



2014 Young Tree Care Survey Report

Compiled by Michael Hawkins, Program Director

Canopy's Mission:

Because 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.

Contents:

1: Introduction

2: Survey Results

3: Evaluation

4: Methodology

5: Conclusions

Attached:

Full City Report: For the City of Palo Alto Urban Forestry Section. Including health condition and care recommendations for all 556 trees surveyed

Full Red Flag Report: Already sent in batches as individual surveys were finished.

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 to educate homeowners on the proper care of young trees, to notify the City of Palo Alto of any problems with young street trees that need to be addressed, and to engage community volunteers in the process. Young street trees are on the front line of our urban forest and must tolerate the harshest urban conditions. Once established they provide some of the greatest benefits to our city and residents.

The Canopy Young Tree Care Survey takes place in the summer months and surveys most street trees planted in Palo Alto in the past five planting seasons. At each site where trees are surveyed, information is left with homeowners or business owners on proper care for young trees. Also included is the species name, planting date, and current information collected about their particular tree(s). Results from the survey are compiled and shared in a detailed report to the City's Public Works Urban Forestry Section to alert the staff about trees in need of care. Results of the survey are also posted on Canopy's website, www.canopy.org.

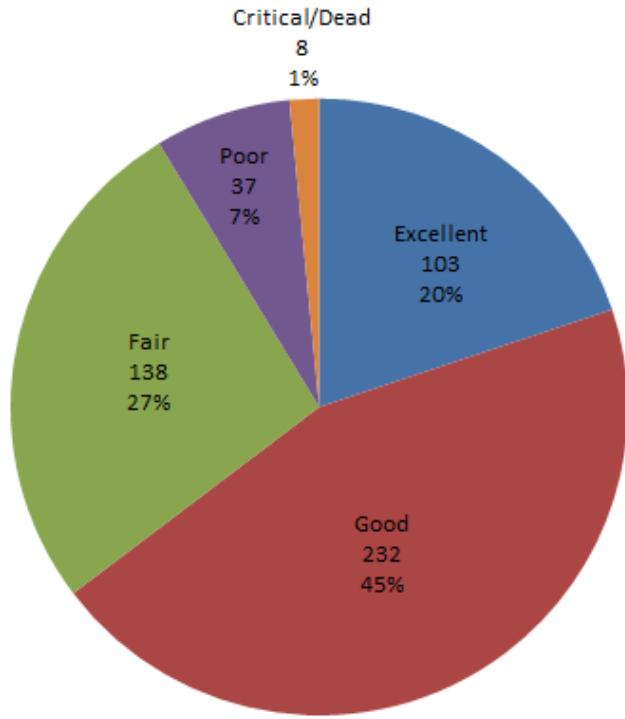
2. Survey Results

On the next page is a table summarizing the results of the survey. Each of the questions from the survey are on the left with the total number of trees for which the answer was yes and percentage of the total on the far right. In the middle are the percentages from the previous 5 surveys for comparison. Following that are several graphs added this year for easier visualization of important result. An explanation and evaluation of many of the individual questions follows.

