354.15             | 10,686,574.26            | 12,071,864.45 |
| 639.06 | 1,161,444.30 | 330,131.23             | 9,834,636.35             | 11,326,211.88 |
| 636.05 | 895,803.38   | 156,770.51             | 10,267,787.69            | 11,320,361.59 |
| 632.01 | 1,364,701.41 | 844,214.37             | 8,597,788.40             | 10,806,704.18 |
| 637.01 | 1,418,207.11 | 349,564.65             | 8,968,258.79             | 10,736,030.55 |
| 632.02 | 1,458,695.31 | 1,015,942.40           | 8,125,089.04             | 10,599,726.75 |
| 638.05 | 1,400,789.14 | 745,663.05             | 8,404,155.86             | 10,550,608.05 |
| 633.01 | 927,970.64   | 442,359.04             | 8,573,519.32             | 9,943,849.00  |
| 638.08 | 1,377,498.60 | 368,761.71             | 6,267,097.67             | 8,013,357.98  |
| 631.03 | 672,123.55   | 465,701.63             | 4,621,776.06             | 5,759,601.24  |
| 631.01 | 222,715.36   | 117,226.43             | 2,314,231.92             | 2,654,173.71  |
| 525.01 | 42,919.56    | 282,092.43             | 864,056.37               | 1,189,068.36  |
| 636.03 | 47,435.76    | 35,208.57              | 865,346.60               | 947,990.93    |
| 741.06 | 10,400.72    | 3,377.65               | 243,418.50               | 257,196.87    |
| 634.00 | 275.50       | 6,319.95               | 163,683.91               | 170,279.36    |
| 740.04 | 19.37        | 35.39                  | 68,545.13                | 68,599.89     |
| 992.40 | 1,001.54     | -                      | 57,962.19                | 58,963.74     |
| 740.06 | 14.28        | 3.88                   | 48,022.98                | 48,041.14     |
| 741.07 | 719.93       | 91.05                  | 24,509.96                | 25,320.94     |
| 630.10 | -            | 154.99                 | 18,404.52                | 18,559.51     |
| 740.03 | 5.58         | 259.92                 | 5,723.51                 | 5,989.01      |
| 630.09 | -            | 15.51                  | 1,086.05                 | 1,101.56      |

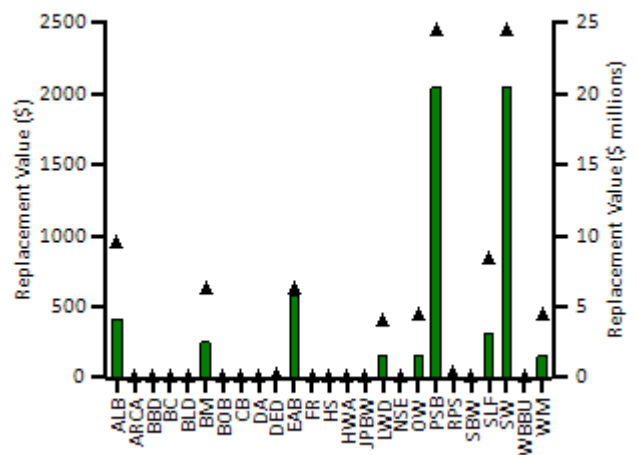
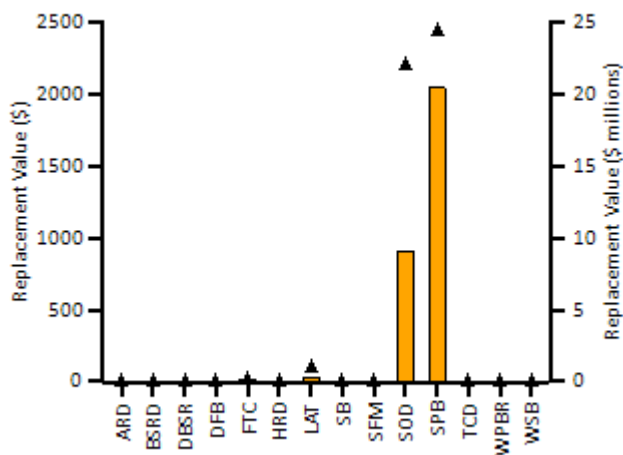
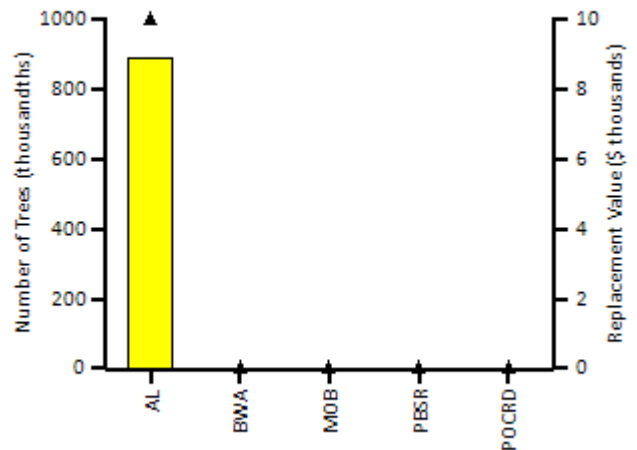
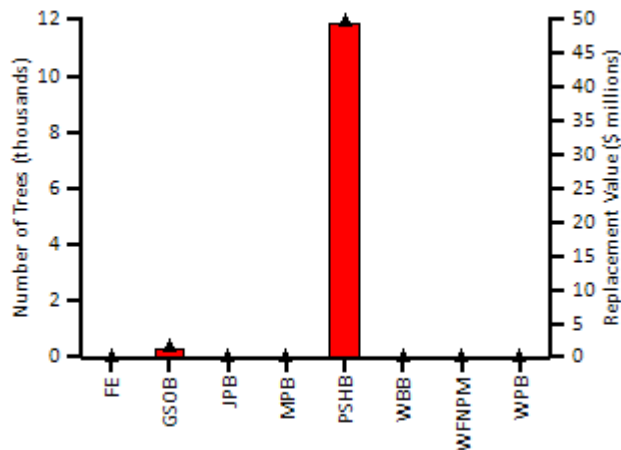
Table A.2

