



2009 Young Tree Care Survey Report

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Because we believe trees are a critical element of a livable, sustainable urban environment, Canopy's mission is to educate, inspire, and engage residents, businesses, and government agencies to protect and enhance local urban forests.

1. Introduction:

Canopy is a nonprofit organization working to promote a healthy urban forest by educating, inspiring and engaging the community in the stewardship of young and mature trees. The Young Tree Care Program was created to address these goals. The Young Tree Care Survey is a component of this program, and seeks both to educate homeowners on the proper care of young trees and to notify the City of Palo Alto of any problems with young street trees that need to be addressed. Young street trees are on the front line of our urban forest, must tolerate the harshest urban conditions and yet provide some of the greatest benefits to our city and residents.

The Young Tree Care survey takes place in the summer months and surveys all street trees planted in Palo Alto by the City and by Canopy in the past five planting seasons. The Canopy Young Tree Care Survey began as a pilot project in the summer of 2001 and expanded into a citywide program in 2002. At each address surveyed, information is left with homeowners on the proper care for young trees. Results from the survey are compiled and shared in a detailed report to the City's Public Works Department so they can take action on trees in need of care. Results of the survey will also be posted on Canopy's website, www.canopy.org.

2. Methodology:

The Young Tree Care Survey is a volunteer-based effort. This year we recruited 51 volunteers for our scheduled surveys. Over 250 volunteer hours were required to complete the survey. Our volunteers represented a broad cross-section of the community, including high school students, college students, retired community members and local community or corporate groups including Memry Corporation and Volunteers in Asia from Stanford University.

Canopy's youth employment program plays a key role in completing the survey. Our summer intern and youth employees (ages 16-19) were given leadership roles and teamed up as mentors with the younger student volunteers.

The City of Palo Alto Geographic Information System (GIS) was employed with TreeKeeper data to create route maps, info tables and print large-scale maps of all trees and routes. This step helps streamline volunteer survey time. The list of young street trees was downloaded from the City's TreeKeeper database into a spreadsheet and sent to City GIS specialists. A GIS layer was created with the trees marked by tree symbols and a large map was printed. Survey routes were hand-drawn on the large map with ~20 trees per route for a total of 53 routes.

Canopy's summer intern, Olga Singleton, worked with Marta Seone in the City's GIS dept. to draw and label polygons around the 20 trees of each

route and print individual route maps for all 53 routes. The polygons were also used to create tables with the address, location, tree species and date planted for the trees on each route.

The TreeKeeper data was also used to create pre-printed survey forms and personalized brochure labels for each route. The survey form divides the possible problems a tree may have into responsibilities of the homeowner and responsibilities of the City. These steps increase efficiency and reduce the possibility errors for our volunteer surveyors.

Our color “Young Tree Care” brochure with tips on watering and protecting young trees, information about the value of the urban forest and a personalized survey form to educate residents, was distributed to each residence surveyed. Volunteer surveyors completed brochures with survey information related to the young trees urgent needs and included notes to encourage resident attention to the trees. The personalized brochure was left at the door of each residence and additional blank brochures were handed out to residents that approached volunteers with questions about trees or the survey.

Each survey team was provided with a clipboard, red pen, individual map of their route, a table with tree info details, pre-printed survey forms for the trees on the route, pre-labeled brochures for each residence and soil moisture probes. Volunteers were trained, divided into teams and assigned routes that could be completed within a 2-3 hour span. A total of 905 trees were surveyed. Half of the surveys were completed during our scheduled survey dates of July 15, July 18 and August 11th. Experienced survey volunteers and youth staff completed the remaining surveys in teams throughout the summer. All surveys were completed between mid-July and early September.

Volunteers performed first care on young street trees again this year. In addition to marking the survey form, whenever possible, volunteers weeded around the base, removed suckers and cleared the root flare of young trees. This step gives volunteers a chance to do some hands-on tree care, contributes immediately to the health of the trees and by spending a little extra time at some trees, saves the city from a large cumulative maintenance project.

The “Is Your Tree Thirsty?” campaign accompanied the survey, including our 20’ banner posted prominently throughout the summer at El Camino Field and 2 watering reminder postcards sent to residents. We received multiple comments and questions regarding our banner with web address and link to summer watering and tree care tips. The banner was highly visible to residents of Palo Alto, Stanford, Menlo Park and all travelers along the busy El Camino roadway or shoppers at the Stanford Shopping Center. Postcards were sent in June and September, before and after the summer survey, to all addresses with young street trees. Postcards also contain information on proper watering needs and our web address for more information.

3. Significant Results

The two most frequent problems that volunteers found with young street trees were again “needs water” and “needs mulch”. The other three most common issues were “stakes need to be removed”, “lawn or other competing plants” and “needs weeding”. Below in Table 1 is the survey data with the number of trees reported for each problem (Note: Many trees exhibited more than one problem.)

