

Occupational Health Branch • California Department of Public Health
850 Marina Bay Pkwy, P-3, Richmond, CA 94804
510-620-5757 • fax 510-620-5743

INCIDENT HIGHLIGHTS

**DATE:**

February 13, 2023

**TIME:**

11:00 a.m.

**VICTIM:**

39-year-old tree trimmer

**INDUSTRY/NAICS CODE:**

Tree trimming / 561730

**EMPLOYER:**

Tree Service

**SAFETY & TRAINING:**

None

**SCENE:**

Front yard of a private residence

**LOCATION:**

California

EVENT TYPE:

Asphyxiation



REPORT#: 23CA001

REPORT DATE: February 9, 2024

Palm Tree Trimmer Dies from Asphyxia When Crushed by Palm Fronds — California

SUMMARY

On February 13, 2023 a 39-year-old Hispanic tree trimmer (the victim) was trimming a palm tree in the front yard of a private residence. The victim and the landscape company owner who hired him were not certified tree workers. The victim climbed underneath the dead palm fronds and started cutting them from the tree. Instead of falling to the ground, the skirt of dead palm fronds directly above him broke loose and slid down the trunk, crushing and suffocating him... [READ THE FULL REPORT](#) > (p.3)

CONTRIBUTING FACTORS

- Improper work practices (removing fronds from below)
- Incorrect equipment to do the job safely
- Homeowner hiring tree trimmers and supervisors that are not certified or licensed...[LEARN MORE](#) > (p.4)

RECOMMENDATIONS:

The California FACE (CA/FACE) investigator determined that, in order to prevent similar incidents, landscaping companies and self-employed tree trimmers should ensure that:

- Palm tree trimming or removal is performed or supervised by workers trained and certified by organizations such as the International Society of Arboriculture (ISA).
- Proper work procedures and equipment are used, such as using an aerial lift and cutting fronds from above.

Homeowners should:

- Only hire tree trimmers and/or supervisors who are certified by organizations such as ISA, and have a tree service contractor's license (in states where this is applicable)...[LEARN MORE](#) > (p.5)



CALIFORNIA

State **FACE** Program

Fatality Assessment & Control Evaluation

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Fatality Assessment and Control Evaluation (FACE) Program

This case report was developed to draw the attention of employers and employees to a serious safety hazard and is based on preliminary data only. This publication does not represent final determinations regarding the nature of the incident, cause of the injury, or fault of employer, employee, or any party involved.

This Case report was developed by the California Fatality Assessment and Control Evaluation (FACE) Program. California FACE is a NIOSH-funded occupational fatality surveillance program with the goal of preventing fatal work injuries by studying the worker, the work environment, and the role of management, engineering, and behavioral changes in preventing future injuries. The FACE program is located in the Occupational Health Branch, California Department of Public Health.

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INTRODUCTION

On Monday, February 13, 2023, at approximately 12:09 p.m., a 39-year old Hispanic tree trimmer (victim) died while trimming a palm tree in the front yard of a residence. The CA/FACE investigator received notification of this incident on March 30, 2023, from the weekly summary from the California Department of Industrial Relations Public Information Office. On April 10, 2023 the CA/FACE investigator interviewed the landscaping business owner (employer) and the homeowner where the incident occurred. On September 26, 2023, a phone interview was conducted with an instructor who taught tree work safety courses with the victim. The police and fire department reports (including co-worker statements) were received and reviewed.

EMPLOYER

The employer in this incident was a landscaper who had been in business for eight months. The employer did not have a landscaping (C-27) or tree service (D-49) contractor's license, and he was not an ISA-certified tree worker. The employer hired workers periodically depending on the size of the job. On the day of the incident, he hired three workers, including the victim.

WRITTEN SAFETY PROGRAMS and TRAINING

The landscaper did not have a written safety program or injury and illness prevention program (IIPP). There was no documentation of any formal employee training by the landscaper on tree trimming, and it is unknown if palm tree trimming safety was discussed at the jobsite on the day of the incident.

