

TO: Director, National Institute for Occupational Safety and Health

FROM: California Fatality Assessment and Control Evaluation (CA/FACE) Program

SUBJECT: A Tree Trimmer Dies When he is Crushed by Palm Tree Branches

SUMMARY
California FACE Report #10CA002

A self-employed tree trimmer died while trimming the palm branches from an 80-foot palm tree in the yard of a private residence. The victim climbed the palm tree and got underneath the palm branches to trim them off the tree. As he cut the dead palm branches off the tree, they intertwined and formed a skirt anchored by the remaining branches. This skirt engulfed him, crushing him against the tree. The victim did not have any training or accreditation in palm tree trimming. The CA/FACE investigator determined that, in order to prevent future incidents, tree trimming companies and self-employed tree trimmers who trim or remove palm trees should ensure that:

- Palm tree trimming or removal is performed or supervised by workers trained in hazard recognition and accepted safe work practices.

In addition, homeowners should:

- Hire arborists or tree trimming companies who have received training or accreditation in palm tree trimming by organizations such as the Tree Care Industry Association (TCIA) or the International Society of Arboriculture (ISA).

INTRODUCTION

On Saturday February 13, 2010, at approximately 11:00 a.m., a 40-year-old Hispanic tree trimmer was asphyxiated when he was crushed by the palm branches he was trimming from a palm tree. The CA/FACE investigator received notification of this incident on February 16, 2010, from the Monrovia District Office of the Department of Industrial Relations (Cal/OSHA). On March 11, 2010, the CA/FACE investigator went to the incident site and interviewed the homeowner. On March 15, 2010, a telephone interview was held with the victim's brother. A second telephone interview was held on March 19, 2010, with the gardener employed by the homeowner who knew the victim for about eight years and was at the residence when the incident occurred.

The victim was born in Mexico and had been in the Los Angeles area for 25 years. It is not known how long the victim had been in the United States. The victim had an eighth grade education. According to his brother, the victim was fluent in both Spanish and English. The victim had been self-employed as a gardener and tree trimmer for 25

years. There were no documents or witness statements to verify the safety training he had received.

INVESTIGATION

The location of the incident was a private residence in the suburbs of Los Angeles. The back yard of the residence had a palm tree that was approximately 80 feet tall and had not been trimmed in the past four years. The homeowner asked his gardener, who had been working for him for the past two years, if he knew anyone who could trim the tree in the backyard. The gardener said he had a business acquaintance (the victim) who trimmed trees. Later that evening the gardener contacted the victim and advised him of the work and gave him the address with instructions to be there the next day. The victim agreed to trim the palm tree.

On the day of the incident, the victim arrived at the private residence at 10:30 a.m. He put on his climbing gear, which consisted of a rope attached to a climbing harness around his waist and climbing gaffs attached to his boots, and then proceeded to climb the palm tree. When he reached the dead palm branches approximately 60 feet up, he climbed underneath the hanging branches and started to cut them from the tree trunk. The dead tree branches were intertwined, forming a skirt. As the branches were cut away, they were suspended by the remaining uncut branches. As he continued to cut, the skirt started falling around him, pressing him against the tree trunk and putting pressure on his head and shoulders. Unable to move or free himself, and unable to breathe, he called for help. The gardener below heard the victim yell for help. He looked up but could not see the victim, and called 911.

The fire department and paramedics arrived at the location within minutes of the call and began the rescue operation. When they reached the victim with a ladder truck, he was unresponsive. They removed the victim from the tree and he was pronounced dead at the scene.

CAUSE OF DEATH

The cause of death according to the death certificate was asphyxia as a consequence of being crushed by palm branches.

RECOMMENDATIONS / DISCUSSION

Recommendation #1: Palm tree trimming or removal is performed or supervised by workers trained in hazard recognition and accepted safe work practices.

Discussion: In this incident, the victim had over 25 years of experience in tree trimming and may have been familiar with general safety procedures. However, it is not clear if this experience included knowledge of the best methods for trimming palm trees, or if the victim's skills had been rigorously assessed through job supervision and testing. There are several organizations (e.g. TCIA, ISA) that recommend safe work practices for pruning palm trees. These safe work practices include the use of aerial lift devices,

tie in from a second tree, and single or double rope techniques. Palm tree fronds should always be trimmed from the top to avoid the risk of entrapment. Had the victim had the knowledge to recognize the hazards posed by the palm tree branches and used these recommended procedures, this fatality may have been prevented.

Recommendation #2: Homeowners should hire arborists or tree trimming companies who have received training or accreditation in palm tree trimming by organizations such as the TCIA or the ISA.

Discussion: In this incident, the homeowner relied on his gardener to choose a tree trimmer to trim the palm tree in his backyard. His gardener hired a tree trimmer that had 25 years of experience in tree trimming but was not trained or accredited in palm tree trimming. During the trimming of the palm tree, the victim was suffocated under the weight of the palm branches. The victim probably was not familiar with the recommended safe work practices for palm frond removal including trimming the fronds from the top. When hiring a worker or company that has been trained and accredited in palm tree trimming, homeowners can be assured that the work will be performed according to recommended safe work practices.

References:

Division of Occupational Safety and Health - Title 8 regulations - Subchapter 7 - General Industry Safety Orders Group 3. Tree Work, Maintenance or Removal §3421. General. §3427. Safe Work Procedures. §3428. Operating Rules.

Preventing Falls and Electrocutions During Tree Trimming
<http://www.cdc.gov/niosh/92-106.html>

NIOSH Issues Nationwide Alert on Dangers of Tree Trimming
<http://www.cdc.gov/niosh/updates/93-122.html>

Beware the Hidden Dangers of Palms
http://www.tcia.org/PDFs/Safety/Beware_Hidden_Dangers_Palms.pdf

ANSI Z133.1-2006. American National Standard for Arboricultural Operations – Safety Requirements.

TCIA Accreditation
http://www.treecareindustry.org/public/main_accreditation.htm

The ISA Certification Credentials:
<http://www.isa-arbor.com/certification/certification.aspx>
ANSI A300 Part1-2008 Pruning Standard

TCIA: “Safe Palm Pruning Best Work Practices”: Tree Care Industry Association, Inc. 136 Harvey Road, Suite 101, Londonderry, NH 03053 (603) 314-5380

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FATALITY ASSESSMENT AND CONTROL EVALUATION PROGRAM

The California Department of Public Health, in cooperation with the Public Health Institute and the National Institute for Occupational Safety and Health (NIOSH), conducts investigations of work-related fatalities. The goal of the CA/FACE program is to prevent fatal work injuries. CA/FACE aims to achieve this goal by studying the work environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact. NIOSH-funded, state-based FACE programs include: California, Iowa, Kentucky, Massachusetts, Michigan, New Jersey, New York, Oregon, and Washington.

Additional information regarding the CA/FACE program is available from:

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