

CITY OF OAKLAND

ONE FRANK OGAWA PLAZA • 2ND FLOOR • OAKLAND, CALIFORNIA 94612

**Jean Quan, President Pro Tem
City Council Member, District 4**

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510-238-7004

AGENDA REPORT

TO: Life Enrichment Committee, Oakland City Council

FROM: Councilmember Jean Quan

DATE: June 12, 2007

RE: A RESOLUTION to Establish the Oakland Register of Big Trees

SUMMARY

When the City removed the diseased “Champagne Oak” in Dimond Park —the city’s oldest Oak tree--in November, 2005, it became clear that the City had limited knowledge of the number and location of our oldest trees. The Resolution proposes establishing an Oakland Register of Big Trees to identify the largest specimen of native and naturalized tree species in the City of Oakland, similar to the National Register of Big Trees and the California Register of Big Trees. The Register would be purely for identification purposes only, and provides a way to increase public awareness of our heritage trees. It could also become part of a proposed Urban Forestry Management Plan now under discussion within the City.

FISCAL IMPACT

The Tree Services Division of Public Works estimates that it would take no more than one hour—including travel—to assess each tree that is nominated. While it is unclear how many nominations we might receive from this effort, we estimate approximately 100 per year. At \$62 per hour (inspector’s time and travel expenses), this comes to approximately \$6,200 a year, add in another \$380 for incidentals (setting up the web page, for example), and the project should run approximately \$6,600 a year.

BACKGROUND

Currently, the City of Oakland does not have a mechanism for identifying its largest and -- because size often equates with age-- presumably oldest trees. This is more than just a historical

nicety—it is a part of laying the groundwork for monitoring the health of our tree canopy, which is essential to the health and safety of our city on several fronts:

- It will help us identify the location of our largest and oldest trees, knowing that the City has thousands of aging trees in the hills that pose a tremendous threat to fire safety and electrical outages, when, due to failing health and age, they are more susceptible to falling down during winter storms or to burning in a major fire.
- It will contribute to the development of an Urban Forestry Master Plan that will guide the City in the maintenance of its trees, including removal and replacement with native, less fire-prone trees.
- It will specifically help us identify historic oaks, our City's namesake, and promote awareness of their proper care and preservation.
- It will raise public awareness of our tree heritage in a city that has consistently been ranked as one of the top 10 "green" cities in the nation, due to our large number of parks, open space and trees.

Registry Process

Both the National Register of Trees and the California Register of Trees use the same nomination process. These registers have been in existence since 1940 and have developed a standard, workable process. The process begins with public nomination of potential big trees. Anyone can nominate a tree, using a standard nomination form with the required information:

- Circumference in inches at 4 ½ feet above the ground
- Height in feet
- Crown spread in feet
- Common and scientific name
- Date measured and by whom
- Exact location (include map)
- Owner's name and address
- Nominator's name and address
- Any additional information
- Photograph, if possible.

The largest tree of each native and naturalized species will be posted on the Oakland Register Website so that it can be easily accessed by the public.

KEY ISSUES AND IMPACTS

SUSTAINABLE OPPORTUNITIES

Economic: This program will contribute to the general quality of life by documenting the location of the largest trees by species within the city, which supports the ongoing reputation of Oakland as one of the nation's "greenest" cities, with many parks and open spaces.

Environmental: The health of our tree canopy is linked to air quality and global warming reduction efforts. Knowing where our largest trees are located is a critical first step in the management of our urban forest.

Social Equity: This program will provide equal opportunity to citizens to nominate large trees in their neighborhoods.

DISABILITY AND SENIOR CITIZEN ACCESS

This program has no impact on Disability and Senior Citizen Access.

RECOMMENDATION

I request that the City Council pass this resolution to establish the Oakland Register of Big Trees.

Respectfully submitted,

Jean Quan
President Pro Tem
City Council, District 4

Prepared by: Sue Piper,
Policy Analyst
Councilmember Jean Quan,
City Council, District 4

CALIFORNIA REGISTER OF BIG TREES

Registry of Big Trees * Nominate a Big Tree

Home * Introduction * Volunteer * Related Sites



How to Nominate a Big Tree

Locating a tree to nominate is the first task in the nomination process. The easiest way to do this is to keep your eyes open when outside! Keep in mind that not all champions are giants. Look for both naturalized and native species, as well as shrub species. For example, the National Champion Pacific Rhododendron grows in Mendocino County, with a circumference of 20 inches, height of 33 feet and crown spread of 20 feet.