| Row Labels           | Canopy        | Vegetation    | Soil         | Building       | Road          | Water        | Other        | Shadow        | Grand Total    |
|----------------------|---------------|---------------|--------------|----------------|---------------|--------------|--------------|---------------|----------------|
| Grand Total          | 51,125,340.57 | 53,820,537.93 | 7,460,119.37 | 140,934,220.59 | 75,253,326.34 | 2,772,136.29 | 1,464,997.52 | 11,751,233.02 | 344,581,911.63 |
| Low Density Res      | 23,668,186.12 | 8,853,592.76  | 305,261.91   | 57,299,833.34  | 6,918,203.78  | 315,855.39   | 12,711.90    | 1,987,282.96  | 99,360,928.16  |
| Commercial           | 5,708,246.06  | 1,710,605.75  | 236,734.23   | 37,266,296.23  | 33,036,149.75 | 83,587.05    | 1,175,995.04 | 4,674,906.80  | 83,892,520.91  |
| High Density Res     | 7,664,144.85  | 2,269,444.06  | 116,365.43   | 28,158,685.66  | 8,486,576.94  | 121,306.10   | 46,920.98    | 1,713,548.81  | 48,576,992.83  |
| Open Space           | 4,766,557.83  | 16,521,426.26 | 2,939,518.00 | 809,980.18     | 6,501,300.79  | 356,424.38   | 1,436.08     | 627,757.29    | 32,524,400.81  |
| Golf                 | 2,953,260.65  | 11,447,926.80 | 314,078.18   | 125,839.91     | 664,622.85    | 365,415.38   | 3,906.69     | 665,414.25    | 16,540,464.73  |
| School (non private) | 847,438.67    | 5,318,823.61  | 381,456.06   | 2,138,654.94   | 3,617,652.88  | 27,839.32    | 7,889.23     | 242,356.45    | 12,582,111.16  |
| Medium Density Res   | 2,015,468.10  | 954,138.10    | 21,187.33    | 6,426,462.73   | 1,748,679.09  | 21,397.93    | 3,133.82     | 310,555.60    | 11,501,022.71  |
| College/ University  | 784,920.99    | 1,428,468.05  | 181,949.36   | 2,360,618.10   | 4,019,946.56  | 24,084.35    | 62,169.60    | 276,675.29    | 9,138,832.31   |
| City Facilities      | 673,804.41    | 2,369,808.69  | 420,798.14   | 806,054.30     | 2,685,130.91  | 1,158,434.47 | 6,218.73     | 323,256.39    | 8,443,506.04   |
| Medical              | 862,948.89    | 1,077,231.00  | 484,706.90   | 956,069.52     | 1,377,716.83  | 950.11       | 4,362.32     | 218,811.32    | 4,982,796.89   |
| Right-of-Way         | 251,031.33    | 332,057.69    | 283,362.82   | 187,472.82     | 2,155,425.26  | 256,267.94   | 1,418.74     | 158,152.55    | 3,625,189.14   |
| Agriculture          | 13,598.66     | 848,056.28    | 1,726,226.16 | 13,803.51      | 268,484.73    | 16,248.49    |              | 15,544.15     | 2,901,961.98   |
| Church               | 258,096.56    | 344,546.91    | 11,645.76    | 958,696.80     | 1,102,103.35  | 570.46       | 711.49       | 95,669.58     | 2,772,040.90   |
| Hotel / Motel        | 243,244.20    | 73,053.30     | 821.01       | 1,255,149.97   | 790,196.69    | 17,349.80    | 2,229.42     | 251,646.62    | 2,633,691.01   |
| Private School       | 182,192.10    | 182,088.38    | 5,443.78     | 437,112.19     | 619,042.32    | 818.70       | 1,307.73     | 75,117.23     | 1,503,122.44   |
| Mobile Homes         | 19,622.62     | 7,568.36      | 215.30       | 764,550.04     | 520,303.02    | 1,718.68     | 121,966.98   | 32,202.64     | 1,468,147.64   |
| Senior Housing       | 118,150.26    | 36,144.71     | 17,110.70    | 507,072.30     | 219,934.99    | 2,153.97     | 1,152.19     | 52,917.15     | 954,636.26     |
| Vacant               | 70,714.08     | 30,672.42     | 12,056.61    | 344,804.88     | 391,838.12    | 365.09       | 10,835.30    | 25,103.98     | 886,390.48     |
| Mixed Use            | 22,400.50     | 12,166.08     | 1,181.69     | 108,180.60     | 110,829.79    | 1,338.75     | 631.27       | 4,229.64      | 260,958.31     |
| Railroad             | 1,313.67      | 2,718.73      |              | 8,882.57       | 19,187.69     | 9.96         |              | 84.31         | 32,196.93      |