WORKER INFORMATION

The victim was a 39-year-old Hispanic male tree trimmer who was hired by the landscaper to trim palm trees. According to an instructor who taught tree trimming safety classes with the victim, he was extremely knowledgeable about palm tree trimming techniques and safety and was considered by others in the field to be a qualified tree trimmer¹. The victim had been trimming trees for approximately 12 years and owned all of the necessary equipment to perform the job safely. The landscaper stated that he had known the victim for several years and hired him for many other jobs. The victim and other two workers were originally from Guatemala and all spoke Spanish.

INCIDENT SCENE

The incident scene was the front yard of a private residence located in a cul-de-sac. The home had three

¹ Qualified tree workers are those who through related training and on the job experience, have demonstrated familiarity with the techniques and the hazards associated with tree maintenance and removal, and the use of special tools and equipment.

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palm trees growing on the right side of an attached garage. The palm trees were approximately 80 feet high, and the dead fronds began approximately 50 feet up from the ground (Exhibit 1).



**Exhibit 1. The palm trees and street where the incident occurred.
Photo courtesy Google.**

WEATHER

The weather on the day of the incident was mostly clear with temperatures in the mid 60's and 5 MPH winds [Weather Underground]. The weather is not believed to have been a contributing factor in this incident.

INVESTIGATION

On the day of the incident, the landscaper (employer) and two employees were driving through a neighborhood looking for landscaping and other types of handy work. They came across a home with three palm trees in the front yard that had numerous dead fronds (Exhibit 2). They rang the doorbell and offered to trim the palm trees and the resident agreed to hire them for the job. Because the victim had more experience with palm trees, one of the workers called him to describe the job and gave him the address. The victim arrived at the site a little after 10:00 a.m., and prepared to climb the tree. He put on his climbing harness, fastened climbing spikes to his work boots, and used ropes to secure himself to the tree. The landscaper and the two other workers stayed on the ground to gather the palm fronds and load them on the truck for disposal. According to the co-workers, the victim did not bring all the necessary gear needed to climb above the dead fronds. He ascended the tree, positioned himself underneath the fronds and started cutting with a chainsaw and pulling them off.

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**Exhibit 2. The partially trimmed palm trees after the incident.
Photo courtesy of the police department.**

Most of the fronds that he cut away from the tree fell to the ground, but some intertwined, forming a skirt around the tree trunk above him. According to the co-workers, the victim was trimming underneath the dead fronds for approximately 15 minutes when they witnessed the frond skirt collapse onto the victim. They could no longer hear the chain saw and the victim did not respond when they called out to him. One of the co-workers tried to climb the tree to assist the victim from below, but was unsuccessful. The co-workers then called 911 for help. Dispatchers received the call at 11:24 a.m. and the fire department arrived at the scene five minutes later. Additional fire and rescue equipment from nearby jurisdictions were called to aid in the technical rescue. The extrication took approximately 30 minutes using a fire truck aerial ladder. Life saving measures including CPR were taken to revive the victim but were unsuccessful and he was pronounced dead at the scene.

CAUSE OF DEATH

According to the county coroner, the cause of death was traumatic asphyxia.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. CA/FACE investigators identified the following unrecognized hazards as key contributing factors in this incident:

- Improper work practices (removing fronds from below)
- Incorrect equipment to do the job safely
- Homeowner hiring tree trimmers and supervisors that are not certified or licensed



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RECOMMENDATIONS/DISCUSSION

The CA/FACE investigator determined that, in order to prevent similar incidents, landscaping companies and self-employed tree trimmers should ensure that:

Recommendation #1: Palm tree trimming or removal should be performed or supervised by workers trained and certified by organizations such as the International Society of Arboriculture (ISA).

Discussion: In this incident, the victim had many years of experience in tree trimming and was a qualified tree worker who was familiar with procedures for trimming palm trees with excessive (more than 3 years) frond accumulation. The victim was familiar with the proper procedures to trim palm fronds from above. However, on the day of the incident the victim did not bring the proper equipment to place him above the dead palm fronds. It is possible that the victim decided to proceed with the trimming and did not take the time to retrieve the necessary equipment. Although the victim had many years of experience, he was not certified. The ISA trains and certifies tree workers in all aspects of job safety, including the best methods for trimming palm trees. ISA-certified tree workers (climber specialists and arborists) must attend formal trainings and pass hands-on knowledge and skills exam conducted by trained evaluators. Had the victim or landscaper/supervisor been certified, they may have recognized the hazards posed by the fronds and ensured that they were trimmed from above, thereby preventing this fatality.