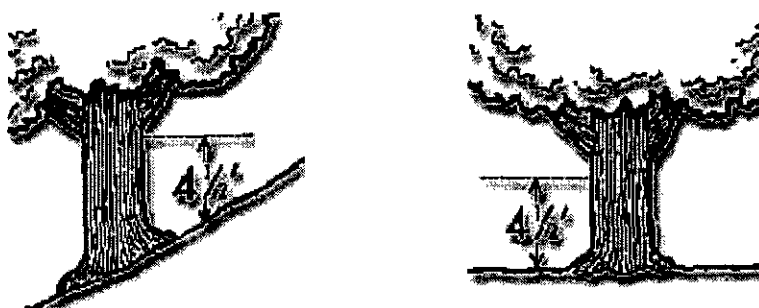
Searching for a specific tree species may be a good way to begin your big tree search. There are several books that can provide information to help with identification. Your local forester may also help. You will also need the current register to see how your tree measures up to the current champion. Keep in mind that current champs can be "dethroned" and that there are several species without a state champion. A nomination form must be filled out for each nominated tree. Information that is required includes:

- Circumference in inches at 4-1/2 feet above the ground
- Height in feet
- Crown spread in feet
- Common and scientific name
- Date measured and by whom
- Exact location (include map)
- Owner's name and address
- Nominator's name and address
- Any additional information
- Photograph, if possible.

Circumference

To measure the tree's circumference, measure around the tree at 4-1/2 feet above the ground on the tree's uphill side. If the tree forks below or bulges at 4-1/2 feet, measure the circumference where the tree reaches normal size or tapers below the 4-1/2 foot point. For accurate measurement, use a diameter tape or regular tape measure.

Attachment A - background materials



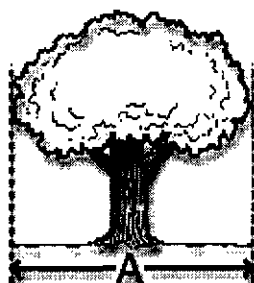
Height

Measure the height from the ground level to the highest point. You can measure height with an instrument such as a clinometer, hypsometer or abney. It is also possible to compare the tree to something of known height, such as a 25-foot building. American Forests also recommends the following method: Hold a straight stick at its base, vertically at arm's length. The stick's length above your hand should equal the distance from your hand to your eye. Walk back from the tree, staying level to the tree's base. Stop when the stick above your hand is the same length as the tree. Sight over your hand to the base of the tree, and sight over the stick to the top of the tree. Measure how far you've moved from the tree. That measurement, in feet, is the tree's height.

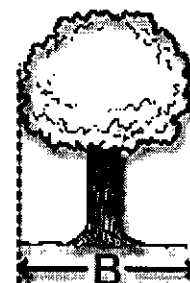
The Indiana Division of Forestry recommends another method of measuring tree height. First, temporarily mark a spot 4 feet from the base of the tree to serve as a sighting point. Back away from the tree, holding a yardstick vertically in front of you. It must be straight for an accurate measurement. Stop when the 4-foot section of the tree occupies exactly 1 inch of the yardstick. Sight to the base and the top of the tree, noting the number of inches the entire tree height occupies. Multiply that number by 4 feet to determine the total tree height.

Crown Spread

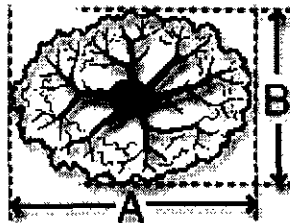
To find the tree's average crown spread, measure the widest point and the narrowest point of the crown. Add them together and divide by two to calculate the average crown spread.



Widest part of tree.



Narrowest part of tree.



Bottom view of tree. This view shows both narrowest and widest part of the tree.

Formula for computing the tree's average crown spread:

A + B = Total Points

Total Points / 2 = Average

The California Register of Big Trees uses American Forests' formula to determine whether a tree is a champion.

Trunk circumference in inches
+ Height in feet
+ 1/4 of the crown spread in feet
= Total Points

When two trees are within 10 points of each other, they are co-champions.

Nominate a Big Tree Now!