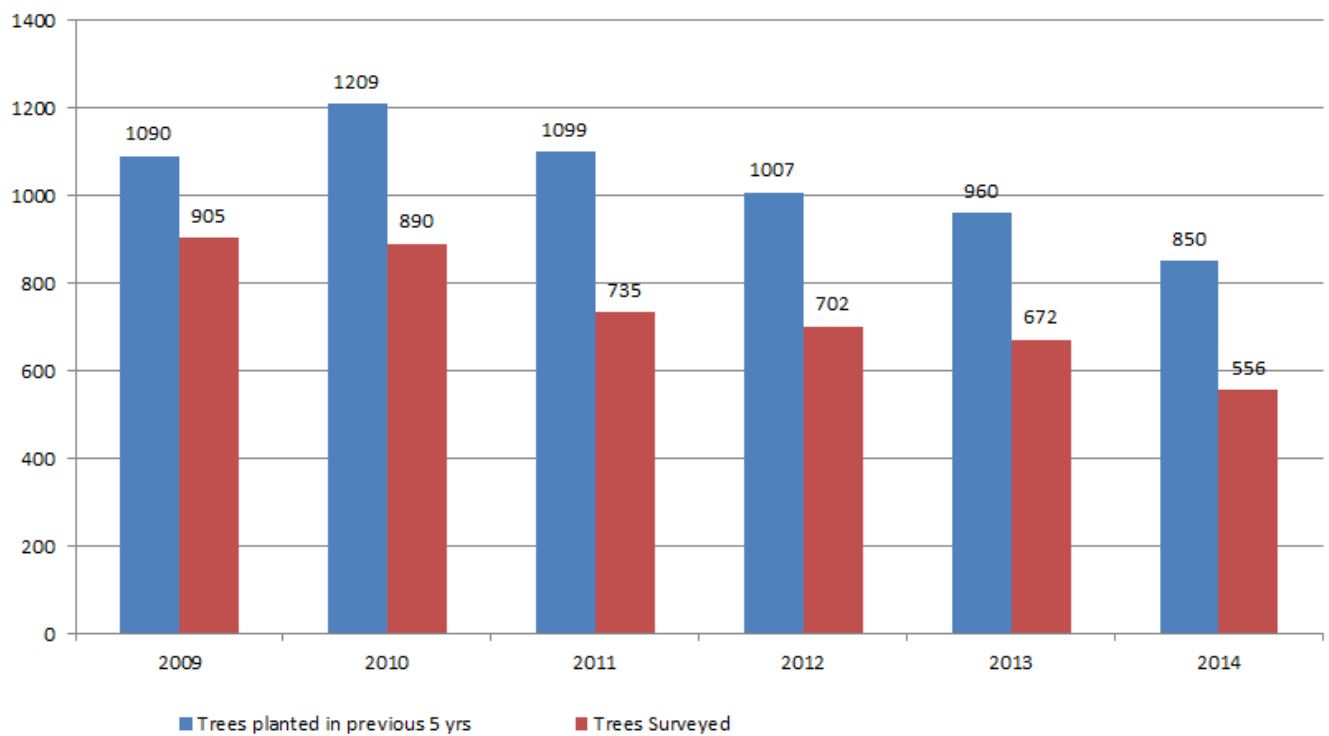
Canopy 2014 Young Tree Care Survey

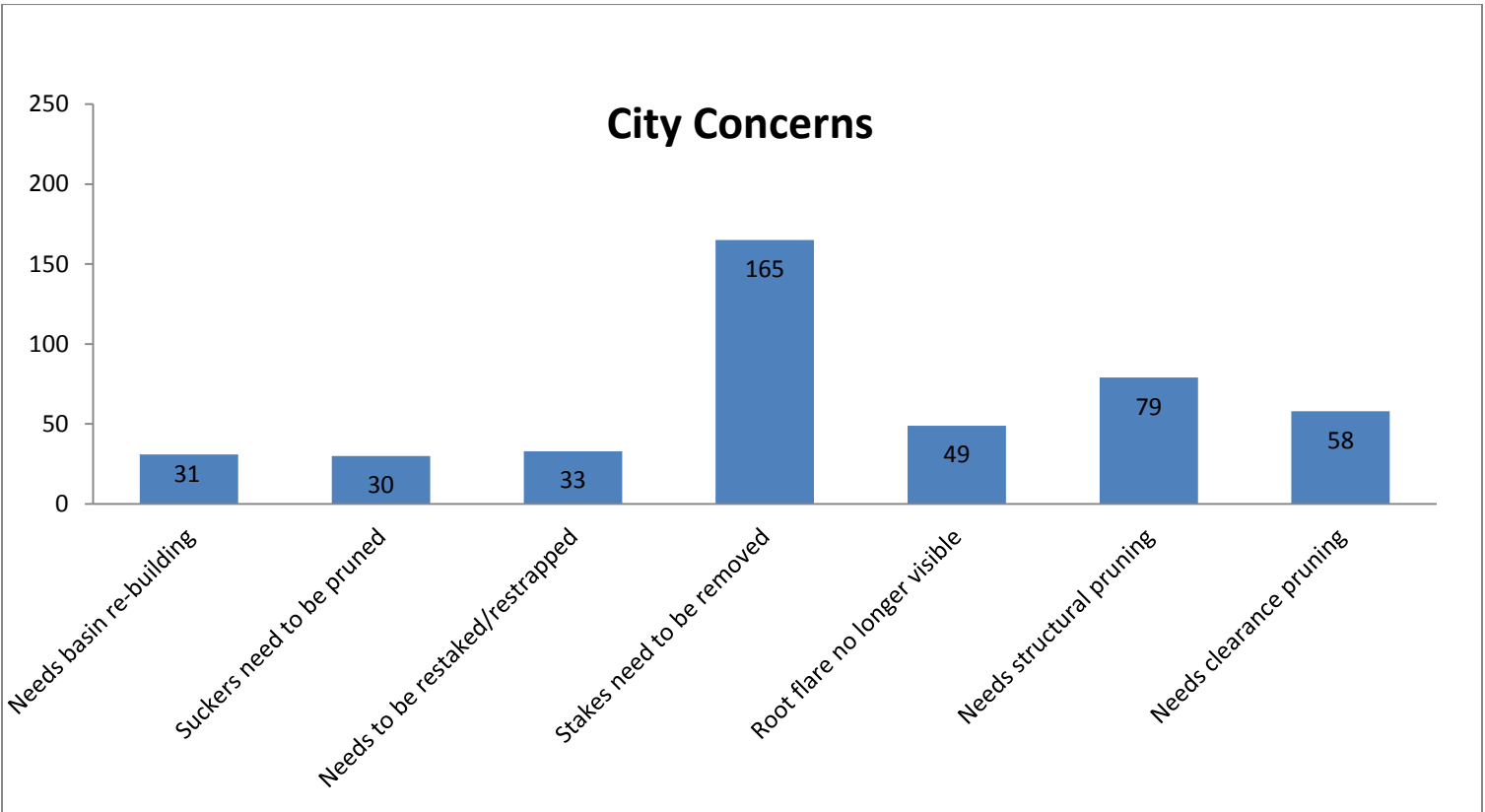
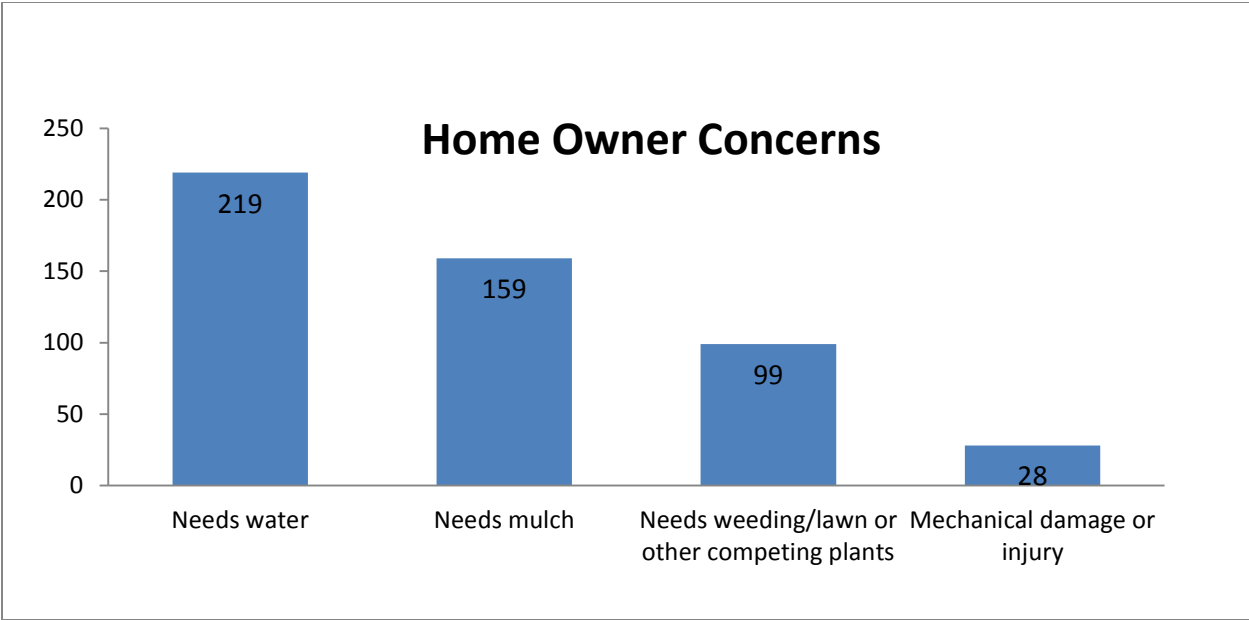
General						<u>2014</u>	
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>#</u>	<u>%</u>
Trees Surveyed	905	890	735	702	672	556	NA
Trees planted in previous 5 yrs	1090	1209	1099	1007	960	850	NA
Health Rating							
Excellent	-	-	-	-	-	103	20%
Good	-	-	-	-	-	232	45%
Fair	-	-	-	-	-	138	27%
Poor	-	-	-	-	-	37	7%
Critical/Dead	1%	1%	1%	1%	2%	8	1%
“Red Flag” *	-	-	-	19%*	10%*	35	6%