Recommendation #2: Proper work procedures and equipment are used, such as using an aerial lift and cutting fronds from above.

Discussion: In this incident, the palm trees were approximately 80 feet high and accessible from the street so the use of an aerial lift device would likely have been the best practice to trim the fronds. Safe methods for trimming palm trees include using an aerial lift equipped with fall protection. Alternatively, a climbing procedure that places the worker above the fronds should be used when there is greater than 3 years of frond growth. This climbing procedure should only be performed by trained and experienced tree workers, and involves:

- Using ropes, tools, and equipment designed for tree trimming work, and assuring this equipment is checked and serviced on a regular basis.
- Installing a throw line through the top of the palm tree needing trimming with the use of a tool called the “big shot throw launching system”.
- Attaching an approved anchor line and pulley (block) to the throw line.
- Threading an approved climbing line through the block and hauling the block into the canopy, above the skirt of dead fronds. The climbing line must be long enough that when the block is raised, both ends of the climbing line will reach the ground.
- Securing the anchor line away from the base of the tree.



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- Tying a friction hitch to the climbing line before ascending the tree, so that the worker is secured against falling at all times while aloft.
- Having one or two ground workers available, properly trained and equipped to assist the climber if needed.

The CA/FACE video, [Preventing Palm Tree Trimmer Fatalities](#), available in English and [Spanish](#), demonstrates this procedure.

In addition, to ensure tree worker safety, employers should:

- Develop, implement, and enforce a comprehensive health and safety program that includes written safety rules and safe work procedures for all tasks performed.
- Ensure that qualified tree workers direct tree trimming/removal/repair operations, and immediately correct any hazards or improper work practices identified.
- Create a company safety culture that encourages workers to establish safe habits, emphasizing the importance of safety and not taking risks or shortcuts.

If the victim had used an aerial lift, or the climbing procedure that positioned him above the fronds, this incident could have been prevented.

Recommendation #3: Homeowners should only hire tree trimmers and/or supervisors who are certified by organizations such as the International Society of Arboriculture (ISA), and have a tree service contractor's license (in states where this is applicable).

Discussion: In this incident, the homeowner hired a landscaping company that did not have certified tree workers. An ISA-certified tree worker climber specialist or arborist is an individual who has met specific qualifications and has demonstrated an acceptable level of skill and proficiency. When using a company with certified tree workers, homeowners can be assured that these companies more likely:

- Have policies that promote the health, safety, and general welfare of the public.
- Ensure that tree trimming is performed in a safe, competent, and professional manner.
- Adhere to the laws, regulations, and standards governing tree trimming.
- Understand hazards that are local/regional in nature (e.g. special risks that are unique to palm trees).
- Provide resolution to disputes that arise from tree trimming activities.
- Educate consumers so that they make informed choices.

Had the homeowner hired a tree trimmer or supervisor who was certified, the palm fronds may have been trimmed using the proper procedures, thereby preventing this incident. In addition, homeowners should hire tree care companies that have a current tree service (D-49) contractor's license. Under certain circumstances, homeowners may be liable for worker injuries or deaths that occur on their property if they hire unlicensed tree service companies.



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REFERENCES:

Division of Occupational Safety and Health – Title 8 Regulations. Subchapter 7. General Industry Safety Orders; Group 3. General Plant Equipment and Special Operations; Article 12. Tree Work, Maintenance or Removal: Cal/OSHA [California Code of Regulations, Title 8, Section 3421. General.](#)
Cal/OSHA [California Code of Regulations, Title 8, Section 3427. Safe Work Procedures.](#)

California FACE Program [Preventing Palm Tree Trimmer Fatalities Video](#) and [Palm Tree Resource Page](#).

Cal/OSHA [Tree Work Safety Guide](#).

Firefighter Nation Magazine [Team-Based Palm Tree Rescue](#).

OSHA Website [Tree Care Industry Safety](#).

INVESTIGATOR INFORMATION

This investigation was conducted and authored by Hank Cierpich, Fatality Investigator/Consultant. Additional contributions to the report were provided by Robert Harrison, MD, MPH, CDPH FACE Project Officer; Laura Styles, MPH, FACE Research Scientist; and Glenn Shor, PhD, Cal/OSHA CFOI Program.