[Home](#) | [Introduction](#) | [Registry of Big Trees](#)
[How to Nominate a Big Tree](#) | [Volunteer](#)
[Related Sites](#) | [Webmaster Contact](#)

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CALIFORNIA REGISTRY OF BIG TREES



home

The California Register of Big Trees Nomination Form

You may "Copy & Paste" this form into an email, complete and send to Glenn Flamik at
Glenn.Flamik@fire.ca.gov

Traditional mail address information is located at the bottom of the form.

Cut Along this line.

Common Name: _____

Scientific Name: _____

Circumference (inches) at 4.5 feet: _____

Average Crown Spread (feet): _____

Total Height (feet): _____

Date Measured: _____

Measurer's name: _____

Exact Location of Tree: _____
(sketch map below)

County: _____

Describe Tree's Condition: _____

Owner's Address: _____

Nominator's Name: _____

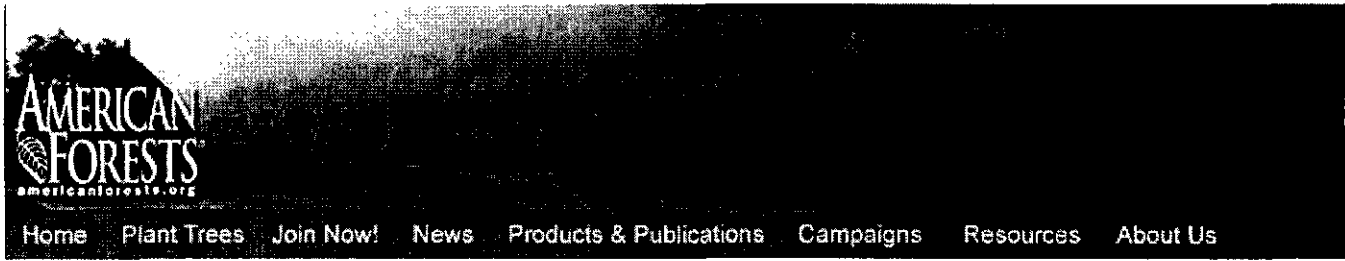
Nominator's Address: _____

Nominator's Phone Number: _____

Please sketch a map on the back of this page showing tree location and attach a photo of the tree.

Please return completed form to:
Email: Glenn.Flamik@fire.ca.gov

California Big Tree Coordinator
Glenn C. Flamik, Urban Forester
California Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94424-2460



Measuring Guide

[Register](#)

[Home](#) | [Resources](#) | [National Register of Big Trees](#) | [Measuring Guide](#)

- [Introduction](#)
- [The 2006-2007 Register](#)
- [Search the Register](#)
- [How to Measure a Big Tree](#)
- [Species Without Champs](#)
- [Hunting for Big Trees](#)
- [Big Tree Trivia](#)
- [Frequently Asked Questions](#)
- [Big Tree Coordinators](#)
- [State Registers](#)
- [Nominate a Tree](#)
- [Download Wallpaper](#)

Before nominating a tree, you need to know 3 measurements: (1) Trunk Circumference (measured in inches), (2) Vertical Tree Height (measured to the nearest foot), and (3) Average Crown Spread (measured to the nearest foot).

American Forests uses the following calculation to determine a tree's total points:

$$\text{Trunk Circumference} + \text{Height} + \frac{1}{4} \text{ Average Crown Spread} = \text{Total Points}$$

A nominee will replace a registered champion if it has more points. When two trees have scores that fall within 5 points of each other, they are listed as co-champions.

For measuring instructions, click on the links below:

- [Trunk Circumference](#)
- [Tree Height](#)
- [Average Crown Spread](#)



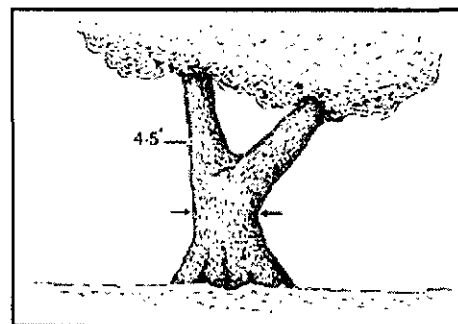
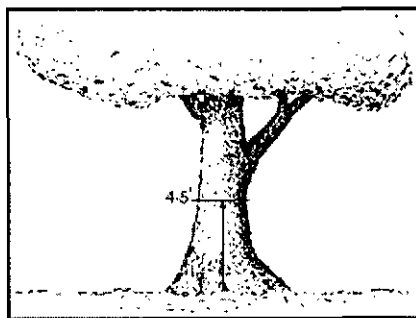
The National Champion Valley Oak, California

