



## Job Hazard Analysis of Arborist Work<sup>1</sup>

Arboricultural Task(s)	Associated Hazard(s)
Using noisy equipment, including: chain saws, clearing saws, brush chippers, stump grinders, leaf blowers, generators, air compressors, etc.	Hearing loss
General arboricultural work	Struck by's to the head caused by falling tree sections and other objects, low-hanging branches; eye injury from branches, flying particles.
Working with mechanized equipment, such as chain saws, power take-offs (PTOs) and brush chippers	Loose clothing getting caught
Working around thorny or poisonous plants	Puncture wounds from sharp objects; contact with poisonous plants
Working with logs or other heavy items	Heavy weight falling on feet, ankles or toes; back injury; soft tissue injuries
Working on sloping, uneven or slippery terrain	Slips and falls
Lifting objects; twisting while lifting or reaching; working where there is poor footing; working in awkward positions while climbing or in an aerial lift	Back strain or sprain due to twisting while lifting or reaching, poor footing or awkward positions while climbing
Chain saw use while tree climbing, working from an aerial lift or cutting on the ground.	Lacerations due to chain saw kickback or accidental contact with the moving or stationary saw chain Falls due to cut line and failure to use redundant system; tied into the cut tree portion Burns from the chain saw muffler
Working with hand tools, such as: hand pruners, loppers, hand saws, pole saws, pole pruners, cant hooks, axes, sledge hammers, metal wedges, etc.	Lacerations, foreign objects in the eyes, metal splinters/fragments
Working with un-insulated (metal) pole tools and/or ladders	Indirect electrical contact

<sup>1</sup> Derived from TCIA's Tailgate Safety Training Program, © 2007

<b>Arboricultural Task(s)</b>	<b>Associated Hazard(s)</b>
Chain saw use to limb and/or buck trees	Chain saw kickback, limbs bent under tension (spring poles, etc.), trees rolling or shifting
Refueling equipment, working with/near equipment with exposed exhaust systems; using power tools near dry grass and brush	Burns from hot mufflers, gas and oil spillage; fires; explosion of equipment
Manually dragging and chipping brush	Contact with moving parts on machinery; Strain/sprain from heavy weights or awkward lifts; struck by flying debris
Working aloft to trim, remove or cable trees	Stuck-by to person(s) on the ground from falling tree, limb, branch, hanger, or hand tools. Struck-by to person aloft from tree limbs, hangers Fall hazard to worker aloft due to failure to use fall protection; cut line; tree failure or equipment failure.
Getting in and out of vehicles; moving on aerial lift or spray rig step surfaces; walking around job sites; walking on slippery surfaces; climbing ladders; tree climbing	Slippery pavement or footing; trip hazards (holes, brush, logs, tools); slippery work surfaces
Working in extremely high temperatures and humidity	Heat illness; dehydration
Working in extremely cold temperatures	Frostbite; hypothermia
Repetitive use of hands and arms; working with vibrating power equipment	Musculoskeletal disorders of the hand, arm and shoulder
Working where biting and stinging insects and animals may be present	Bites and stings; slips, trips, and falls when trying to escape; hypersensitive (allergic) reactions; exposure to carriers of chronic illness such as Lyme disease or rabies
Crossing walkways with brush, hoses, and/or other equipment; working at curbside; working at roadside; working in public areas, parks, etc.	Pedestrians tripping; pedestrians subjected to struck-bys by entering drop zones; employees being struck by motorists; vehicular collisions
Climbing and working around electrical conductors	Electrical shock through direct or indirect contact; electrical flashover burns
Assisting an injured worker aloft	Various hazards for the would-be rescuer; risk of additional injury to the victim
Operating equipment off-road; backing a truck with a trailer; backing a vehicle with obscured visibility	Striking other workers, bystanders, vehicles, etc.; roll-over
Working with portable, electric hand tools such as drills and hedge shears	Electric shock, laceration/amputation from the tool

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Operating or using the following near overhead electrical conductors: Aerial lifts Cranes and hoists Log loaders Tree spades	Electrical shock through direct or indirect contact; electrical flashover burns; Electrical shock to workers on the ground through energized equipment
Tree removal and tree felling	Struck by to saw operator or other workers from falling tree, falling branches Barber chair Struck by due to premature tree/branch failure caused by decay or defect
All aerial lift operations	Boom failure while working, caused by condition of the lift or as a result of forceful contact with a falling tree or limb; hydraulic system failures
Storm work: clearing downed trees and debris; climbing in damaged trees	Struck bys from hangers and split wood; shock/burns from hidden electrical lines; chain saw cuts; limbs bent under tension
Climbing using a climbing system (approved saddle, approved climbing line, adjustable personnel lanyard)	Fall caused by: Rope failure due to cut, melting due to friction, defect Not tied in (detached line, knot failure, etc.) Tree failure Branch failure Equipment failure due to: Improper use/abuse Inappropriate for the task Degradation Uncontrolled swing
Climbing and/or working from a ladder	Falls due to: Ladder slipping Ladder failure Not being secured (when working from) Electric shock due to conductive ladder
Tree care operations using materials handling equipment such as a crane, log loader or hoist	Dropped load; equipment failure; equipment tip-over

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Cabling trees	Struck-by from dropped tools and materials; worker aloft struck by recoil from hand operated winch (come-along) or excessively tensioned cable, or cable cut under tension Fall when tree fails as result of release of tension on old cable.
Sectional tree removal, with or without roping or rigging	Splitting limbs Swinging or falling limbs Breaking ropes Breaking tree crotches
Operating a stump grinder	Flying debris; moving parts on machinery; moving grinder wheel
Tree climbing using climbing spurs (also called climbers, gaffs, spikes, hooks)	Cut-out (spurs kicking out)
Shop or on-the-job maintenance of a chipper	Sharp blades / knives; pinch points; equipment malfunction due to improper maintenance
One handed use of chain saw (usually while climbing or working from an aerial lift)	Lacerations to the left hand/wrist/arm Increased risk of kickback
Using a chipper mounted winch	Caught in pinch points; struck-by winch line or load; crushing/amputation by chipper
Rigging for tree removal	Tree failure; rigging line/hardware failure; struck-by's
Operations that involved digging or excavation; such as tree planting, stump grinding, trenching or fertilizer/pesticide application	Electric shock from contact with underground utilities.
Hydraulic truck dump operation, such as dumping chips and other loads, delivering firewood, under-body maintenance	Crushing