CREATION OF A PAMPHLET ON YOUNG TREE CARE

by

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ABSTRACT

A GUIDE TO YOUNG TREE CARE IN THE CITY OF CARPINTERIA

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THE PURPOSE OF THIS PROJECT WAS TO CREATE A PAMPHLET TO INFORM THE CITIZENS OF CARPINTERIA ABOUT THE PROPER CARE OF YOUNG TREES. THE INFORMATION FOR CARE OF YOUNG TREES WAS OBTAINED THROUGH BOOKS, PROFESSIONAL ARBORISTS INTERVIEWS, AND OTHER TREE PUBLICATIONS. A TRI-FOLD PAMPHLET WAS ASSEMBLED WITH THIS INFORMATION AND PRESENTED TO THE TREE ADVISORY BOARD, AND TO THE CITY OF CARPINTERIA PUBLIC WORKS DIRECTOR, CHARLIE EBELING. THE PUBLIC WORKS DIRECTOR AND CITY STAFF MADE SUGGESTIONS TO FORMAT THIS INFORMATION AND MAKE IT MORE USEFUL TO ITS CITIZENS. THE CITY AND TREE ADVISORY BOARD RECEIVED A FINAL DRAFT. THEY WILL SOON BE UPDATING THEIR STREET TREE MANAGEMENT PLAN THAT WILL INCLUDE ONE KEY COMPONENT OF COMMUNITY OUTREACH TO HELP INVOLVE RESIDENTS WITH PROPER TREE MAINTENANCE. THEY BOTH AGREED THAT THIS PAMPHLET CONTAINED GREAT INFORMATION AND WILL BE USED AS AN EXAMPLE FOR FUTURE PUBLIC INFORMATIONAL PIECES.
ACKNOWLEDGMENT

The author would like to thank God first for the opportunity to create this pamphlet for his senior project. He would like to express his sincere appreciation to his parents Ernie and Sally Sanchez, wife Polly, children Anthony, Daniel and Monique for their love and encouragement along the way, to whom this pamphlet is dedicated.

A word of thanks is extended to Susie Panizzon and Gary Elkins for their help in editing and formatting of the pamphlet. I would also like to thank Mike Zohns and Peter Winn for their advice and information that helped create this pamphlet for this study.

JS
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INTRODUCTION

The City of Carpinteria is a beautiful valley nestled between the mountains and the Pacific Ocean. The city’s terrain allows for housing, industrial and agricultural needs. Most of these areas contain a wide variety of valuable trees.

Trees are a very important part of any landscape. They have become the oldest and largest visual creations of many gardens throughout the United States. A tree helps add color, shade and character to the landscape, not to mention increase property value.

In order for a tree to have a longer, more productive life, proper tree care is essential. Without proper planting and maintenance, trees can become hazardous problems for themselves and for the people around them.

Even though there are many books concerning proper tree care, the United States today still has a large number of tree problems due to the fact that not enough people are informed about correct tree maintenance.

The primary purpose of the senior project is to examine this lack of knowledge, and to produce a tri-fold pamphlet which will serve to fill this void in tree awareness. This pamphlet has been written for the residents of Carpinteria to help educate and encourage them to use proper tree care. The important techniques selected for this pamphlet can help aid in the prevention of tree problems before they start, thus giving the tree a longer and healthier life.
In creating this pamphlet it was important to drive around the neighborhoods to see how trees were being cared for. Some observations that were made include trees that were planted in the wrong areas, creating problems either by their roots or planting too close to structures. Other trees were either planted too high or too shallow making the trees stressed out and unhealthy. Some of the trees still had original nursery stakes and others were not properly tied. There were other trees that had been improperly pruned.

An interview with a professional Arborist, Peter Winn, was taken to describe and discuss these issues. He said that good health of the tree starts from the very beginning at planting. His advice was to put together a pamphlet that would just deal with planting for homeowners. When the tree gets too big, the homeowner should call for a professional so they will not bring harm to themselves, or to the tree. With these suggestions in mind, planting, staking, watering, and pruning would be the main points of this pamphlet.

When planting a tree it is important to know the reason and the growth habits of that particular tree. Many of the trees observed were planted too close to houses and concrete structures causing damage to the foundations and uplifting concrete. Most roots grow in the top three feet, with the majority of the absorbing roots being within the top six inches. Surface roots can be increased depending if the soil is too wet or too dry (Zimmermann and Brown 1971). Some insects can pollinate and others can seriously cause damage by transmitting serious plant and animal disease pathogens (Johnson and Lyon 1976).
Knowing this information beforehand can help eliminate a problem before it starts.