Resources

- [Resources](#)
- [National Register of Big Trees](#)
- [Urban Forests](#)
- [Forest Policy](#)
- [Sprawl Information](#)
- [Historic Tree Nursery](#)
- [Resources for Kids](#)
- [Links](#)

Trunk Circumference

Circumference is measured at 4 ½ feet above ground level in inches.



If the tree forks record in inches the smallest circumference between 4½ feet and the ground below the lowest fork excluding dead branches and **epicormic sprouts**. Also record the height above the ground line where measurement was taken, in inches.

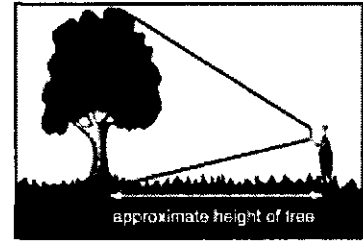
For more information on measuring trees on a slope, see our [FAQ page](#).

Tree Height

There are many tools that can be used to estimate the height of a tree including something as simple as a stick, but if at all possible height measurements should be

confirmed by an expert such as a local arborist, forester, or Big Tree Coordinator.

The vertical height of a tree is measured in feet. It can be measured using an Abney hand level, a hypsometer, a transit, a clinometer, a relascope, a laser or other instrument designed for that purpose.

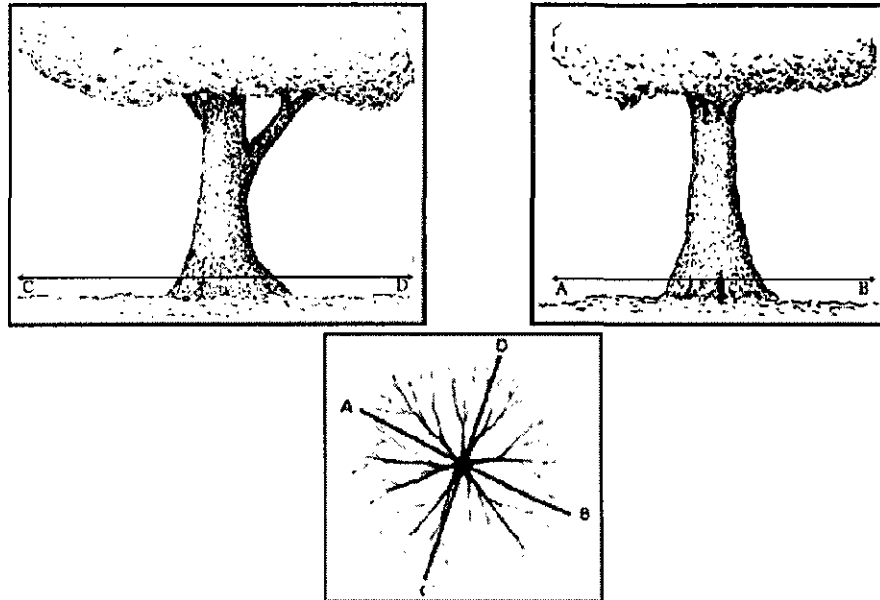


Alternatively, you can use the stick method:

Hold the stick at its base vertically, making certain that the length of the stick above your hand equals the distance from your hand to your eye. Staying on ground level (or on the same contour as the base of the tree), move away from the tree while sighting the trunk base above your hand. Stop when the top of the stick is level with the top of the tree. You should be looking over your hand at the base of the tree and, moving only your eyes, looking over the top of your stick at the top of your tree. Measure how far you are from the tree and that measurement - in feet - is the tree's height.

Average Crown Spread

Two measurements of the crown spread are taken and recorded (in feet), at right angles to one another. The first is the widest crown spread, which is the greatest distance between any two points along the drip line of the tree. (The drip line is the outline on the ground of the outermost leaves of the crown.) Once the widest spread has been found, turn the axis of measurement 90 degrees and find the crown spread. The two crown spreads are averaged together.