Tree Not Found	-	1%	0%	2%	1%	18	3%
Health Rating of 3	-	-	-	64%	55%	-	-
Health Rating of 2	-	-	-	21%	35%	-	-
Health Rating of 1	-	-	-	6%	8%	-	-
Health Rating of 0	-	-	-	1%	2%	-	-
Home Owner Concerns	2009	2010	2011	2012	2013		
Needs water	35%	41%	32%	43%	46%	219	39%
Needs mulch	35%	26%	24%	40%	32%	159	29%
Needs weeding/lawn or other competing plants	-	-	-	-	-	99	18%
Needs weeding	15%	12%	12%	12%	11%	-	-
Lawn or other competing plants	13%	15%	16%	18%	16%	-	-
Weeded Today	5%	2%	4%	6%	5%	13	2%
Mechanical damage or injury	3%	1%	4%	4%	5%	28	5%
City Concerns	2009	2010	2011	2012	2013		
Needs basin re-building	6%	10%	10%	22%	21%	31	6%
Suckers need to be pruned	6%	7%	2%	5%	7%	30	5%
Suckers Pruned Today	5%	1%	1%	5%	9%	21	4%
Needs to be restaked/restrapped	-	-	-	10%	9%	33	6%
Stakes need to be removed	18%	19%	8%	29%	24%	165	30%
Root flare no longer visible	5%	5%	9%	6%	5%	49	9%
Root flare cleared today	3%	1%	2%	2%	5%	2	0%
Needs pruning (major)	2%	3%	3%	6%	4%	-	-
Needs structural pruning	-	-	-	-	-	79	14%
Needs clearance pruning	-	-	-	-	-	58	10%