Some of these trees observed were planted too deep or settled. It is best to dig a hole two to three times the width of the root ball and one to two inches deeper than the bottom of the root ball. The width of the hole when backfilled will create a nice transition zone for the root system and the depth of the hole will not allow the tree to sink and cause a chance of crown root. (Smith 1977).

Mulch around the base of the tree will help to keep moisture in and reduce the chance of weeds (ISA 2005).

Not all trees require staking but some do. Some trees observed were staked improperly with a wire or strap tied around the trunk tightly causing girdling. When support staking, one or two stakes can be used by placing them on either side of the tree in the backfill area. A tree tie should be fastened in a figure 8 loop between the tree and the stake loosely, so it has movement and will not girdle the trunk (Harris, Leiser, and Davis 1976).

Water is a life line for the root system in transporting food and nutrients into the tree. A tree can become shallow-rooted both by lightly irrigating and by over irrigating which causes water logging. These shallow-rooted trees are susceptible to blowing over in a wind storm. Slow deep watering will help a root system grow deep (Harris 1983). Signs of a tree stressing include yellowing, curling, browning and wilting of the leaves (Canopy 2008).
The best time to prune trees is during the late fall and winter when a tree is dormant (Fazio 2011). Some trees observed were over pruned. Pruning should be done sparingly on young trees removing dead, dying, and diseased limbs. This helps reduce weight and open the inside for air and light to pass (Winn 2012).
MATERIALS AND METHODS

A Tree Advisory Board meeting was attended to find out if there was any literature on tree planting and maintenance by way of pamphlets or hand-outs available to the community, and there was not. A proposal to create one was made and granted.

Tri-fold pamphlets were the most prevalent inside the City Hall information rack. With this observation, the information in this pamphlet needed to be short and to the point. The City Arborist said that too much information may overwhelm the homeowner, thus making them not want to read it.

Planting

In this section five important points to consider were listed. Factors to consider when planting a tree include soil, root growth, canopy of tree, pest problems, and reason for planting. Instructions on how to plant a tree include hole size, root pruning, back-fill, and mulching.

Staking

Not all trees require staking. Two methods of support staking were described, single stake and two stakes, along with a key points diagram for both planting and staking.
Watering

Instructions on how to water a newly planted tree were described in this section to help lessen the chance of under watering or over watering. This area also included signs to look for if the tree was starting to stress, and what to do if these occur.

Pruning

This section included the best time to prune a young tree and explained why the trees should be pruned. It describes the types of branches to be removed and the tools which are required. With this pamphlet being used to help develop young trees, it suggests contacting a professional once the tree is large.
RESULTS

After reviewing the original pamphlet in FIGURE 1 and 2, the Tree Advisory Board thought the information it contained was great, and the titles were attention grabbing. According to FIGURE 3 they suggested that the title be modified from “Young Tree Care for the City of Carpinteria” to “A Guide to Young Tree Care in the City of Carpinteria.” They also suggested summarizing the information in each paragraph into bullets and increasing the font size. Another suggestion was to add key points above the diagram. There was one open page and they sent a city seal to be printed on that page.

Pictures were taken and chosen for the front cover along with a picture of the size of nursery stock that may be used. All of this information and pictures were then brought to a graphic designer. With limited space on a tri-fold pamphlet front and back, editing was required to fit in this information. Original information had to be shortened and precise without a lot of explanation to fit each section. Color was added on the background to make the pamphlet more attractive to read. A prototype was then made and submitted to the city.

All of these suggestions were implemented shown in FIGURE 5 and 6 to create a final copy. According to FIGURE 6 the city will present the pamphlet to the Tree Advisory Board on April 25, 2013. They will soon be updating their Street Tree Management Plan which will include one key component that involves a community outreach. According to FIGURE 7 both the Tree Advisory Board and Department of Public Works agree that
this pamphlet contains great information and will be used as an example for future public information.
The first few years in the life of a young tree are critical for the long term success. In order for a tree to have a longer, more productive life, proper care is essential. This pamphlet will help guide you through the steps in producing a healthy tree.

Basic Tips For:
- Planting
- Staking
- Watering
- Mulching
- Pruning
PLANTING

Tree care begins with proper plant selection. Factors to consider when choosing a tree are soil type, area for the root system to grow, area for the canopy of the tree, pest problems, reason for planting a tree, shade screen and aesthetics. To ensure healthy root growth, the width of the hole should be as much as three times the diameter of the root ball, and the depth should be no more than the root ball. Before setting the tree into the ground, it is a good idea to lightly loosen or cut root tips and circling roots. Depending on the plant material, a root barrier may be needed when planting a tree near paved areas or concrete structures. This will help prevent damage caused by uplifting roots. When back-filling hole, use evenly broken-down native soil. This will help create and encourage new root growth. Mulching with organic material and keeping the newly planted area weed-free will also help root growth.