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AMERICAN FORESTS | PO BOX 2000 | Washington, DC 20013 | (202) 737-1944

CFC # 10632

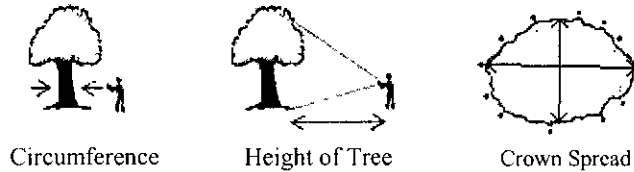
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For Administration Use Only
 Date Rec'd: _____
 Response: _____
 Tree State _____
 Data For Tree #: _____

National Register of Big Trees Nomination Form

Please complete the following information about the potential champion:

1. **Scientific Name** _____
2. **Common Name** _____
3. **Measurements** *(see notes at end and attached guide)*



- A. Circumference**..... _____ **inches**
 Record in inches the smallest circumference between 4½ feet and the ground below the lowest fork.

- B. Total Height**..... _____ **feet**
 Distance between the base of the trunk and topmost twig, measured with clinometer and tape.

- C. Crown Spread**..... _____ **feet**
 Average width of crown measured in two directions widest and the measurement at 90°.

- D. Total Points**..... _____ **points**
 Circumference (inches) + Total Height (feet) + ¼ Crown Spread (feet) = total points.

1. **Nominator** _____ **Date Measured** _____
Address _____
City _____ **State** _____ **Zip** _____
Email _____ **Phone** _____

2. **Location** of specimen (state, county, nearest town, legal description on quad sheet, including directions to reach site; attach map if possible.)

3. **Owner** _____
Address (if different from above) _____
City _____ **State** _____ **Zip** _____
Email _____ **Phone** _____

4. **Photograph(s) date taken** _____

5. **Measured by** _____
Address (if different from above) _____
City _____ **State** _____ **Zip** _____
Email _____ **Phone** _____

6. **Remarks** _____

How was the tree discovered _____

Condition of specimen _____

7. **Current date** _____

- Note 1. Definition of a tree:
"A tree is a woody plant having one erect perennial stem or trunk at least 3 inches in diameter at 4.5 feet above the ground, a more or less definitely formed crown of foliage, and a height of at least 13 feet." (USDA Agriculture Handbook No. 541)
- Note 2. If the tree forks below 4.5 feet, measure the largest circumference between 4.5' and the ground
- Note 3. Height measurements of trees up to about 25 feet all can be made most easily with a stiff carpenter's rule pushed vertically up through the crown.
- Note 4. For further measurement instructions please refer to our Big Trees measuring guide at: <http://www.americanforests.org/resources/bigtrees/measure.php>

Please mail to:

**National Register of Big Trees
American Forests
P.O. Box 2000
Washington, DC 20013-2000**

*Approved For and
Legality
Susan Mor*

OAKLAND CITY COUNCIL

RESOLUTION NO. _____ C.M.S.

INTRODUCED BY COUNCILMEMBER Jean Quan

RESOLUTION DIRECTING CREATION OF THE OAKLAND REGISTER OF BIG TREES

WHEREAS, trees contribute to the health and wellbeing of Oakland’s citizenry by providing shade and enhancement to the air quality throughout the city, and

WHEREAS, maintaining the tree canopy provides a shield against the effects of global warming by absorbing harmful greenhouse gases, and

WHEREAS, the thousands of trees that contribute to Oakland consistently being ranked among the top 10 “greenest” cities nationally by the Green Guide and Sustain Lane, are a critical part of the city’s urban forest legacy

WHEREAS, there is a correlation between the size of a tree and its age, and

WHEREAS, identifying the location of our largest and oldest trees will help the city better monitor, maintain and replace these heritage trees as part of a future urban forestry management plan, now therefore be it

RESOLVED: That the Oakland City Council hereby directs the establishment and promotion of the Oakland Register of Big Trees and its website

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 20____

PASSED BY THE FOLLOWING VOTE:

AYES – BROOKS, BRUNNER, CHANG, DE LA FUENTE, NADEL, QUAN, REID, WAN

NOES-

ABSENT-

ABSTENTION-

ATTEST: _____

LATONDA SIMMONS
City Clerk and Clerk of the Council
of the City of Oakland, California