

ASWP 04 R0

Working at Heights



Revision History

Version	Revision Date	Brief Description of Revisions
R0	February 2016	Document has been updated to new format.

ARBORIST SAFE WORK PRACTICES

DISCLAIMER

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Workplace Safety & Prevention Services wishes to express its appreciation to those who have assisted in the preparation of the **Arborist SafeWorkPractices** guide.

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1.0 Introduction

This document outlines the requirements for an arborist working at heights.

2.0 Hazards

The following hazards have been identified to aid in establishing and maintaining a safe work environment when ascending trees:

Biotic Conditions	Gravity
Chemical	Mechanical
Climatic Conditions	Pedestrian Traffic
Electrical Conditions	Vehicular Traffic
Ergonomics	

Note: The above list of hazards is not a complete list and a thorough job plan should be completed to identify existing hazards found at the work site.

3.0 Legislation / Safe Work Practices

The following information has been provided listing relevant arborist safe work practices and legislation requirements:

- ASWP01 General Legislation
- ASWP02 Work in a Safe Environment
- ASWP02 Protect Self and Others
- ASWP02 Arborist Job Planning
- ASWP03 Ascending Trees
- ASWP12 Chain Saw Operation

Legislation	RRO / RSO	Section Referenced
Industrial	851 / 90	45, 51
Construction	213 / 91	172, 173, 174, 179

4.0 Mandatory Information / Work Practices

The following are the general mandatory requirements for an arborist working at heights. In addition to these requirements, the work practice contains specific requirements that must also be followed.

- All trees must be inspected for hazards prior to climbing or working at heights (Refer to ASWP03 Ascending Trees)
- All appropriate Personal Protective Equipment must be worn while working at heights
- When one or more climbers are working at heights at least one Ground Assistant must be present
- At least one Ground Assistant at any given work site must know the Emergency Response Plan
- Those engaged in working at heights must be trained in proper knot tying, use of appropriate fall protection systems and techniques, conducting pre-climb inspection (Refer to ASWP03 Ascending Trees), aerial rescue techniques (Refer to ASWP11 Aerial Device Operation), appropriate descent and ascent methods and appropriate rigging techniques
- Drop Zone must be identified and controlled
- All rigging (Refer to ASWP06 Rigging Trees) and cutting equipment (Refer to ASWP12 Chain Saw Operation) must be inspected, as per manufacturer's recommendations, prior to daily use
- Ensure that chain saws and other gasoline-powered tools are fueled, sharp and running properly prior to sending aloft
- While working at heights climbers should use a second point of attachment for fall protection and to ensure a secure work position
- Follow ASWP06 Rigging Trees when performing work aloft and rigging equipment is required for the removal of limbs
- Precautions must be taken to eliminate the hazard of a potential 'reverse barber chair'
- All pruning tools and equipment not in use must be securely attached to a limb of sufficient strength to hold it and to keep it from coming in contact with any electrical conductor
- Corner cuts, two cuts on either side of notch, should be used to ensure that the bark does not strip down a limb
- When using a sharp tool (e.g. handsaw, chain saw, or pole pruner) aloft when climbing the tree, you shall be tied in twice with the second point of attachment shall be attached in a way to prevent a fall

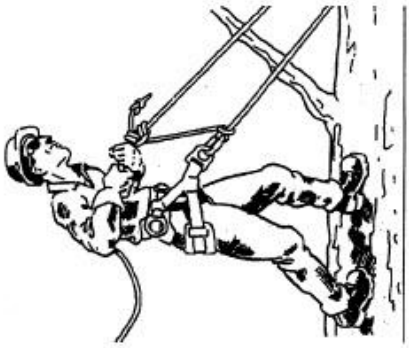
Note: A second point of attachment must be used when using sharp tools that could cut the life line except in circumstances where the hazards of using it are greater than not.

4.1 Inspect Worksite

A thorough inspection of the worksite should be completed identifying all hazards with a plan in place to perform the required work aloft (Refer to ASWP02 Job Planning for additional information).