Staking

Not all trees require staking, but it can provide support, protection and anchor. Support staking is used on young trees with slow tapering trunks, which are usually weak. This method can use one or two stakes. When one stake is used, it should be placed in the back-fill on the windy side of the tree. When two stakes are used, they should be placed on either side of the tree trunk. The tree ties used in staking should be put as low as possible on the tree trunk until the top of the tree starts to lean. The ties should be fastened in a figure 8 loop between the stake and the tree trunk. The figure 8 forms a cushion so the tree will not rub against the stake, but it can still move freely. Protective staking can anchor and support a tree. It is also used to protect the tree from injuries caused by machines and man, especially where there is a lot of traffic.

WATERING

Watering is another vital part of healthy tree development. It is very important to water soil after planting. This will prevent the root ball from drying out and causing restricted tree growth, disease or death. Deep watering at a slower rate will ensure better penetration into the soil and prevent water run-off. Young trees should be checked once a week. Depending on the soil, a tree may be watered once a week during the summer and once a month during the winter. The soil should be moist 4 - 6 inches deep, but not soaked. Signs of a stressed tree are curling, browning of leaves, wilting and yellow discoloration of leaves. If any of these signs exist, you may be watering too much or too little, and you may have to call your local nurseryman, landscape professional or arborist.

PRUNING

Pruning is performed on trees for health, safety and appearance, and it should be done sparingly on young trees. The species of tree and the amount of growth will help to determine how much to prune. The best time to prune a tree is during the late fall or winter while a tree is dormant. A thinning (removal) of branches helps to reduce weight and open up the interior of the tree for light and air to pass through it. In order to develop a well-balanced structure, the removal of dead, drying, and diseased limbs should be removed as soon as possible. This will help to ensure a healthy and safe tree. This can be done with a hand pruner, or a saw if needed, leaving the lower limbs for strengthening the trunk and foliage for photosynthesis.
Hi John,

Thank you for giving the City and Tree Advisory Board the opportunity to comment on your tree pamphlet. The information it contains is great.

After reviewing it, we did come up with a few minor suggestions. We have numbered the sections to make it easier to understand which area we are referencing.

Section 1: Title can be modified to read: A Guide to Young Tree Care in the City of Carpinteria

Sections 2 & 4: The titles look great (planting, staking, watering, pruning) and are attention grabbing. We suggest summarizing the information in each paragraph into bullets and increasing the font size.

Section 3: Keep image as is, it is clear and easy to understand. You may want to consider adding a title above the numbered items such as Key Points and modify item 1 to read: Carefully select tree species (or something similar).

Section 5: It might be a good idea to add an image on this section to help fill some of the blank space on the page.

Section 6: We attached a clearer copy of the City seal that you may find useful.

FIGURE 3. First correspondence from City and Tree Advisory Board.
The first few years in the life of a young tree are critical for the long term success. In order for a tree to have a longer, more productive life, proper care is essential. This pamphlet will help guide you through the steps in producing a healthy tree. For more detailed information go to International Society of Arboriculture at www.isa-arbor.com/.

Basic Tips For:
- Planting
- Staking
- Watering
- Pruning
PLANTING
Tree care begins with careful plant selection. Factors to consider when choosing a tree are soil type, area for the root system to grow, area for the canopy of the tree, pest problems, reason for planting a tree, shade screen and aesthetics.
- The width of the hole should be as much as three times the diameter of the root ball, and the depth should be no more than the root ball.
- Before setting the tree into the ground, lightly loosen or cut root tips and circling roots. Depending on the plant material, a root barrier may be needed when planting a tree near paved areas or concrete structures.
- When back-filling the hole, use evenly broken-down native soil.
- Mulch with organic material and keep the newly planted area weed-free; this will help root growth.

STAKING
Not all trees require staking. Support staking is used on young trees with slow tapering trunks.
- When one stake is used, it should be placed in the back-fill on the windy side of the tree.
- When two stakes are used, they should be placed on either side of the tree trunk.
- The tree ties used in staking should be put as low as possible on the tree trunk until the top of the tree starts to lean. The ties should be fastened in a figure 8 loop between the stake and the tree trunk. The figure 8 forms a cushion so the tree will not rub against the stake, but it can still move freely.

KEY POINTS
1. Carefully select tree species.
2. Dig hole at 2-3 times the width of root ball.
3. Depth of hole should not be lower than the root ball.
4. Lightly loosen and/or cut root tips and circling roots.
5. Backfill with good native soil or top soil.
6. Place 2 - 3 inches of mulch around tree.
7. Keep mulch away from base of trunk.
8. If staking is needed, use rubber tree ties. Place in a loose figure 8 with stake on the wind side as shown in diagram.

