

## DETERMINING THE MITIGATION VALUE OF ROADSIDE VEGETATION

### Key Words and Definitions

- *Diameter* - a standard measurement for trees recorded at 54" (inches) above grade.
- *Condition Rating* – assessment of the health and structure of a tree expressed as a percentage multiplier.
- *Replacement Tree* - the tree located in the marketplace which shall be used as a basis of valuation for the casualty tree.
- *Qualified Nursery Grower* - a wholesale plant nursery registered with the Division of Plant Industry; with promulgated prices. The name and phone number of the qualified nursery grower shall be included in the report.
- *Average Wholesale Value* – average of three (3) wholesale values from a qualified nursery grower. When three (3) wholesale values are not found utilize available data and/or comparative species for comparable.
- *Installed price* – the average wholesale value times 2.5

### Appraisal Methodologies

1. Replacement Cost Method – Utilize this method for those trees (other than Palm Trees) that can be found in the open marketplace of the same species, cultivar, and size of the casualty tree.

- Three (3) wholesale values from a qualified nursery grower
- Average wholesale cost of casualty replacement tree, same size, same species and cultivar  
x 2.5 mark-up of the average wholesale plant price  
x condition rating  
= mitigation cost

Example:

A 4" diameter sweetgum tree (*Liquidambar styraciflua*) is removed

A 4" diameter sweetgum tree (replacement) averages \$155.00 wholesale cost

$\$155.00 \times 2.5 = \$387.50$  (installed price)

$\$387.50 \times \text{condition rating of } 70\% = \$271.25$

mitigation cost = \$271.25

2. Inch for Diameter Inch Replacement Method – Utilize this method for casualty trees (other than Palm Trees) which cannot be found in the open marketplace in the same or similar size.

- Three (3) wholesale values from a qualified nursery grower
- Average wholesale cost of, at minimum, a 3" diameter replacement tree, same species and cultivar  
x 2.5 mark-up of the average wholesale plant price  
 $\div 3$  (total diameter inches of the replacement tree, same species and cultivar)  
x the diameter of the subject casualty tree  
x condition rating

= mitigation cost

Example:

An 18" diameter live oak tree (*Quercus virginiana*) is removed. An 18" diameter live oak tree is not found in the open marketplace.

A 3" diameter live oak tree (replacement tree, same species and cultivar) averages \$275.00 wholesale

$\$275.00 \times 2.5 = \$687.50$  (installed price of 3" replacement tree, same species and cultivar)

$\$687.50 \div 3$  (total diameter inches of the 3" replacement tree, same species and cultivar)

= \$229.17 per diameter inch

18 (casualty tree) x \$229.17 (diameter inch value) = \$4,125.06

$\$4,125.06 \times$  condition rating of 70% = \$2,887.54

mitigation cost = \$2,887.54

3. Relative Comparison Analysis Approach – Utilize this method when the casualty plant or tree cannot be found growing or for sale in the open marketplace at any size. This approach to value establishes the cost of the replacement species similar to the function and/or attributes of the casualty species. Once the comparative species is identified, value the replacement tree as found in the Inch for Diameter Inch Replacement model.

Example:

A species of tree is a casualty and cannot be found in the open marketplace. Based on the information in the *Species Rating List, published by the International Society of Arboriculture*, it is discovered that a bottlebrush is a comparative function/attribute species. Use this comparative species utilizing the Inch for Diameter Inch Replacement Model to value the casualty tree.

#### 4. Replacement Cost Method - Shrubs

Use same replacement plant species, cultivar and size as casualty plant species

Three (3) wholesale values from a qualified nursery grower

x 2.5 mark-up of the average wholesale plant price

x the actual number of casualty plants

x condition rating

= mitigation cost

Example (Replacement shrub available)

Twenty (20), 4' x 4' ligustrum plants are removed

A 4' x 4' ligustrum replacement plant averages \$22.50 per plant

$\$22.50 \times 2.5 = \$45.00$  each

$\$45.00 \times 20$  removed ligustrum plants = \$900

$\$900 \times$  condition rating of 70% = \$630

mitigation cost = \$630

Note: If the casualty plant is larger than the largest replacement plant in the open marketplace, determine the per foot value of the largest replacement plant to be used as a multiplier for the casualty plant size.

Example (Replacement shrub not available)

A 6' x 6' ligustrum plant is removed

A 4' x 4' ligustrum is known to be valued at \$45.00 each

$\$45.00 \div 4 = \$11.25$  per foot

$\$11.25 \times 6 = \$67.50$

$\$67.50 \times 2.5 = \$168.75$  each

$\$168.75 \times$  condition rating of 70% = \$118.13

mitigation cost = \$118.13

#### 5. Replacement Cost Method - Palm Trees

Note: Palm trees may be measured by over-all height, clear trunk or clear wood.

- Three (3) wholesale values from a qualified nursery grower or collector
- Average wholesale cost of same size and species replacement palm tree
- x 2.5 mark-up of the average wholesale palm tree price
- x the unit of measurement of the subject casualty palm tree
- x condition rating
- = mitigation cost

Example (Palm replacement tree available)

A 16' tall Washington palm tree (*Washingtonia robusta*) is removed

A 16' tall Washington palm tree replacement averages \$8.00 per foot wholesale cost or collector cost

$\$8.00 \times 2.5 = \$20.00$  per foot

$\$20.00 \times 16' = \$320.00$

$\$320.00 \times$  condition rating of 70% = \$224.00

mitigation cost = \$224.00

Note: If replacement palm tree is not available from wholesale grower or collector, then the average wholesale cost of the replacement palm tree, same species will be calculated by over-all height, clear trunk or clear wood.

Example (Palm replacement tree **not** available)

A 40' tall Washington palm tree (*Washingtonia robusta*) is removed

A 40' tall Washington palm tree replacement is not available from a wholesale grower or collector

The wholesale or collector cost is \$8.00 per foot (based on a 16' tall replacement palm tree)

$\$8.00 \times 2.5 = \$20.00$  per foot

$\$20.00 \times 40' = \$800$

$\$800 \times$  condition rating of 70% = \$560.00

mitigation cost = \$560.00

**Note:** The appraisal methodologies outlined above are intended for application by qualified professionals and/or tree care practitioners.

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