Table A.3

In the following graph, the pests are color coded according to the county's proximity to the pest occurrence in the United States. Red indicates that the pest is within the county; orange indicates that the pest is within 250 miles of the county; yellow indicates that the pest is within 750 miles of the county; and green indicates that the pest is outside of these ranges.



Note: points - Number of trees, bars - Replacement value

Table A.4

Based on the host tree species for each pest and the current range of the pest (Forest Health Technology Enterprise Team 2014), it is possible to determine what the risk is that each tree species in the urban forest could be attacked by an insect or disease.

| Spp. Risk | Risk Weight | Species Name                    | AL | ALB | ARCA | ARD | BBD | BC | BLD | BM | BOB | BSRD | BWA | CB | DA | DBSR | DED | DFB | EAB | FE | FR | FTC | GSOB | HRD | HS | HWA | JPB | JPBW | LAT | LWD | MOB | MPB | NSE | OW | PBSR |
|-----------|-------------|---------------------------------|----|-----|------|-----|-----|----|-----|----|-----|------|-----|----|----|------|-----|-----|-----|----|----|-----|------|-----|----|-----|-----|------|-----|-----|-----|-----|-----|----|------|
|           | 13          | <i>Quercus agrifolia</i>        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 13          | <i>Quercus chrysolepis</i>      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 10          | <i>Salix lasiolepis</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 9           | <i>Betula pendula</i>           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 8           | <i>Cinnamomum camphora</i>      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 8           | <i>Quercus ilex</i>             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 8           | <i>Pinus</i>                    |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 8           | <i>Umbellularia californica</i> |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 7           | <i>Alnus rhombifolia</i>        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Pinus thunbergii</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Fraxinus velutina</i>        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Quercus lobata</i>           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Prunus persica</i>           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Acer palmatum</i>            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Albizia julibrissin</i>      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 6           | <i>Betula nigra</i>             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus canariensis</i>        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Fraxinus uhdei</i>           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus halepensis</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus torreyana</i>          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Ulmus parvifolia</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus pinea</i>              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus eldarica</i>           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Quercus suber</i>            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Juniperus chinensis</i>      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Liriodendron tulipifera</i>  |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Morus alba</i>               |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Persea americana</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Populus fremontii</i>        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Zelkova serrata</i>          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Pinus radiata</i>            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Platanus occidentalis</i>    |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Acacia</i>                   |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Prunus serrulata</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Ficus carica</i>             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Fraxinus</i>                 |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 5           | <i>Melia azedarach</i>          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | <i>Liquidambar styraciflua</i>  |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | <i>Pyrus calleryana</i>         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |

