Management of Street Trees: Planting

Miller, Chapter 11
Species Selection Model

From Miller, p 231

Figure 11–1
ENVIRONMENTAL CONSTRAINTS
Edaphic differences, *Liquidambar styraciflua*
Boron and Sour Gum (*Nyssa sylvatica*), Davis
Japanese Maple, Davis
Biologic factor, Mistletoe in Modesto Ash, Sacramento
CULTURAL CONSTRAINTS
Ficus macrophylla, La Mirada
Jacaranda in Narrow Tree Lawn, Whittier
Crepe Myrtle in Lawn Strip, Davis
Elm Roots in Too Small Cut-out, Sacramento
Ginkgo in Small Cut-out, Sacramento
London Plane, Small Cut-Outs
Palm in Very Small Cut-Out
Mediterranean Hackberry in Small Cut-Out
Moraine Ash in Small Cut-Out
Moraine Ash in Large Cut-Out
Food for Thought?
Tree-Shape/Building Conflict, Sacramento
Sapium Building Conflict, Davis
Crepe Myrtle Building Conflict, Davis
Moraine Ash Building Conflict, Davis
Cork Oak, Davis
Cork Oak and Power Lines, Davis
SOCIAL FACTORS
ECONOMIC FACTORS
TABLE 11–1  COMPARISON OF THE ULTIMATE ESTABLISHMENT COST PER TREE FOR TWO SPECIES

<table>
<thead>
<tr>
<th></th>
<th>Species A</th>
<th>Species B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase price/tree</td>
<td>$35.00</td>
<td>$50.00</td>
</tr>
<tr>
<td>Planting cost/tree</td>
<td>15.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Other maintenance during 5-yr. period</td>
<td>12.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Total establishment cost per tree</td>
<td>$62.00</td>
<td>$75.00</td>
</tr>
<tr>
<td>Number of trees planted</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total planting cost</td>
<td>$6,200.00</td>
<td>$7,500.00</td>
</tr>
<tr>
<td>Percent survival after 5 years</td>
<td>60%</td>
<td>80%</td>
</tr>
<tr>
<td>Number of surviving trees</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Cost per surviving tree</td>
<td>$103.33</td>
<td>$93.75</td>
</tr>
</tbody>
</table>

*aSpecies A is less expensive to start with, but when evaluated on the basis of cost per surviving tree, species B is a better choice.

From Miller, p 237
FULL STOCKING
Annual planting (N) to reach full stocking in 8 years

<table>
<thead>
<tr>
<th>Vacant sites (V)</th>
<th>Last year’s removals (R)</th>
<th>Anticipated planting survival (S)</th>
<th>Years to full-stocking goal (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1624</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

\[
N = \frac{R + \frac{V}{G}}{S} \\
N = \frac{120 + \frac{1624}{8}}{0.80} \\
N = 411 \text{ trees}
\]

From Miller, p 250
TREE MOVING
Mexican Fan Palm
Mexican Fan Palm
PRUNING CYCLE
Bradford Pear
Modesto Ash
TREE FAILURE AND REMOVAL
European Hackberry
European Hackberry
European Hackberry
Ashes to ashes,...
Ginkgo
Foothill Pine
Foothill Pine
Foothill Pine
Birch, close call
Close Call

Nicole Lapatka
Crunch

A city tree damaged an SUV on Chestnut Lane in East Davis when it fell during the Jan. 4 storm.

CITY OF DAVIS/ COURTESY PHOTO
The roof of a house on Cypress Lane in East Davis was damaged by the Jan. 4 storm.
100 more Stern Grove trees called hazardous

Supes panel is told of other city perils at fatality hearing

By Marisa Lagos
Chronicle Staff Writer

Three months after a large branch snapped off a Stern Grove tree and killed a woman, San Francisco officials said Thursday that there are still more than 100 hazardous trees that need to be removed there — and probably thousands of others throughout the city that need to be pruned or cut down.

Work to trim or remove the trees at Stern Grove and elsewhere is under way, but it has been slow because the city doesn’t have enough forestry staff, said Dennis Kern, director of operations for the Recreation and Park Department.

There are 100,000 trees spread among the department’s 3,500 acres of parkland, Kern said, and only three tree crews. Each crew is made up of two or three tree climbers and one laborer. One of the crews is now working full-time on Stern Grove’s 2,600 trees.

The agency isn’t likely to hire more tree trimmers anytime soon because the city faces a $338 million budget deficit for the 2008-09 fiscal year. However, the department may get some help with equipment and planning through a recently passed park bond: $4 million of the $185 million issue is earmarked for the urban forestry program.

At the hearing before a Board of Supervisors committee, which was called in response to the death of Kathleen Bolton in Stern Grove on April 14, Kern said decades of neglect have made the problem more severe.

The department doesn’t really know how many trees in the city would be considered hazardous by arborists because only three areas — Stern Grove, Park Presidio and Washington Square —