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OPERATIONS MANUAL

STANDARD INSTRUCTION 02 SPECIAL RESPONSE GUIDELINES

SECTION 44 PALM TREE RESCUE

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SUBJECT: SPECIAL RESPONSE GUIDELINES PALM TREE RESCUE	SECTION 44	PAGE 2 of 4	EFFECTIVE DATE 7 August 2020

I. PURPOSE

The purpose of this policy is to provide guidelines for palm tree rescues.

II. SCOPE

This policy shall apply to all sworn San Diego Fire-Rescue Department (SDFD) personnel excluding lifeguards.

III. AUTHORITY

The fire chief authorizes the information within this policy.

IV. BACKGROUND

Tree trimmers can become trapped during routine palm tree maintenance where they die from crush injuries and asphyxiation. The fronds on these trees grow from the center out and dead fronds hang down and accumulate around the trunk near the base of the live palm fronds. These dead fronds come loose and remain near the trunk, unattached but woven together in a skirt, or collar, that needs to be trimmed by tree trimmers. This collar can slide down the tree naturally without being tampered with but does so more frequently when disturbed by the trimming process. These skirts can weigh up to 100 pounds per linear foot.

Tree trimmers use a length of rope wrapped around the trunk of a tree called a flip line that they sling upwards as they ascend the tree and utilize cleats on their feet to climb the tree. While working below the collar, the collection of dead fronds can unexpectedly slide down the trunk and trap the trimmer. The flip line gets enveloped by the skirt and pins the tree trimmer's lower body to the tree where the harness is attached, while the weight of the skirt rests on the chest and pushes the upper body down and out. The large sections of dead fronds are covered in debris that can occlude the tree trimmer's airway while the sheer weight of this skirt crushes him/her. The mortality rate is high in these situations.

V. POLICY AND PROCEDURES

A. Truck Company Operations

1. Access tree with two trucks (preferred method)
 - a. Palm tree rescues are ideally carried out with two trucks having patient access.
 - b. If the tree is in a position for allowing two trucks, arriving units need to position themselves appropriately.
 - c. Place the tip of the first ladder at the victim's shoulders.
 - d. The firefighter at the tip of the ladder (brush coat, gloves, helmet, eye protection, ladder belt) should clip into a rung/beam then apply a harness to the patient and secure them to the ladder as soon as possible.
 - e. The firefighter should attempt to relieve some of the downward pressure on the tree trimmer's chest.

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- f. If the patient is conscious use them to help remove the fronds one section at a time until the collar eventually falls off.
 - g. Removing the fronds can be done by hand, with a pike pole, and with a chainsaw or reciprocating saw to cut away thicker fronds.
 - h. The pike pole is best for striking down on the collar from above or using the hook to pull off sections of fronds from below.
 - i. The second aerial should position above and behind the rescue operation and begin removing the skirt one section at a time.
 - j. The sections of fronds will “un-zip” or come apart and eventually the whole collar will fall off.
 - k. The tree trimmer can then be moved onto the ladder using standard extrication procedures.
2. Access to the tree with one truck
 - a. Once the patient is secured by the firefighter on the ladder tip, the firefighter (and victim if conscious) can remove the dead fronds until the collar falls off.
 - b. The tree trimmer can then be moved onto the ladder using standard extrication procedures.
 3. If the tree trimmer is not accessible by aerial ladder, alternative methods for patient access/extrication will be utilized by the technical rescue team at the incident commander’s discretion.
 4. Included below is a link to a rescue in San Diego. Note the following:
 - a. Challenging placement for aerial ladders
 - b. Use of chain saw for patient access
 - c. Harness application
 - d. Effectiveness of second truck with pike pole
 - e. <https://youtu.be/5kjB6eQCh68>

B. Safety Considerations

1. Keep area below the tree clear due to falling fronds.
2. Utilizing ground ladders from below the skirt is dangerous and not recommended. The tree is an unstable object to rest the ladder against and the skirt will eventually slide down rendering the ladder useless.
3. Care should be taken to ensure the tree trimmer is secure before the collar falls off. This can be done with a chest harness and can be supplemented with standard victim pick-off procedures.
4. All ladder movements need to be coordinated between the engineer, the rescuer, the tree trimmer, and/or the incident commander.
5. Use caution when cutting or striking the tree or collar when the patient’s extremities are hidden from view.
6. Take care not to sever the tree trimmer’s flip line (rope) with the saw.

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7. Additional common causes for death in trees include electrocution and being struck by the tree or parts of it. Accordingly, be aware of power lines and unstable structural elements of the tree itself.

C. Resource Considerations

1. Additional resources to assist with access issues and specialized equipment and personnel trained to deal with such emergencies:
 - a. Articulating boom truck with bucket from Parks and Recreation Department
 - b. City arborist
2. Consider potential response delays when ordering these resources.