Table A.4

| Spp. Risk | Risk Weight | Species Name                   | AL | ALB | ARCA | ARD | BBD | BC | BLD | BM | BOB | BSRD | BWA | CB | DA | DBSR | DED | DFB | EAB | FE | FR | FTC | GSOB | HRD | HS | HWA | JPB | JPBW | LAT | LWD | MOB | MPB | NSE | OW | PBSR |
|-----------|-------------|--------------------------------|----|-----|------|-----|-----|----|-----|----|-----|------|-----|----|----|------|-----|-----|-----|----|----|-----|------|-----|----|-----|-----|------|-----|-----|-----|-----|-----|----|------|
|           | 4           | Platanus racemosa              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Washingtonia robusta           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Magnolia grandiflora           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Cupaniopsis anacardioides      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Afrocarpus falcatus            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Platanus mexicana              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Jacaranda mimosifolia          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Archontophoenix cunninghamiana |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Pistacia chinensis             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Koelreuteria bipinnata         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Bauhinia variegata             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Schinus molle                  |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Tipuana tipu                   |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Eucalyptus polyanthemos        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Arbutus unedo                  |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Olea europaea                  |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Eucalyptus camaldulensis       |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Cassia leptophylla             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Ficus benamina                 |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Koelreuteria paniculata        |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Corymbia ficifolia             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Callistemon viminalis          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Cocculus laurifolius           |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Brachychiton populneus         |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Pittosporum undulatum          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Washingtonia filifera          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Ceiba speciosa                 |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Brachychiton acerifolius       |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Ceratonia siliqua              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Eriobotrya japonica            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Ficus macrophylla              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Acacia stenophylla             |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Cedrus atlantica               |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Howea forsteriana              |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Citrus limon                   |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Gleditsia triacanthos          |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
|           | 4           | Hymenosporum flavum            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |



Table A.4

# A: APPENDIX

[illegible]

Table A.4

| Spp. Risk | Risk Weight | Species Name           | AL | ALB | ARCA | ARD | BBD | BC | BLD | BM | BOB | BSRD | BWA | CB | DA | DBSR | DED | DFB | EAB | FE | FR | FTC | GSOB | HRD | HS | HWA | JPB | JPBW | LAT | LWD | MOB | MPB | NSE | OW | PBSR |
|-----------|-------------|------------------------|----|-----|------|-----|-----|----|-----|----|-----|------|-----|----|----|------|-----|-----|-----|----|----|-----|------|-----|----|-----|-----|------|-----|-----|-----|-----|-----|----|------|
| 1         | 1           | Platycladus orientalis |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
| 1         | 1           | Ligustrum lucidum      |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
| 1         | 1           | Prunus domestica       |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
| 1         | 1           | Malus fusca            |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |
| 1         | 1           | Quercus tomentella     |    |     |      |     |     |    |     |    |     |      |     |    |    |      |     |     |     |    |    |     |      |     |    |     |     |      |     |     |     |     |     |    |      |

| Spp. Risk | Risk Weight | Species Name             | POCRD | PSB | PSHB | RPS | SB | SBW | SFM | SLF | SOD | SPB | SW | TCD | WBB | WBBU | WFNPM | WM | WPB | WPBR | WSB |
|-----------|-------------|--------------------------|-------|-----|------|-----|----|-----|-----|-----|-----|-----|----|-----|-----|------|-------|----|-----|------|-----|
| 13        | 13          | Quercus agrifolia        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 13        | 13          | Quercus chrysolepis      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 10        | 10          | Salix lasiolepis         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 9         | 9           | Betula pendula           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 8         | 8           | Cinnamomum camphora      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 8         | 8           | Quercus ilex             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 8         | 8           | Pinus                    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 8         | 8           | Umbellularia californica |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 7         | 7           | Alnus rhombifolia        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Pinus thunbergii         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Fraxinus velutina        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Quercus lobata           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Prunus persica           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Acer palmatum            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Albizia julibrissin      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 6         | 6           | Betula nigra             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus canariensis        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Fraxinus uhdei           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus halepensis         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus torreyana          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Ulmus parvifolia         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus pinea              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus eldarica           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Quercus suber            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Juniperus chinensis      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Liriodendron tulipifera  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Morus alba               |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Persea americana         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Populus fremontii        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Zelkova serrata          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Pinus radiata            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Platanus occidentalis    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Acacia                   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Prunus serrulata         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Ficus carica             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
| 5         | 5           | Fraxinus                 |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |

Table A.4

| Spp. Risk | Risk Weight | Species Name                   | POCRD | PSB | PSHB | RPS | SB | SBW | SFM | SLF | SOD | SPB | SW | TCD | WBB | WBBU | WFNPM | WM | WPB | WPBR | WSB |
|-----------|-------------|--------------------------------|-------|-----|------|-----|----|-----|-----|-----|-----|-----|----|-----|-----|------|-------|----|-----|------|-----|
|           | 5           | Melia azedarach                |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Liquidambar styraciflua        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Pyrus calleryana               |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Platanus racemosa              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Washingtonia robusta           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Magnolia grandiflora           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Cupaniopsis anacardioides      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Afrocarpus falcatus            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Platanus mexicana              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Jacaranda mimosifolia          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Archontophoenix cunninghamiana |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Pistacia chinensis             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Koelreuteria bipinnata         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Bauhinia variegata             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Schinus molle                  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Tipuana tipu                   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Eucalyptus polyanthemos        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Arbutus unedo                  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Olea europaea                  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Eucalyptus camaldulensis       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Cassia leptophylla             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Ficus benjamina                |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Koelreuteria paniculata        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Corymbia ficifolia             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Callistemon viminalis          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Cocculus laurifolius           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Brachychiton populneus         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Pittosporum undulatum          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Washingtonia filifera          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Ceiba speciosa                 |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Brachychiton acerifolius       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Ceratonia siliqua              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Eriobotrya japonica            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Ficus macrophylla              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Acacia stenophylla             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Cedrus atlantica               |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Howea forsteriana              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |



Table A.4

| Spp. Risk | Risk Weight | Species Name             | POCRD | PSB | PSHB | RPS | SB | SBW | SFM | SLF | SOD | SPB | SW | TCD | WBB | WBBU | WFNPM | WM | WPB | WPBR | WSB |
|-----------|-------------|--------------------------|-------|-----|------|-----|----|-----|-----|-----|-----|-----|----|-----|-----|------|-------|----|-----|------|-----|
|           | 4           | Citrus limon             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Gleditsia triacanthos    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Hymenosporum flavum      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Harpephyllum caffrum     |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Erythrina caffra         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Eucalyptus torquata      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Acacia melanoxylon       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Cercidium                |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Magnolia x soulangeana   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Salix babylonica         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Triadica sebifera        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Inga edulis              |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Macadamia integrifolia   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Prosopis chilensis       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Acacia baileyana         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Bombax ceiba             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Calodendrum capense      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Casuarina cunninghamiana |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Eucalyptus cinerea       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Liquidambar formosana    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Parkinsonia aculeata     |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Prunus caroliniana       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Psidium guajava          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 4           | Schinus polygama         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Lophostemon confertus    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Pyrus                    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Sequoia sempervirens     |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Laurus nobilis           |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Ulmus pumila             |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Citrus                   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Acer saccharinum         |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Calocedrus decurrens     |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Malus                    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Photinia x fraseri       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Heteromeles arbutifolia  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Juglans hindsii          |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Alnus                    |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 3           | Juglans californica      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Celtis occidentalis      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |

Table A.4

| Spp. Risk | Risk Weight | Species Name           | POCRD | PSB | PSHB | RPS | SB | SBW | SFM | SLF | SOD | SPB | SW | TCD | WBB | WBBU | WFNPM | WM | WPB | WPBR | WSB |
|-----------|-------------|------------------------|-------|-----|------|-----|----|-----|-----|-----|-----|-----|----|-----|-----|------|-------|----|-----|------|-----|
|           | 1           | Fraxinus angustifolia  |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Punica granatum        |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Prunus armeniaca       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Robinia pseudoacacia   |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Platycladus orientalis |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Ligustrum lucidum      |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Prunus domestica       |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Malus fusca            |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |
|           | 1           | Quercus tomentella     |       |     |      |     |    |     |     |     |     |     |    |     |     |      |       |    |     |      |     |

Note:

Species that are not listed in the matrix are not known to be hosts to any of the pests analyzed.

Species Risk:

- Red indicates that tree species is at risk to at least one pest within county
- Orange indicates that tree species has no risk to pests in county, but has a risk to at least one pest within 250 miles from the county
- Yellow indicates that tree species has no risk to pests within 250 miles of county, but has a risk to at least one pest that is 250 and 750 miles from the county
- Green indicates that tree species has no risk to pests within 750 miles of county, but has a risk to at least one pest that is greater than 750 miles from the county

Risk Weight:

Numerical scoring system based on sum of points assigned to pest risks for species. Each pest that could attack tree species is scored as 4 points if red, 3 points if orange, 2 points if yellow and 1 point if green.

Pest Color Codes:

- Red indicates pest is within Orange county
- Red indicates pest is within 250 miles county
- Yellow indicates pest is within 750 miles of Orange county
- Green indicates pest is outside of these ranges