

## **Tree Study Project**

Juanita Woodlands Park, Kirkland WA

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Finn Hill Neighborhood Alliance

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### I. Description:

To observe, monitor, and record the growth and health of native trees planted from January 2010, 2011 and 2012 in the Juanita Woodlands Park, Kirkland, WA.

### II. Background & Purpose:

In January 2010, 2011 and 2012, volunteers with Finn Hill Neighborhood Alliance (FHNA), with the assistance and supervision of King County Parks Dept, planted 4,500 tree seedlings throughout Juanita Woodlands Park. This included many different native species of trees, ranging from Big Leaf Maples, Oregon Ash, Paper Birch, Shore Pine, to Western Red Cedar and Sitka Spruce. These plantings complete the third year out of a five year re-forestation program to replace diseased trees, creating a healthier tree canopy, as well as increasing the diversity of tree species in the park. FHNA's 5 year goal of the reforestation program is to plant 11,000 trees by 2014.

My idea for a 'Tree Study Project' began in January 2011 while working as a volunteer to help plant 1800 trees in the west section of the Woodlands. Through the next spring and summer I continued to wonder about these new young trees—how many inches would these little trees grow in year? Would different species grow at different rates? What percentage would survive the first year, five years, ten years? How tall might these trees be in 20 years or 50 years? What are the challenges a little native tree must overcome in this urban forest environment of Juanita Woodlands Park to be a healthy tree? In September 2011, the "Tree Study Project" was launched! I selected two trees from each species, labeled them with an orange stake to identify them for the Tree Study. I measured their height and took a photo of each tree. Then each tree was re-measured in April 2012, July 2012, and September 2012. As of September 2012, a total of 17 trees were included in the Project. To see the history of tree height measurements, see the [Tree Height Measurement Log](#).

III. Tree Height Measurement Log (see attached spreadsheet “Exhibit 1”). The first height measurements in the Log were taken September 2011. Additional height measurements recorded in April, July, and September 2012. The Log includes the following data: 1) Identification of tree species, 2) Tree ID number, 3) Description of location of each tree, and 4) height measurements and date recorded. As of October 2012, height measurements were recorded on the following dates:

1. Sept 2011
2. April 2012
3. July 2012
4. Sept 2012
5. (future recordings!....)

Photo Journal-Tree Study Project. Photo web albums document the growth progress of each tree in the Project, as each date measured. Click the photo album “LOG” link to see that tree’s progress as of Sept 2011, April, July & Sept 2012 (although, regrettably, I am unable to locate some of the photos—some trees only have 2 or 3 photos out of the 4 total).

IV. Photos--Tree Study Project (Jan 2010 planting-west Woodlands) see “Exhibit 2”

- |                         |  |
|-------------------------|--|
| 1. Big Leaf Maple #1    | <a href="#"><u>LOG:BLM1-JW-west-planted 2010</u></a> |
| 2. Big Leaf Maple #2    | <a href="#"><u>LOG:BLM2-JW-west-planted 2010</u></a> |
| 3. Oregon Ash #1        | <a href="#"><u>LOG:OA1-JW-west-planted 2010</u></a>  |
| 4. Oregon Ash #2        | <a href="#"><u>LOG:OA2-JW-west-planted 2010</u></a>  |
| 5. Sitka Spruce #1      | <a href="#"><u>LOG:SS1-JW-west-planted 2010</u></a>  |
| 6. Western Red Cedar #1 | <a href="#"><u>LOG:WRC1-JW-west-planted 2010</u></a> |
| 7. Western Red Cedar #2 | <a href="#"><u>LOG:WRC2-JW-west-planted 2010</u></a> |
| 8. Sitka Spruce #2      | <a href="#"><u>LOG:SS2-JW-west-planted 2010</u></a>  |

V. Photos--Tree Study Project (Jan 2011 planting-west Woodlands)—see “Exhibit 3”

- |                    |  |
|--------------------|--|
| 9. Shore Pine #1   | <a href="#"><u>LOG:SP1-JW-west-planted 2011</u></a>          |
| 10. Paper Birch #1 | <a href="#"><u>LOG:PB1-JW-west-planted 2011</u></a>          |
| 11. Paper Birch #2 | <a href="#"><u>LOG:PB2-JW-west-planted 2011</u></a>          |
| 12. Shore Pine #2  | <a href="#"><u>LOG:SP2-JW-west-planted 2011</u></a>          |
| 13. Oregon Ash #3  | missing <a href="#"><u>LOG: OA3 (cannot find photos)</u></a> |

VI. Photos—Tree Study Project (Jan 2012 planting)-east Woodlands--“Exhibit 4”

- 14. Shore Pine #3 [LOG:SP3-JW-east-planted 2012](#)
- 15. Shore Pine #4 missing [LOG:SP4 \(cannot find photos\)](#)
- 16. Western Red Cedar #3 [LOG:WRC3-JW-east-planted 2012](#)
- 17. Western Red Cedar #4 [LOG:WRC4-JW-east-planted 2012](#)

VII. [Map—Tree Study Project \(Jan 2010 & 2011 planting-west Woodlands\)](#)—see “Exhibit 5”

VIII. Immediate Applications of Tree Study Project in the School Curriculum:

Objective: For students to participate in the [Tree Study Project](#) by observing, monitoring, and recording the growth of trees in the Tree Study Project.

Description: Field study, led by the students’ teacher, could include trips to Juanita Woodlands Park every 3 months, for students to make & record observations, take height measurements, record height into the [Tree Height Measurement Log](#), and photograph each tree. Back in the classroom, students could create a chart or graph for each tree from the data they collected in the park. A photo album could also be created of each tree, along with the height and the number of inches growth between measurements. Additional studies could materialize out of this data, such as studies in different rates of growth between different tree species. At the end of the school year, the student’s recorded data, completed charts and photo albums could be turned in to FHNA to be passed on to the next year’s students the following year. The Study Project could continue indefinitely as the trees mature.

IX. Long range visions and applications for the Tree Study Project: Looking into the future, if the Tree Study Project can be continued for 10 or 20 years, there are additional school projects that could be developed with the historical data collected from the Tree Study, such as:

1. Future interpretive exhibit(s) in Juanita Woodlands Park:
  - a. A plaque placed at base of selected trees from the Tree Study Project-- identifying the species, planting date and height of tree at 1 year, 10 years, 20 years, etc.

- b. A Juanita Woodlands interpretive kiosk at a trail entrance--a trail map showing the location of selected trees from the Tree Study Project, along with species identification, planting date, and a chart graph displaying the trees height at 1 year, 10 years, 20 years, etc.
2. Future interpretive exhibit for an indoor display. The historical data from the Tree Study Project, collected over many years time, could be appropriate as an interpretive exhibit somewhere in a public indoor facility in our Finn Hill Neighborhood. Although such a facility might not exist today, it may in the future! Ellen Haas of FHNA, envisions a 'Finn Hill Nature Center'. In the future, when Ellen's dream is realized, the Nature Center could have many exhibits. One of these exhibits could be the history, data, and documentation from the Juanita Woodlands Tree Study Project, gathered over many years time. The exhibit could be open to the public, showing map of the Juanita Woodlands Park, the location of selected trees from the Tree Study Project, along with history of planting date, charts of height measurements and photos documenting growth and life of the trees.

For more information about the Juanita Woodlands Tree Study Project, contact:

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