* Calculated in a different way before 2014



2014 Tree Health Ratings





3. Evaluation

This is the fifth year that Program Director Michael Hawkins has led the survey effort and trainings. Consistency of message, a new video available for volunteers to view prior to conducting a survey, and other minor tweaks, are resulting in a more and more reliable and useful survey. Below is an analysis of some of the more interesting findings in this year’s survey.

We surveyed a total of 556 trees this year. It should be noted that not every street tree planted in the last 5 years is included in the survey. Approximate addresses, for example in front of parks, and trees planted in medians, are not surveyed. The “Trees planted in the previous 5 years” line in the spreadsheet and bar graph above indicates the total number of all public trees planted by the city in the previous 5 years as found in TreeKeeper, the City’s tree inventory database. **At 850, the number of trees planted in the last 5 years has been continually on the decline since 2010.** Canopy is working closely with the City to help plant more public trees, particularly in South Palo Alto to help address this issue.

At the request of the City’s Urban Forester, Walter Passmore, surveyors were asked to measure the diameter at standard height (DSH) of all trees being surveyed for the 5th, and final time. While no evaluation is needed, this information is included in the full report printout for the City and should be added to TreeKeeper.

“Health Rating” was added as a criterion in 2012. This year we have switched from a 0 to 3 scale to a value scale of “Dead, critical, poor, fair, good, and excellent.” While comparisons are not possible between this year and the previous two years, we believe switching to a scale already in use by the City, with a larger gradient and written titles, instead of a number system, will be valuable for the future. Clearly written definitions of each value are distributed and reviewed at each survey training. **The distribution of ratings this year is approximately what would be expected with 45% receiving a rating of “Good, 27% “Fair”, 20% “Excellent”, 7% Fair, and only 1% “Critical” or dead.**

“Red Flag” This category was also added in 2012 and has also been adjusted this year. Previously, once all of the survey data was compiled, one individual would scan each survey’s health ratings, recommended tree care, and notes looking for any tree that needed immediate attention and labeled those trees as “Red Flags.” This year we decided to give that power, and similar instructions, to the individual surveyors who have the tree in front of them. As individual surveys came in batches of Red Flag reports were sent to the City so that immediate care could be administered. Additionally, a separate report of just these trees will be printed and delivered with this summary report to the City of Palo Alto. **35 tree (6%) were labeled as Red Flags by surveyors.**

“Needs Water” remained high at 39%, though a drop from 46% last year is quite encouraging. 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 adjacent to their residence. Canopy’s “Is Your Thirsty Tree” campaign raises awareness about tree care and specifically the need to water during the first few summers following planting. The campaign includes postcards mailed to residents, the tree care brochure left on the homeowner’s porch during the survey and the “Is Your Tree Thirsty?” banner. With the exceptionally dry year we’ve had, you might expect an increase in thirsty young trees; however, my theory is that increased awareness due to the drought has led to more people remembering to water their young trees. Nonetheless, 39% is still a high percentage and we would like to see even more people water their young trees on a regular basis through the dry months.

“Needs mulch” also remained high at 29%. Using mulch effectively is one of the best ways to conserve water in the landscape and has many other benefits for the tree. Canopy will continue to work with residents to replenish mulch on the street trees adjacent to their homes as well as on their own trees.

“Needs basin re-building” dropped significantly to 6% from 21%. My hope is that this is due to increased attention to this issue by the Urban Forestry section and not to any potential variation in

emphasis during the survey trainings. Watering basins are most important during the first dry season after planting. It is advisable to rebuild any basins that are not intact early in the spring or summer following planting.

“Stakes need to be removed” remained very high and increased from 24% to 30%. Stakes should be removed when no longer needed. Damage to branches and trunks that have outgrown stakes and straps can be detrimental to future growth and lead to wounds that can be vectors for disease and pest issues. Canopy recommends a concerted effort to remove unneeded stakes from street and park trees.

“Root flare no longer visible increased from 5% to 9%. While this is a small percentage, this is a very serious problem. The roots of trees that are planted too low do not get enough oxygen, and the tree may very well not survive. If the volunteer surveyors are correct in their assessment, this is almost 10% of recently planted trees that may need to be replanted.