WATERING
It is very important to water soil after planting.
- Deep watering at a slower rate will ensure better penetration into the soil and prevent water run-off.
- Young trees should be checked once a week. Depending on the soil, a tree may be watered once a week during the summer and once a month during the winter.
- The soil should be moist 4 - 6 inches deep, but not soaked.
- Signs of a stressed tree are curling, browning of leaves, wilting and yellow discoloration of leaves. If any of these signs exist, you may be watering too much or too little, and you may have to call your local nurseryman, landscape professional or arborist.

PRUNING
Pruning is performed on trees for health, safety and appearance, and it should be done sparingly on young trees.
- The best time to prune a tree is during the late fall or winter while a tree is dormant.
- Removal of branches helps to reduce weight and open up the interior of the tree for light and air to pass through it.
- Dead, dying, and diseased limbs should be removed as soon as possible. This can be done with a hand pruner or saw if needed.
- It is very important to remember “safety first” when dealing with trees. If the tree is too large or if you have any concerns about the tree, it is best to contact the City of Carpinteria for a referral list of certified arborists who can help you with your trees’ needs.
John Sanchez

From: Melissa Angeles [MelissaA@ci.carpinteria.ca.us]
Sent: Thursday, February 21, 2013 9:53 AM
To: John Sanchez
Subject: Young Tree Care

Hi John,

Thank you for the copies of your updated tree care pamphlet, it looks great. We will be providing copies of it to the Tree Advisory Board members at their next meeting on April 25th. I will send you a reminder email when the date nears in case you would like to attend the meeting.

Thanks!

Melissa Angeles
Administrative Aide

City of Carpinteria
Department of Public Works
5775 Carpinteria Avenue
Carpinteria, CA 93013
805.684.5405 Ext. 445
805.684.5304 Fax
MelissaA@ci.carpinteria.ca.us

No virus found in this incoming message.
Checked by AVG - www.avg.com
Version: 8.5.455 / Virus Database: 271.1.1/5622 - Release Date: 02/21/13 19:09:00

FIGURE 6. Second correspondence from City and Tree Advisory Board.
May 2, 2013

Dear John Sanchez,

The City of Carpinteria Department of Public Works and the Tree Advisory Board would like to thank you for giving us the opportunity to comment on your senior project pamphlet, *A Guide to Young Tree Care in the City of Carpinteria*.

The City strongly believes that trees are a valuable long-term asset to the community that not only enhance the character of our streets and neighborhoods, but also provide many environmental benefits. For these reasons, it is essential that trees be properly cared for to help increase their lifespan.

The Department of Public Works and the Tree Advisory Board will soon be updating the Street Tree Management Plan (STMP) which addresses issues that relate to the health and welfare of the City’s street trees. One key component of the STMP is community outreach which involves informing residents of upcoming tree maintenance operations and any maintenance procedures that homeowners will be responsible for. Informational handouts are sometimes used to accomplish this task. The Department of Public Works and the Tree Advisory Board agree that your pamphlet contains great information and will be used as an example for future public informational pieces.

Thank you again for giving us the opportunity to comment on your project. If you have any questions, I can be reached at (805) 684-5405 ext. 402.

Sincerely,

[Signature]

Charles W. Ebeling, C.E., T.E.
Director of Public Works/City Engineer

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FIGURE 7. Third correspondence from City and Tree Advisory Board.
DISCUSSION

Even though the original pamphlet in FIGURE 1 and 2 had good information that the City and Tree Board were looking for, they had suggestions to help the reader understand the content more thoroughly. Sometimes less information is better. The result of the final pamphlet in FIGURE 4 and 5 showed that summarizing the information and putting it into bullets was easier for the reader to understand. Without the use of a diagram the information can still be a little hard to comprehend. The use of the diagram in FIGURE 5 helps break down the sequence in planting a young tree. The combination of this information and diagram will help aid in conveying the importance of young proper tree care once it is implemented into the City's new updated Street Tree Management Plan.

With our environment constantly changing, further studies on proper tree care also need to be updated. This information needs to be available to the public in order to help keep our trees healthy.
SUMMARY

With not enough people informed in young proper tree maintenance, it is important to get as much knowledge to them as possible. By way of this condensed informational tri-fold pamphlet, which includes techniques for planting, staking, watering and pruning, these voids of information can help be filled, once it is put into publication.
Resources Cited

1. Canopy, 650-496-5953, Palo Alto


7. Pete Winn. Dec 8, 2012 Personal interview. Westtree Tree Co. 5479 Dariesa St. Carpinteria, CA. 93013]