Table 1: Canopy 2009 Young Tree Care Survey – Problems reported

Total trees surveyed	905
Needs water	314
Stakes need to be removed	165
Lawn or other competing plants	116
Suckers need to be pruned	57
Needs weeding	138
Root flare no longer visible	47
Needs mulch	315
Needs basin re-building	51
Needs pruning	22
Needs to be re-staked	17
Tree is dead or dying	5
Mechanical damage or injury	31
Needs to be re-strapped	17

A listing of trees and their corresponding problems has been provided separately to the Public Works Department so that the department may schedule maintenance accordingly and attend to the trees most in need. Table 2 (following on page 5) compares this year’s results to previous years. For each year, both the total number of trees and the percentage with each problem is shown.

4. Evaluation

The total number of young street trees has decreased even further than last year and is 287 trees lower since the 2006 survey. This indicates that either lower numbers of public trees have been planted during the last 5 years or there has been a high rate of young tree mortality.

“Needs Water” dropped significantly since last year’s survey from 43% to 35%! Lack of water has always been the biggest challenge facing young trees in the urban environment. Residents often don’t realize that the city counts on them to water street trees at their residence. Canopy’s “Thirsty Tree” postcards, the tree care brochure left on the homeowner’s porch during the survey and the “Is

Your Tree Thirsty?” banner are raising awareness about tree care and we are seeing the results. Even during another year of drought water needs for young trees have started to come down. Surveyors reported increased care and irrigation of young trees on their routes. Canopy’s communication efforts have proved to be essential for the preservation and success of the young street trees.

Table 2: Canopy 2008 Young Tree Care Survey – Problems reported

	2003	%	2004	%	2005	%	2006	%	2008	%	2009	%
Trees Surveyed	883		1,216		1,059		1,192		932		905	
Needs water	334	38%	416	34%	486	46%	324	27%	399	43%	314	35%
Stakes need to be removed	301	34%	301	25%	314	30%	240	20%	165	18%	165	18%
Lawn or other competing plants	111	13%	183	15%	218	21%	177	15%	136	15%	116	13%
Needs mulch	31	4%	115	9%	195	18%	56	5%	264	28%	315	35%
Root flare no longer visible	43	5%	114	9%	166	16%	95	8%	48	5%	47	5%
Needs basin re-building	67	8%	107	9%	148	14%	56	5%	35	4%	51	6%
Needs weeding	37	4%	97	8%	111	10%	107	9%	122	13%	138	15%
Suckers need to be pruned	80	9%	90	7%	132	12%	110	9%	84	9%	57	6%
Needs pruning	93	11%	48	4%	50	5%	37	3%	21	2%	22	2%
Needs to be re-staked	44	5%	37	3%	32	3%	37	3%	27	3%	22	2%
Tree is dead or dying	12	1%	34	3%	24	2%	27	2%	12	1%	5	1%
Needs to be re-strapped	20	2%	28	2%	43	4%	18	2%	13	1%	17	2%
Mechanical damage or injury	16	2%	27	2%	21	2%	19	2%	17	2%	31	3%

Weeded Today									41	4%	49	5%
Suckers Pruned Today									63	7%	43	5%
Trees Look Good/Healthy									334	36%	388	43%

The survey showed a rise in the number of trees that “need mulch” from 28%-35% from last year, a 30% rise since 2006. This difference may be due to the awareness among our volunteers of the importance of mulch. We hope that many more street trees will be mulched to improve retention of soil moisture.

The percentages of trees that need to have stakes removed, re-staked/re-strapped, structural pruning and also dead or dying trees remain low. The information provided by Canopy to the city’s tree crews through the volunteer survey and the increased diligence of Palo Alto’s Tree Dept. have greatly improved the maintenance of street trees. This improved care will help encourage strong tree trunks and better form in the young trees and increase the beauty of our city streets. The tree care brochure and general community awareness also encourages residents to take a proactive approach in the care of their street trees. We emphasize stake removal, especially on trees that were planted in 2004 and will not be on the survey next year. Stakes/ties may cause injury to established trees and removal adds to the aesthetic of our city streets.

43% of trees received positive comments in this year’s survey, an increase above 36% in 2008. Canopy has started tracking when trees look “good, great or healthy” in the survey comments. Many trees looked healthy even if soil moisture was low at the time of the survey. We also had verbal feedback from returning survey volunteers that the young street trees were looking better than ever.

Canopy continues to look at ways to improve the tree care survey. We will continue to work with the Tree Dept to make sure we are meeting their needs. We hope to organize follow-up volunteer work events to assist the City with some tree maintenance, particularly mulching young trees. We will continue to work on improving and streamlining the Young Tree Care Survey.

5. Conclusion

The health and vitality of the City of Palo Alto depends on maintaining a healthy urban forest. Our urban forest canopy draws people to our community and contributes to our quality of life. Trees are looking better than ever according to the increased number of positive comments by tree surveyors. This is another testament to the awareness that has increased as a result of the survey and resident outreach, as well as the City’s increased attention to street trees. Canopy’s Young Tree Care Survey involves the community to make sure that young trees survive and our urban forest will be maintained into the future. This has become of increasing importance as our street tree canopy matures, annual removals rise beyond annual plantings and our city tree crews are stretched thin. Educational outreach, which brings increased awareness and appreciation of our city trees, is a very important component of this program and we are seeing the results. Understanding the

biggest problems that we face with our city trees through the Young Tree Care Survey will help us shape our programs in the future to better meet tree needs.