“Needs structural pruning” and “Needs clearance pruning” were added this year. In previous years the category was “Needs major pruning, broken limb etc.” I never found this to be a useful category and notes relating to pruning supplemented many surveys. Young trees in the city are in dire need of both structural and clearance pruning and attending to this need will drastically reduce the need for much more costly tree work later in the tree’s lifespan. **“Needs structural pruning” came in at 14% and “Needs clearance pruning came in at 10%.** I think many volunteers (rightly) did not feel confident in their ability to identify trees in need of structural pruning, though for those that did, this information should be helpful for the Urban Forestry section.

Canopy continues to look at ways to improve the tree care survey. This year we used the recently produced Young Tree Care Survey Video to train volunteers uniformly. We will continue to work with the City of Palo Alto's Urban Forestry Division to make sure we are meeting their needs. We will continue to work on improving and streamlining the Young Tree Care Survey. Any comments or suggestions by Surveyors, City Staff, or the community at large are much appreciated. Please contact me at michael@canopy.org.

4. Methodology:

The Young Tree Care Survey is a volunteer-based effort. This year we recruited **66 volunteers for our surveys who together logged over 206 hours.** Our volunteers represent a broad cross-section of the community, including high school students, college students, retired community members and local community groups. This year we were thrilled to again engage folks involved in the planning of the California Avenue re-planting in the surveying and care of those trees. Actively involving residents in the care and enjoyment of Palo Alto’s Urban Forest is a major part of our mission and the Annual Young Tree Care Survey is a major element in reaching this goal.

Canopy’s YTCS Intern, Elizabeth Greenfield, with help from Canopy staff and City of Palo Alto Summer Intern, Conrad Wysocki used the city's street tree inventory (TreeKeeper) to create route maps, info tables and to 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. This year, since resources at the City were limited we used ArcGIS software to produce survey route maps, geolocate each tree, and divide trees into geographic areas or “routes.”

Volunteers distributed our “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. Volunteer surveyors complete 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 the survey, city trees, and Canopy.

Each survey team was equipped with a clipboard, red pen, individual map of their route, a list of trees on their route, pre-printed survey forms, pre-labeled brochures for each residence or business, a soil moisture probe, diameter measuring tape, gloves, and a safety vest. Volunteers were trained, divided into teams and assigned routes that could be completed within a 2-3 hour span. Many surveys were completed during one of 3 scheduled survey trainings Other volunteers were recruited and instructed to watch our 6-minute training video before conducting surveys. Most of the surveys were completed in the months of July and August, with a handful finished in 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 tree base, removed suckers and cleared the root flare of young trees. This step gives volunteers a chance to do some basic hands-on tree care, contributes immediately to the health of the trees and spares the City of a large cumulative maintenance project.

Our “Is Your Tree Thirsty?” campaign accompanies the survey each year. Large banners reading “Is Your Tree Thirsty” are prominently displayed at the train overpasses of University Ave and Embarcadero Rd. As well as on a prominent location on El Camino Real near Sand Hill Road. We also sent a watering reminder postcard to each residence where a tree had been planted in the last 5 years. Postcards contain information on proper watering practice and our web address for more information.

5. Conclusion

The health and vitality of the City of Palo Alto as a whole depends on maintaining a healthy urban forest. Our urban forest draws people to our community and contributes to our quality of life. 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 increasingly important as our urban forest matures. Annual removals, as a necessity, have risen beyond annual plantings and our city tree crews are stretched thin. Educational outreach, brings increased awareness and appreciation of our city trees. Understanding the biggest problems we face with our city trees through the Young Tree Care Survey will help us shape our programs in the future to meet tree needs better. If you have any questions or recommendations on how the Survey can be improved, please send an email to Canopy Program Director Michael Hawkins: michael@canopy.org.

An electronic listing of trees and their corresponding problems has been provided separately to the Urban Forest Division. As well as printed and electronic copies of the separate “Red Flag” report and trees surveyed that were not listed on TreeKeeper. This has been done in hopes that the department will schedule maintenance accordingly and attend to the trees most in need.