Step	Action
Inspect worksite	<p>Identify hazards such as:</p> <ul style="list-style-type: none">• Overhead wires• Traffic conditions (pedestrian and vehicular)• Soils and topography• Buildings, sidewalks, fences etc.• Weather conditions• Hazardous Biotic Conditions• Tree condition (Refer to ASWP02 Job Planning for additional information)• Determine access to tree (Refer to ASWP03 Ascending Trees for additional information)
Inspect rigging equipment	<ul style="list-style-type: none">• Refer to ASWP06 Rigging Trees for additional information• Refer to manufacturer's data sheets for proper inspections on rigging equipment
Determine Drop Zone	<ul style="list-style-type: none">• Ensure that ground assistants are aware of Drop Zone• Ensure appropriate measures are taken to protect against people and vehicles that may enter the Drop Zone

4.2 Ascend Tree

Step	Action
<p>Ascend tree Figure 1 Figure 1</p> 	<p>Refer to ASWP03 Ascending Trees.</p>
<p>Inspect limbs that will be removed</p>	<p>Check limbs for potential hazards such as:</p> <ul style="list-style-type: none"> • Decay • Bird holes • Cracks • Imbedded objects • Cankers • Structural integrity

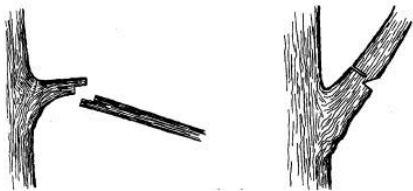
4.3 Starting and Using a Chain Saw Aloft

Step	Action
Select appropriate chain saw	<ul style="list-style-type: none"> • Consider work to be performed and hazards such as worker fatigue
Inspect and fuel chain saw	<ul style="list-style-type: none"> • Follow ASWP12 Chain Saw Operation
Start chain saw and perform warm up	<ul style="list-style-type: none"> • Start saw on ground following manufacturer's instructions • Secure chain saw in a safe location from pedestrian and vehicular traffic
Verify chain brake operation	<ul style="list-style-type: none"> • Follow manufacturer's instructions
Raising chain saw to worker aloft	<p>Ground person attaches saw to climbing rope or an appropriate rope for hoisting a chain saw:</p> <ul style="list-style-type: none"> • Secure saw using an appropriate knot to the chain saw handle(s) or manufacturer's attachment point • Ensure workers or pedestrians maintain

Step	Action
	clearance from underneath tree while raising saw
Raising a running chain saw	<p>For chain saws that must be running while being raised the following conditions must be met:</p> <ul style="list-style-type: none"> • Chain saw being raised is secured to tailstock of saw • Chain brake is secured and locked so that the chain brake cannot be inadvertently disengaged • All life lines or other ropes cannot entangle with chain saw • Workers or pedestrians must not be underneath the potential falling path of a chain saw • Chain saw should be raised in a direct route with few encumbrances • Worker aloft must be secured with two separate tie ins
Raise saw	<ul style="list-style-type: none"> • Maintain Limits of Approach to electrical apparatus • Ensure rope is not obstructed or will become obstructed when raising saw
Secure saw to climber	<ul style="list-style-type: none"> • Secure saw to either a manufactured chain saw lanyard or saw rope that is appropriate in size and strength
Climber positions for cut	<ul style="list-style-type: none"> • Maintain Limits of Approach, to electrical apparatus • Secure second tie-in position prior to operating the chain saw • Ensure climber has adequate balance and stability during cutting operation • Body should be facing direction of cut • Ensure climbing rope is not contacting the chain saw bar • Communicate with ground person prior to starting saw and actions to be taken
Start saw	<ul style="list-style-type: none"> • Ensure appropriate PPE is worn • Apply chain brake • Place body of saw into branch union of tree where available • Ensure saw body is secure • Ensure saw bar will be clear of branches/foliage • Secure footing to prevent slips • Maintain an upright and balanced position • Maintain Limits of Approach to electrical apparatus • Grasp handle securely

Step	Action
	<ul style="list-style-type: none"> Start saw
Perform cut	<ul style="list-style-type: none"> Inspect limb for life lines, rigging ropes, obstacles to the cut or worker Detach saw from climber unless a break away system is used Ensure adequate footing and second tie-in is used Ensure appropriate cuts are used
Shut off saw	<ul style="list-style-type: none"> Apply chain brake Re attach saw to secured system
Relocate within the tree	<ul style="list-style-type: none"> Ensure saw is attached to climber via lanyard or saw rope Caution when moving long distances in the tree as the saw could cause a pendulum effect to the climber Consider lowering saw when cuts are completed before final descent

4.4 Cutting Limbs

Step	Action
<p>Utilize appropriate cutting technique (Figure 2)</p> <p>Figure 2</p>  <p>From: ISA Tree Climbers Guide</p>	<p>Appropriate cuts will be dependent on the desired direction that the limb is to move (e.g. under cut if raising limb, two cuts on either side of the notch to ensure bark does not peel).</p>
Control descent of limb	<ul style="list-style-type: none"> Ensure that there is two-way communication including confirmation between Ground Assistant and Climber Ensure Drop Zone is identified and controlled Climber shall direct the Ground Assistant's actions when rigging limbs Ensure if directing limbs manually that they can be controlled easily